

**SNPLMA Round 20  
Conservation Initiatives Project Addendum**

**Nomination:** Tab 1

**Entity:** National Park Service, Great Basin National Park

**Project:** Improving Recreational Fishing Opportunities and Native Trout Conservation

**Remarks/Clarifications Needed:**

**Section A - Background:**

1. "Conduct Fishing with a Ranger programs where park visitors can borrow fishing gear and receive basic instructions on how to fish."

**Question-How sustainable is this? How many months/years will NPS be able to do this/supply this?**

2. "By including NDOW, the local chapter of Trout Unlimited, volunteer groups, and other local stakeholders; we will create shared support for the brood pond."

**Question-The pond is on BLM land, it appears BLM has no interest in maintaining/assisting in maintaining the pond? BLM's absence is also noticeable in the Maintenance Section of the nomination.**

**Section D - Project Deliverables-Primary:**

1. "Write articles highlighting project accomplishments in the Midden, GRBA's Natural Resource Newsletter."

**Quantification Needed: Appx how many articles?**

**Section D - Project Deliverables-Anticipated:**

1. "Conduct conifer removal / fuels reduction treatments in the Mill Creek watershed to protect a remnant population of BCT from threat of catastrophic wildfire."

**Quantification Needed: Appx how many treatments/acres of removal?**

2. "Create an educational program with clear curriculum utilizing the story of BCT to teach students biology, ecology, and the importance of minimizing impacts on the environment and implement this program in Nevada schools and/or with local Tribes."

**Clarification- Implementation of NPS's new curriculum in the Nevada School District is most likely beyond NPS's control. Recommend clarifying/rewording.**

**Southern Nevada Public Land Management Act  
Conservation Initiatives  
Round 20**

National Park Service, Great Basin National Park



Improving Recreational Fishing Opportunities and Native Trout Conservation

Amount Requested: \$1,939,062.00

## A. BACKGROUND INFORMATION

Bonneville cutthroat trout (BCT) are the only trout native to east central Nevada and Great Basin National Park (GRBA, the park). Like other cutthroats, BCT have experienced major declines due to water manipulation, grazing, and the introduction of nonnative fish. They are a species of concern, demonstrated by three petitions submitted to the United States Fish and Wildlife Service (USFWS) to list BCT as Threatened under the Endangered Species Act. The ongoing conservation efforts to restore and protect BCT throughout their historic range weighed heavily in the USFWS's decision not to list them each time they were petitioned. These conservation efforts carried out by GRBA, the Nevada Department of Wildlife (NDOW), the SNPLMA program, and many other federal agencies, state departments, and nongovernment organizations, led to increases in the number of populations, distribution, and overall abundance of BCT across their range. However, over the last ten years new threats to the persistence of BCT have become apparent and overwhelmingly prevalent throughout their home range within Nevada. Fueled by climate change, winter snowpacks are melting earlier in the spring, summertime temperatures are increasing, and large high intensity wildfires and prolonged droughts are becoming more common. These issues are currently the greatest threats to BCT populations within Nevada.

Fishing is an integral part of outdoor recreation in Nevada. Over 167,000 fishing licenses were sold in 2022, and this number does not include anglers under the age of twelve. NDOW operates three fish hatcheries and one rearing station that produce fish to stock throughout the state. In Eastern White Pine County recreational fishing is largely for native BCT, yet none of Nevada's hatcheries or rearing stations raise them. Therefore, NDOW cannot increase recreational fishing opportunities in many Eastern White Pine County streams by stocking BCT in these waters. BCT restoration and recreational fishing have always been closely linked as these fish are a sought-after sport fish. In fact, BCT are one of the six native fish included in Nevada's Native Fish Slam, an Angler Recognition Program created by NDOW to form a connection between anglers and Nevada's native sport fish. Eastern White Pine County is the only location in Nevada where anglers can catch BCT within their native range while completing this program.

The goals of this project are to improve recreational fishing opportunities in Eastern White Pine County, increase the sustainability and resilience of BCT populations in Nevada, and to promote a sense of conservation stewardship within the public. Project objectives are to (1) Renovate the only BCT brood pond in Nevada creating a source of BCT to stock in Nevada streams; (2) Stock fish in highly visited locations within GRBA to increase fishing opportunities and visitor enjoyment; (3) Conduct "Fishing with a Ranger" programs where park visitors can borrow fishing gear and receive basic instructions on how to fish; (4) Reduce the impact of humans on the landscape by promoting a sense of community and stewardship through educational programs, outreach, ranger patrols, and litter clean-ups; and (5) Improve BCT habitat and expand their range within Nevada.

This project will not be an interagency project. Except for renovating the BCT brood pond, this project will occur within GRBA. The BCT brood pond is located adjacent to GRBA on lands administered by Bureau of Land Management (BLM). The Ely BLM office has submitted a letter of support allowing the NPS to conduct the renovation on their lands.

The project will be completed when the deliverables have been met, final reports received, and education and outreach has been finished. Project performance will be tracked using the Conservation Initiative Performance Measures identified in this nomination package.

**a. Describe Relationship to Prior Approved Projects and/or Phases Relevant to this Project (SNPLMA funded or not), and any anticipated Future Phases**

Round 8 Conservation Initiatives Project NP42, “Implementing the Conservation Agreement for BCT within the State of Nevada” permitted GRBA and NDOW to collect data on the status of all Nevada’s BCT populations. One new BCT population was discovered during the project and the groundwork was laid to complete other BCT restoration projects.

Round 13 Conservation Initiative Project NP74, “Johnson Lake Mine Historic District” stabilized several historic log cabins. The proposed project would further protect these structures and other artifacts throughout the Johnson Lake Historic Mining District by conducting Ranger patrols intended to educate visitors how to recreate in culturally sensitive sites without causing impacts to the resources.

Round 14 Conservation Initiatives Project NP75, “Recovery and Restoration of BCT in the Snake Creek Watershed within Great Basin National Park” restored all of Snake Creek within the park boundary to BCT habitat. A fish barrier was installed to stop nonnative fish from migrating into the park and a stream renovation treatment removed all nonnative fish upstream of the barrier. During the last year of the project 118 BCT were reintroduced to Snake Creek and a healthy, fishable population now exists throughout the stream. The proposed project would stock BCT directly at campsites, trailheads, and an ADA accessible Fishing Deck to further increase recreational fishing opportunities in Snake Creek.

Round 15 Conservation Initiative Project NP77 “Lehman Creek Wetland Restoration: Creating Sustainability by Connecting Habitat, Wildlife, Education, and Recreation” installed an ADA accessible Observation Deck adjacent to a stream channel in Upper Lehman Campground. The proposed project would stock wild trout at this ADA accessible Observation Deck to increase visitor enjoyment and angling opportunities.

Round 17 Eastern Nevada Landscape Restoration Project N008 “Strawberry Creek Fire - Watershed Restoration & Stabilization” restored natural stream functions to one of the park’s BCT streams. Post Assisted Log Structures (PALS) and Beaver Dam Analogs (BDAs) were installed to limit downcutting, maintain water table levels, and promote the recovery of a healthy riparian corridor. Areal seeding and weed management assisted the recovery of upland vegetation, stabilized the soil, and reducing the amount of sedimentation entering the stream. These actions laid the groundwork for the proposed project to make additional BCT habitat improvements in Strawberry Creek.

Round 17 Conservation Initiatives Project NP88, “Protect BCT using High Elevation Refugia” will establish two additional conservation populations of BCT within Great Basin National Park. This will be accomplished by introducing BCT into Baker and Jonson Lakes, both located above 10,500 feet in elevation. This project will not only increased BCT’s resilience in the face of

climate change but also increase recreational fishing opportunities at Baker and Johnson Lakes, popular backcountry hiking and camping destinations. The proposed project would protect these newly formed BCT populations by conducting ranger patrols and litter clean-ups at both Johnson and Baker Lakes.

**b. Acknowledgement of Stand-Alone Project and no Guarantee of Funding for Future Phases**

This project is a stand-alone, one-time, non-phased, viable project. No other SNPLMA funds will be requested for this action.

## **B. EXECUTIVE COMMITTEE'S SNPLMA STRATEGIC PLAN VALUES**

Conservation Initiative projects have two goals identified in the Strategic Plan:

- Goal 1: Sustain the quality of the outdoor environment by conserving, preserving, and restoring natural and cultural resources.
- Goal 2: Improve the quality of life for all publics in urban and rural communities by enhancing recreational opportunities that connect people with the outdoor environment.

Nominated projects should meet these two goals by focusing on the three SNPLMA core values, connectivity, sustainability, and community. Every nomination must explain how the three values are promoted by the project.

- **Connectivity**  
The “Fishing with a Ranger” program, stocking fish at ADA accessible decks, and creating new fishing access sites will provide the visiting public with outdoor recreation opportunities that encourage interaction with nature. The “Fishing with a Ranger” program will be designed for park visitors that are interested in fishing but have limited opportunity to do so. The necessary gear will be provided at no cost to encourage participation by all, even those who cannot afford fishing gear of their own. The park will also invite various groups from underserved communities to participate. This program has the potential to make lifelong memories and forge strong connections between park visitors and nature. Stocking fish at ADA accessible decks and creating new fishing access sites will increase angler opportunity and offer non-fishing members of the public easy viewing of wild animals in their natural environment. The fish at the ADA accessible decks may be the only fish that many park visitors get to see, adding excitement and joy to their trip.
- **Sustainability**  
This project will restore and/or improve up to 5 stream miles of BCT habitat by removing nonnatives fish from headwaters and/or restoring resilience to riparian ecosystems in landscapes effected by improper fire management. The habitat improvements and new BCT populations established during this project will endure and provide lasting benefits

for the conservation of the species and the public long after this project and the SNPLMA program have expired.

Renovating the only BCT brood pond in Nevada would increase the number of BCT available to stock in White Pine Country streams for recreational and conservation purposes. By including NDOW, the local chapter of Trout Unlimited, volunteer groups, and other local stakeholders; we will create shared support for the brood pond. This will promote these groups to assist with annual maintenance, decrease the long-term costs, and increase its sustainability allowing the benefits of this project to persist long term.

This project will also protect the health of alpine ecosystems by conducting annual litter clean-ups at Baker and Johnson Lakes, the two locations that receive the most backcountry use within GRBA. They encompass sensitive alpine soils and vegetation, BCT habitat, and a historic landscape. Human impacts, including trash, remnants of illegal fires, and improperly disposed of human waste accumulate there every year. Pairing annual litter clean-ups with educational outreach, stewardship, and ranger patrols will ensure the water quality of the alpine lakes remain pristine, protect native BCT populations, reduce damage to sensitive alpine soils and plants, and keep these areas in proper functioning condition.

- **Community**

This project will promote a sense of community through fostering partnerships. This project involves GRBA, BLM, NDOW, Trout Unlimited, Great Basin National Park Foundation, local landowners, and possibly local Tribes. All these groups will be working together for the same outcome: improving connections between the public and recreational fishing, conserving BCT, and instilling a sense of stewardship through educational outreach. It is our hope that the partnerships formed during this project will lay the foundation for continued collaboration on future projects.

Fishing has been shown to benefit people and society by offering an outlet to relax, get outdoors, breathe fresh air, and improve one's self-esteem. This project will improve the quality of life for the visiting public by conducting "Fishing with a Ranger" programs, providing the gear and opportunity to learn how to fish, inviting groups from underserved communities to participate, creating new fishing access locations, and stocking fish in easily accessible locations (including ADA compliant decks).

Conducting annual litter clean-ups at Baker and Johnson Lakes to remove trash and improperly disposed of human waste will help keep these heavily visited areas of the backcountry safe and enjoyable places for the public to visit. These clean-ups will increase the quality of life for the visiting public and protect the integrity of the alpine biological community.

## **C. PURPOSE STATEMENT**

Great Basin National Park in partnership with NDOW, BLM, the Great Basin National Park Foundation, Trout Unlimited, and local stakeholders will use active management and educational

outreach to improve cold water recreational fishing opportunities, increase the sustainability of Nevada's BCT populations, foster connections between the public and the natural environment, and promote a sense of stewardship within Eastern White Pine County. These actions will protect sensitive natural and cultural resources, protect a species of management of concern, and increase the quality of life and overall enjoyment of the visiting public.

## **D. PROJECT DELIVERABLES**

### Primary:

- Renovate the only BCT brood pond in Nevada
- Stock native BCT into highly visible, easily accessible locations along Snake Creek at least 4 times during the life of the project
- Translocate wild trout to the stream channel that is immediately adjacent to the Lehman Creek Wetlands Observation Deck at least 4 times during the life of the project
- Launch and conduct 16-40 "Fishing with a Ranger" programs
- Conduct at least 30 backcountry ranger patrols of Johnson and Baker Lakes
- Conduct approximately 4 litter clean-ups at Baker and Johnson Lakes
- Restore and/or improve up to 5 stream miles of habitat for BCT within GRBA
- Introduce BCT to vacant or recently restored habitat
- Improve and maintain at least 2 barriers that prevent nonnative species from invading BCT habitat
- Monitor water quality and quantity in at least 2 BCT streams and 2 lakes
- Write articles highlighting project accomplishments in the Midden, GRBA's Natural Resource Newsletter

### Anticipated:

- Construct up to 4 fishing access sites
- Conduct conifer removal / fuels reduction treatments in the Mill Creek watershed to protect a remnant population of BCT from threat of catastrophic wildfire
- Create an educational program with clear curriculum utilizing the story of BCT to teach students biology, ecology, and the importance of minimizing impacts on the environment and implement this program in Nevada schools and/or with local Tribes
- Present results of fisheries work at annual BCT Range-Wide Meetings and up to 5 additional professional meetings
- Map and create a new GIS layer of all the fish habitat that exists within GRBA
- Conduct a condition assessment on the Johnson Lake Historic Mining District to determine the effect increased fishing recreators are having on cultural resources that occur adjacent to BCT habitat

### Standard:

- Develop a detailed implementation plan and enter it into SNPLMA SMART database
- NEPA, NHPA, and Section 106 Compliance (including Tribal Consultation)
- Develop a Scope of Work for contracting and cooperative agreements
- Budget Tracking
- Quarterly and annual reporting

- Final project report SNPLMA close-out package

## **E. PROJECT LOCATION**

### **Identify County in Nevada where Project will be carried out:**

White Pine County

### **Identify Congressional District(s):**

2<sup>nd</sup> Congressional District of Nevada - NV02

### **Latitude and Longitude:**

38.955129° / -114.257885°

## **F. PROJECT TIMEFRAME**

The project is expected to last 5 years from the initiation date and will be initiated within one year of the Authorization to Expend Funds. The project will be completed when the deliverables have been met, final reports received, and education and outreach has been completed. These products will be included in the final closeout report to SNPLMA to confirm completion.

### **Year 1**

- Create detailed implantation plan
- Initiate NEPA, NHPA Section 106, and Tribal Consultation
- Secure necessary permits
- Draft cooperative agreements and contracts
- Project planning with partners
- Initiate equipment purchasing

### **Year 2**

- Continue any needed compliance
- Finalize cooperative agreements and contracts
- Update implementation plans
- Begin renovation of BCT brood pond
- Conduct prep work for stream restoration treatments

### **Starting in Year 2 and continuing to Year 5**

- Stock fish in Snake Creek and Lehman Creek at easily accessible locations
- “Fishing with a Ranger” program
- Ranger patrols at Baker and Johnson Lakes for outreach
- Litter clean-ups at Baker and Johnson Lakes
- Improve/maintain barriers to nonnative fish migration
- Monitor water quality and quantity on BCT streams and lakes
- Write articles for the Midden



**Year 3**

- Treat a section of stream to restore and/or improve habitat for BCT
- Begin educational program (Anticipated)
- Begin mapping fish habitat within GRBA (Anticipated)
- Construct fishing access sites (Anticipated)
- Begin Condition Assessment on Johnson Lake Historic Mining District (Anticipated)

**Year 4**

- Introduce BCT into vacant and/or recently restored habitat
- Conifer removal / fuels reduction in Mill Creek watershed (Anticipated)
- Continue with mapping and educational program (Anticipated)

**Year 5**

- Introduce additional BCT into vacant and/or recently restored habitat
- Finalize conifer removal / fuels reduction in Mill Creek watershed (Anticipated)
- Project close out

**G. LEVEL OF PROJECT READINESS FOR IMPLEMENTATION**

Is this a shovel-ready project?  Yes  No

Basic pre-planning for the project has been completed and involved the BLM, NDOW, Trout Unlimited, Great Basin National Park Foundation and local stakeholders. A categorical exclusion has already been completed for the existence and maintenance of the brood pond located on BLM lands. No further compliance is needed for this portion of the project. The level of readiness to implement the overall project within one year of notification of funds availability is very high. The park and their partners have much of the staff, training, and resources necessary to implement this project. Current GRBA staff includes:

- Integrated Resource Manager, permanent
- Environmental Protection Specialist, permanent
- Fish Biologist, permanent subject to furlough
- Ecologist, permanent
- Biologist, permanent
- Biological Science Technician, permanent subject to furlough
- Archeologist, permanent
- Fully Staffed Interpretation Department
- Chief of Maintenance, permanent
- Motor Vehicle Operators (2), permanent subject to furlough

In addition to GRBA staff, NDOW and Trout Unlimited have committed to assisting with the necessary field work and outreach programs.

**H. FUTURE OPERATING AND MAINTENANCE**

This project is expected to incur minimal O&M costs. After the project is completed the park, NDOW, and Trout Unlimited will fully support any maintenance that is needed to keep the BCT brood pond and fish migration barriers in operation.

The brood pond will require approximately 80 hours of maintenance per year (5 persons for 8 hours twice a year) to keep it in fully functioning condition. This includes flushing silt from the spawning channel each Spring and removing aquatic vegetation from the pond every Fall. GRBA and NDOW will commit non-SNPLMA funded staff time and Trout Unlimited will commit volunteer hours to complete this semiannual maintenance. Occasionally (about once every 10 years) the diaphragms and tubing for the aerator systems may need to be replaced. The total cost for replacement parts is approximately \$250. Funding will be secured through NDOW and TU to purchase the replacement parts.

Maintaining any barrier improvements made during the project will take approximately 20 hours per year. The barriers will have to be assessed each year following spring runoff. If any part of the barrier is being actively undermined or eroded, then large cobble, boulders, and/or riprap will be placed in a manner to stop the erosion. All work will be done by hand and not require any heavy machinery. This will be completed by non-SNPLMA funded GRBA staff.

## **I. PROJECT BUDGET**

Please see the attached Excel spreadsheet for budget details.

### Partnership and/or Contributed Funds

NDOW has committed a total of 1,775 hours of staff time and the use of their electrofishing and educational outreach equipment to this project. They will assist GRBA with the brood pond renovation, semiannual maintenance, BCT management, and the “Fishing with a Ranger” program. The total value of their commitment comes to \$94,996.

The Great Basin Chapter of Trout Unlimited has committed to supplying 500 volunteer hours throughout the life of the project valued at \$16,000. These volunteers will assist with the brood pond renovation and semiannual maintenance. Trout Unlimited has also committed the use of various equipment and tools valued at \$600 and plan to pursue \$10,000 worth of Embrace-a-Stream funding that if awarded can be used to purchase materials for the brood pond. Trout Unlimited’s total contribution is \$26,600.

Please see the attached commitment letters and budget for more details.

## **J. KEY CONTACTS**

Authorized Officer: Anita Hansen, Acting Superintendent

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Project Manager: Jonathan Reynolds, Fish Biologist  
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Budget Officer: Anita Hansen, Administrative Officer  
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## K. RANKING CRITERIA

The Ranking Criteria are used to evaluate the nomination against the goals for the Conservation Initiatives category. Nominating entities are not to include either the total point value or the point values by criteria in their responses. Nominations will be reviewed and scored by the Conservation Initiatives subgroup. Explain how the project meets each applicable criterion.

**1. The nomination supports habitat enhancement, cultural resources, environmental health and protection, and/or public health and safety through connectivity and sustainability.** Include as many project subtypes as applicable to your nomination. Points for this criterion will be awarded on how well the nomination addresses the concepts within the factors, and the quality/quantity of results the project provides. The examples identified are not an all-inclusive list.

A. Habitat Enhancement. *The following are examples of project subtypes for habitat enhancement goals, objectives, or actions: Enhances or connects habitats, migratory corridors, or protected areas; Protects endangered species; Proactive steps to prevent listing; Invasive species treatment and/or control (plant and/or animal); Restoration of habitat for sensitive species at the watershed and/or landscape level; Project addresses climate change; Water quality and quantity monitoring; Cave management; Restoration of springs/streams/rivers; Road decommissioning and rehabilitation/restoration; Reintroduction or augmentation of species to restore overall ecosystem; Mitigates impacts of drought.*

**Answer:** BCT are the only trout native to east central Nevada and GRBA. They are a species of special concern as demonstrated by three petitions to list them under the Endangered Species Act. If funded, this project would enhance BCT habitat by (1) Maintaining barriers that control and stop the upstream migration of invasive fish species; (2) Surveying for and if present, treating invasive fish to restore headwater streams back to BCT habitat; and (3) Creating deep water pools that will act as refuges from increasing summertime temperatures and mitigate the impacts of drought. In addition to these actions, this project anticipates removing encroaching conifers from riparian areas and reducing overall fuel loads in the Mill Creek watershed to protect BCT habitat from the threat of catastrophic wildfire. This project will also renovate the only BCT brood pond in Nevada and use it as a source population for much needed BCT reintroductions and augmentations restoring the overall aquatic ecosystems in nearby streams. These reintroductions and augmentations will additionally increase BCT's resilience and

resistance to climate change and wildfire by creating additional populations and expanding their upstream distribution into higher elevations. All these actions are proactive steps to prevent the listing of BCT if they were petitioned again in the future. This project would also monitor water quality and quantity in several GRBA BCT waterbodies.

B. Cultural Resources. *The following are examples of project subtypes for cultural resources goals, objectives, or actions: surveys; National Register (eligible or currently approved); Protection/site stewards; Restoration/stabilization; and tribal involvement in the planning, design and/or implementation.*

**Answer:** This project would fund park ranger patrols to Johnson and Baker Lakes with the goal of educating visitors on proper backcountry etiquette and site stewardship. This will protect BCT habitat, the newly established BCT populations, and many cultural resources. The Johnson Lake Historic Mining District, which is listed on the National Register of Historic Places, consists of several cabins, a mill site, a mine site, and multitudes of smaller artifacts. Park rangers conducting patrols will protect this culturally significant site and its many artifacts by educating and reminding visitors of the proper ways to enjoy cultural resources without impacting them. If necessary, park rangers could document, report, or issue citations for damage to and/or theft of cultural resources located at Johnson Lake. Also, an Anticipated Deliverable of this project is to conduct condition assessment surveys of the Johnson Lake Historic Mining District to determine how and to what extent increased visitation has impacted the site.

BCT are culturally significant to the Goshute Tribe, who call them “Ainkai Painkwi” or red fish. They were an important food source for both the Goshutes and early European pioneers that settled the Bonneville Basin. Therefore, BCT have a culturally significant role in the history of the Great Basin. This project will protect BCT and preserve a natural resource and cultural heritage that is important to past, current, and future generations.

GRBA plans on working with the Great Basin National Park Foundation (GBNPF) to involve local area Tribes in this project. GBNPF has a strong working relationship with the Confederated Tribes of the Goshute Reservation, Ely Shoshone, and Duckwater Shoshone Tribes. GBNPF will deliver this project’s educational program to these communities during the school year and will invite teens from each Tribe to the park to participate in BCT restoration projects during the summer. This program will recognize and prioritize the special relationship local area Tribes have with BCT by inviting youth to be intimately involved with the restoration of this special species. Youth will also be coached on NPS careers and internships while participating in this program. Youth’s families and tribal council members will be invited to a Sharing Circle where participants share what they did and learned with their elders. At the Sharing Circle elders will be invited to share their stories with the group about their relationships (personal and/or cultural) to fish, fishing, and the Great Basin riparian environment.

C. Environmental Health and Protection and/or Public Health and Safety. *The following are examples of project subtypes for public health and safety goals, objectives, or action: Illegal litter/dumping cleanup; Information kiosks and signs; Addresses and mitigates adverse impacts to resources caused by the volume of people using the resource; Resolving trespass/encroachment/illegal use of public lands (i.e. homeless*

*encampments, marijuana grow sites)/boundary surveys; Abandoned mine land (AML) with habitat restoration component; Improve the sustainability of the landscape health and ecosystem function; Remove the threat of catastrophic fire loss of the ecosystem; Improve water quality and/or mitigate the threat of soil erosion.*

**Answer:** Visitation has steadily rose at GRBA over the last 2 decades. In addition to this increase in overall visitation, angling pressure at Baker and Johnson Lakes is expected to increase as fishable populations of BCT are established there. More visitation typically results in increased impacts on the land and resources. This project aims to reduce these human impacts by conducting annual litter clean-ups and park ranger patrols at Baker and Johnson Lakes. These two lakes are the most popular backcountry camping destinations in GRBA. They also encompass sensitive alpine soils and vegetation, BCT habitat, and a historic landscape. Due to the concentration of use at these lakes, adverse effects to both natural and cultural resources as well as public health issues occur each year. The most serious public health issue is visitors illegally defecating too close to the lakes, which are the only sources of drinking water for backcountry campers. These litter clean-ups and patrols would not only remove trash, illegal fire rings, and improperly disposed of human waste; but they would also educate visitors how to be stewards of the land and protect it for future generations to enjoy. This would mitigate the adverse effects of concentrated use and improve the water quality of Baker and Johnson Lakes.

An Anticipated Deliverable of this project is to reduce fuel loads and conifer encroachment throughout the Mill Creek watershed. This would improve riparian conditions and BCT habitat, protect Ponderosa pine groves, and most importantly, reduce the risk of a catastrophic wildfire permanently altering the ecosystem and extirpating a relict BCT population.

**2. The nomination promotes sustainability by providing benefits in the near and long term by implementing actions to conserve and sustain healthy and resilient landscapes and providing durability, and relevancy.**

A. *Conserves resources to ensure availability to current and/or future generations through management of natural and/or cultural resources for public benefit and sustainable social and economic utilization.*

**Answer:** Renovating the only BCT brood pond in Nevada would increase the number of BCT available to stock into White Pine County streams for recreational and conservation purposes. This will produce immediate benefits as the need for a BCT source population has never been higher. Within the last 10 years, three Nevada BCT streams have been devastated by wildfire and many others have been devastated by drought. Four waterbodies are home to recently reintroduced populations that could benefit from augmentations. Currently there are not enough BCT to meet Nevada's augmentation and reintroduction needs. Fishing opportunities in much of Eastern Nevada are scarce. However, the renovation of the brood pond will change that by producing BCT each year that can be used for reintroductions and augmentations throughout Eastern White Pine County. Stocking more BCT in streams that have been negatively affected by wildfire and drought will allow them to recover faster and create a sustainable recreational fishery. This will ensure the availability of one of Nevada's native trout for current and future generations to enjoy. And since fishing is a popular outdoor recreation activity throughout

Nevada, this will also provide sustainable social utilization of the resource. By including the local chapters of Trout Unlimited and other local stakeholders in this process, we will create shared support and a sense of stewardship over the brood pond. This in turn will promote these groups to assist with semiannual maintenance, decrease the long-term costs, and increase the brood ponds longevity and sustainability. In addition, the new BCT populations established during this project will endure and provide lasting benefits for the conservation of the species and the public in both the short- and long-term timeframes.

Ranger patrols will protect various cultural resources at the Johnson Lake Historic Mining District for the enjoyment of current and future generations. Rangers will educate visitors how to enjoy cultural resources without damaging them and can report and/or issue citations for damage to or theft of cultural artifacts if necessary. Also, if the Anticipated Deliverable of conducting condition assessment surveys on the Johnson Lake Historic Mining District is activated, it will produce results that can be used to better manage the site ensuring its availability for future generations.

B. *Will remain relevant and continue to provide a benefit beyond the existence of SNPLMA.*

**Answer:** The new BCT populations established during this project will endure and provide lasting benefits for the conservation of the species long after the SNPLMA program ends. The mission of GRBA is to protect its resources and ecosystem processes “unimpaired for future generations”. BCT are one of these resources and having populations of this native trout within GRBA’s boundaries will always be a priority. Due to the park’s mission statement and the cultural connection between BCT and the Goshute people, the conservation efforts made possible by this project will always remain relevant even after the SNPLMA program ceases to exist.

The newly renovated brood pond will continue to produce BCT for recreational fishing and conservation purposes indefinitely. Trout Unlimited, NDOW, GRBA, BLM, and local stakeholders all support brood pond’s existence and continued maintenance. By including all these stakeholders in the process, we will create shared support and a sense of stewardship over the brood pond. This in turn will decrease the long-term costs and increase its sustainability. NDOW and the NPS will have a source of BCT dedicated to performing reintroductions, augmentations, and recreational stocking as needed. This will allow streams to recover from wildfire, drought, and other environmental factors more quickly and ensure that high quality fishing opportunities will exist throughout Eastern White Pine County. Recreational fishing has been and always will be an important outdoor recreational activity in Nevada, thus supporting recreational fisheries will remain relevant long after this project is completed and the SNPLMA program no longer exists.

C. *Conserves or restores the functionality, resilience, and integrity of biological communities.*

**Answer:** This project will aim to restore and maintain the functionality, resilience, and integrity of the aquatic and riparian biological communities within GRBA and Eastern White

Pine County. New populations of BCT will be established and a brood pond will be renovated. BCT from both will be used to restock streams that have been devastated by wildfire and drought increasing the resilience of Nevada's BCT populations. Habitat improvements and restoration actions will be completed in park watersheds that have been affected by improper fire management. Additional instream structures will be installed in the recently burned Strawberry Creek to reduce downward incision, promote channel complexity, maintain connection between the water table and nearby wet meadows, reduce sedimentation, and improve BCT habitat. Conifer removal and fuels reductions in Mill Creek would lay the groundwork for allowing "good" natural wildfire back on to the landscape while reducing the risk of a large, high intensity, devastating wildfire. The goal of these habitat restoration actions is to return these watersheds back to proper functioning conditions and to restore natural processes that currently are not present. This in turn can increase the integrity of the entire watershed.

D. *Conserves or restores cultural resources through prudent management and prevention of damage, injury, decay, waste, or loss.*

**Answer:** This project would fund park ranger patrols to Johnson Lake with the goal of interacting with and educating visitors on proper backcountry etiquette and site stewardship. The Johnson Lake Historic Mining District is listed on the National Register of Historic Places and consists of several cabins, a mill site, a mine site, and many other smaller artifacts. Park rangers conducting patrols will protect this culturally significant site and its many artifacts from damage, injury, and loss by educating and reminding visitors of the proper ways to enjoy cultural resources without impacting them. If necessary, park rangers could document, report, and/or issue citations for blatant disregard of rules and regulations and/or damage to the cultural resources located at Johnson Lake. If the Anticipated Deliverable of conducting condition assessment surveys at the Johnson Lake Historic Mining District is activated, they will produce results that will allow GRBA to better manage the site protecting it further from decay, waste, and loss.

**3. The nomination promotes community, connecting humans to engage in the protection and the integrity of biological communities or cultural sites. Encourages people to connect with habitats, migratory corridors, protected areas, etc., and to appreciate and care for the environment.**

A. *Encourages people to meaningfully connect with their natural environment and helps them appreciate and be a steward for the environment. Provides information and resources to educate and engage people in understanding their role in protection and maintenance of the natural environment by providing opportunities for them to connect to the natural resources directly or virtually, or provides education of the environment.*

**Answer:** Fishing has been shown to benefit people and society by offering an outlet to relax, get outdoors, breathe fresh air, and improve one's self-esteem. The "Fishing with a Ranger" program will connect visitors directly with the natural environment and forge a meaningful connection with their cold-water fisheries. This program will be designed for park visitors that are interested in fishing but have limited experience and/or opportunity to do so. Providing basic fishing gear for participants to borrow will promote participation by all, even

visitors that do not own or cannot afford fishing gear. The park will also invite various groups from underserved communities to participate. The rangers will provide basic fishing tips and instructions as well as an educational message on why aquatic resources are important, deserve protection, and how we can all do our part to preserve pristine water quality and cold-water fisheries. Participants will have a chance to practice their newly learned skills in a controlled environment and then head to the stream to fish. If they do catch a fish, it will be up to them whether they want to release it or keep and eat it. Depending on interest, the program may expand to offer basic fish cleaning, preparation, and cooking instructions and/or advanced fly fishing lessons. This program has the potential to leave first time anglers with lifelong memories and instill a passion for protecting our cold-water resources. All Nevada Fishing Regulations will be followed.

Stocking fish at easily accessible locations along Snake and Lehman Creeks will also forge meaningful connections between park visitors and the natural environment. Fish stocked at ADA accessible decks may be the only fish some visitors get to see, adding excitement and enjoyment to their visit. This paired with our park's standard educational outreach and existing wayside exhibits will engage visitors in understanding their role in and the importance of protecting our valuable natural resources.

Ranger patrols at Baker and Johnson Lakes will be another platform to engage the public while they are forming connections with the natural world. Rangers will primarily focus on outreach, educating visitors about the fragile alpine environment, BCT habitat, and cultural resources. They will also remind them how we all can do our part to recreate responsibly and leave minimal impacts on the environment.

Lastly, our educational program will produce videos for students to view as part of their curriculum and promote school field trips to GRBA. The videos will allow student across Nevada to virtually connect to the natural environment of the Great Basin while the field trips will allow students to form a direct connection to the resources. Curriculum will include information about restoration and ecology as well as why we should do our part to protect the environment. As part of the educational program, middle and high school students from local area tribes will be invited to assist with BCT restoration projects. These tribes have a cultural connection to BCT and our hope is that it will be meaningful for them to get hands on experience working with this resource.

*B. The nomination clearly defines and includes a stewardship component (federal or non-federal) to broaden support and reduce long-term costs by minimizing the human impact on the environment through an education plan with clear curricula and achievable goals and objectives.*

**Answer:** Our nonprofit partner, Great Basin National Park Foundation (GBNPF), will assist GRBA create and implement a new education program that utilizes the story of BCT to teach students the importance of minimizing impacts on the environment. Next-Generation Science Standard (NGSS) ecology lessons will be given to Nevadan elementary, middle, and high school students. GBNPF's education program curriculum, objectives, goals, and dissemination will be as follows:



### Third and Fourth Grade Elementary students

1. GBNPF will work with GRBA's fish biologist to create a 5 minute video which teaches elementary students why native species are specially adapted to the Great Basin and what steps GRBA has taken to reintroduce BCT into the landscape. The video will support a new lesson sequence for the 3rd grade that GBNPF will create. The lesson sequence will support the following NGSS standards:

- 3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all
- 3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change
- 4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction

2. GBNPF will utilize their established partnership with PBS Reno Curiosity Classroom to offer the 3rd grade lesson to schools throughout Nevada. Currently PBS Reno reaches 50,000 Nevadan students each year with this program. The lesson in classroom program will include all materials and primarily reach Title 1 schools.

3. GBNPF will incorporate the new lessons into their 4th grade educational program. The current 4th grade program includes 7 lessons that teach students geology, ecology, and introduce the science of climate change through specific Great Basin examples. For local schools in White Pine County, the sequence culminates with a field trip to GRBA as part of the "Every Kid in the Park" program. GBNPF will add 1-3 lessons to their lesson plan sequence to teach the story of BCT. The story will weave through lessons on animal adaptations, water quality and quantity in the Great Basin, and landscape changes due to climate change. During the park field trip, students will visit a riparian area to do hands-on investigation making the trout's story come alive.

### Middle and High School Students

1. GBNPF will work with GRBA to develop a lesson sequence that supports NGSS biology and ecology standards. The lessons will invite students to analyze historic maps, park data, and the prehistoric record. Students will learn through analyzing data and discussion; the importance of preserving water quality and quantity in the Great Basin, the mechanics of stream and riparian restoration, the lifecycle of the BCT, how native and nonnative species affect the environment, and how climate change is affecting the Great Basin. Students will become land managers and make their own decision on how to utilize what they have learned to maintain a natural, functioning environment which includes the importance of humans enjoying and stewarding the natural world.

2. GBNPF will work with GRBA to create several videos to support this lesson sequence.

3. GRBA and GBNPF will make this curriculum available for free on our websites and GBNPF will market this curriculum to schools throughout Nevada. GBNPF will support this lesson sequence through offering virtual programs to schools throughout Nevada. The virtual programs will be 40 minutes in length, include 25-30 minutes of presentation, and allow 10-15 minutes for

students Q&A. GBNPF currently offers virtual programs on Lehman Caves throughout Nevada which serve over 1,000 students each year, the majority of whom attend Title 1 schools.

4. GBNPF has a strong working relationship with the three Native American Tribes that consult with the park (Ely Shoshone, Duckwater Shoshone, and Confederated Tribes of the Goshute Reservation). GBNPF will deliver the above educational programs to these communities during the school year. In the summer GBNPF will bring teens from each Tribe to the park to participate in our BCT restoration project. The tribal communities have a special relationship with the BCT as it was an important food source for many native people throughout the region. We want to prioritize and recognize this special relationship by inviting youth to be intimately involved with restoration of this special species. Youth will also be coached on NPS careers and internships while participating in this program. Youth's families and tribal council members will be invited to a Sharing Circle where participants share what they did and learned with their elders. At the Sharing Circle elders will be invited to share their stories with the group about their relationships (personal and/or cultural) to fish, fishing, and the Great Basin riparian environment.

C. *Preserves the past (cultural or historic sites) for present or future generations.*

**Answer:** This project would fund park ranger patrols to Johnson Lake with the goal of interacting with and educating visitors on proper backcountry etiquette and site stewardship. The Johnson Lake Historic Mining District consists of several cabins, a mill site, a mine site, and many other smaller artifacts. Park rangers conducting patrols will protect this culturally significant site and its many artifacts by educating and reminding visitors of the proper ways to enjoy cultural resources without damaging them. If necessary, park rangers could document, report, and/or issue citations for blatant disregard of rules and regulations and/or damage to the cultural resources located at Johnson Lake. If the Anticipated Deliverable of conducting condition assessment surveys at the Johnson Lake Historic Mining District is activated, it will produce results that will allow GRBA to better manage the site. These actions will ensure this Nation Register of Historic Places site is properly preserved for present and future generations.

**4. The nomination enhances partnerships to promote cooperation, collaboration, and stewardship. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project.**

A. *The nomination promotes partnerships to promote collaboration which addresses and meets the needs of more than one agency (federal or state).*

**Answer:** This project promotes collaboration with and addresses the needs of multiple agencies including the Nevada Department of Wildlife (NDOW), Bureau of Land Management (BLM), and National Park Service (NPS). This project will promote native species conservation, environmental education, and outdoor recreational opportunities, which are core values to each of the three agencies listed above. NDOW has been invested in BCT conservation for over three decades and this project aligns with their mission to manage and conserve wildlife along with enhancing recreational angling and wildlife education opportunities. The BLM considers BCT a sensitive species that requires special consideration for conservation, maintenance, and

restoration activities and will benefit from the renovation of the BCT brood pond. The NPS has received a letter of support from the BLM and a letter of support and commitment to contribute funds from NDOW. Please see these letters for more details.

*B. The nomination involves non-Federal, public partners, citizen groups or organizations in the development or accomplishment of resource management goals and other activities to prevent waste, damage, or neglect.*

**Answer:** This project involves non-federal organizations such as Trout Unlimited, the Back Country Horsemen of Nevada, the Great Basin National Park Foundation (GBNPF), and local stakeholders. GRBA will also extend invitations to participate on this project to local area Tribes and the Friends of Nevada Wilderness. All parties will be working towards accomplishing fisheries management goals and preventing damage to other natural resources. Specifically, Trout Unlimited assisted with developing management goals for the BCT brood pond and has committed to assisting with its renovation, GBNPF has committed to developing and implementing an educational program with a theme of reducing human impact on the environment, and the Friends of Nevada Wilderness will be invited to assist with the litter clean-ups reducing damage to and neglect of resources at Baker and Johnson Lakes. The Back Country Horsemen of Nevada are currently working with GRBA on other projects, and they are excited to help haul trash from Baker and Johnson Lakes if needed.

*C. Project has support for the planning, design, and/or implementation from non-profit, local, or state government, academia, tribal, or youth initiatives.*

**Answer:** Trout Unlimited, a national nonprofit organization, is excited to be involved with planning, designing, and implementing the BCT brood pond renovation and the “Fishing with a Ranger” program. The Great Basin National Park Foundation is a nonprofit organization that will design and implement an education plan and curricula to be taught in Nevada schools. GBNPF also has a good working relationship with local area Tribes and plans on inviting them to attend field trips to GRBA to participate in restoration projects. NDOW is a state agency that supports all deliverables that involve the restoration and conservation of BCT habitat and populations as well as the “Fishing with a Ranger” program. Preliminary planning meetings have already been held with all the above organizations, they all participated in designing the project, and they all have committed to assisting with the project implementation.

*D. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project, (i.e., volunteer labor valuation to be computed at the rate used by the Department of the Interior, non-federal employees’ actual hourly rate plus the value of any fringe benefits received, actual costs for material, equipment, and supplies. **Overhead costs may not be included in determining in-kind contributions.***

**Answer:** This nomination has identified \$121,596 of committed non-SNPLMA, non-Federal sources of funding and in-kind contributions in the development and implementation of the project. Trout Unlimited has committed 500 volunteer hours valued at \$16,000. They have also committed the use of \$600 worth of their equipment and are applying for an Embrace-A-

Stream grant that will be used to purchase \$10,000 of supplies for the BCT Brood Pond. NDOW has committed 1,775 hours of labor and the use of their electrofishing equipment for a combined total value of \$94,996.

## L. ORDERS AND PRIORITIES

Respond to the Executive Orders, Secretarial Orders, Department of the Interior Priorities, and USDA Forest Service Priorities as they apply to the purpose of the nomination.

### A. Executive Orders (EO):

- ***EO No. 13855: Promoting Active Management of America's Forests, Range Lands to Improve Conditions and Reduce Wildfire Risk***

The Anticipated Deliverable of "Conduct conifer removal / fuels reduction treatments in the Mill Creek watershed" would support EO No. 13855 by actively managing NPS lands to reduce the risk of and intensity of wildfire. The Primary Deliverable of "Restore and/or improve up to 5 stream miles of habitat for BCT" would also support EO No. 13855 by assisting in the restoration of a burned watershed on NPS managed lands.

- ***EO No. 14004: Ensuring the Future is Made in All of America by All of America's Workers***

This project will support maximizing the government's use of goods, products, and materials produced in, and services offered in, the United States. Whenever possible, American made products and services will be purchased and utilized in order to help America's workers thrive.

- ***EO No. 14063: Use of Project Labor Agreements for Federal Construction Projects (applicable to projects estimated at \$35 million or more)***

This project is well under the \$35 million dollar threshold and therefore this Executive Order is not applicable.

- ***EO No. 14072: Strengthening the Nation's Forests, Communities, and Local Economies***

Increasing recreational fishing opportunities, providing quality programs for the public to attend, and keeping popular backcountry camping destinations clean will ensure that visitors continue to travel to and enjoy Great Basin National Park. This will in turn strengthen the local economy of the surrounding rural communities by providing much needed tourism dollars.

- ***EO No. 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All***

This project will involve local stakeholders and invite local Tribes to participate in the planning

and implementation of several deliverables. Also, the “Fishing with a Ranger” programs allow members of the public that cannot afford fishing gear to borrow it and will extend invitations for groups from underserved communities to participate.

#### B. Secretarial Orders

- ***SO No. 3347: Conservation Stewardship and Outdoor Recreation.***

The goals of this project are to improve recreational fishing opportunities, conserve BCT, and promote a sense stewardship through active management, partnerships, and educational outreach. These goals directly support SO No. 3347’s purpose of enhancing conservation stewardship, increasing outdoor recreation, and improving the management of game species and their habitat.

- ***SO No. 3356: Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories.***

This project will support SO No. 3356 by promoting outdoor recreation, proper management of game species and their habitat, and conservation stewardship. It will also support this Secretarial Order by engaging youth with the “Fishing with a Ranger Program”. Lastly, this project aims to collaborate with state and tribal partners.

- ***SO No. 3362: Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors.***

Not Applicable.

- ***SO No. 3366: Increasing Recreational Opportunities on Lands and Waters Managed by the U.S. Department of the Interior***

This project will increase recreational opportunities on U.S. Department of Interior lands by creating up to 4 new fishing access sites (Anticipated Deliverable), stocking native and nonnative trout in easily accessible areas, and conducting “Fishing with a Ranger” programs at Great Basin National Park.

- ***SO No. 3370: Conservation Stewardship and Increasing Public Access to Urban National Wildlife Refuges.***

Not Applicable.

- ***SO No. 3372: Reducing Wildfire Risks on Department of the Interior Land Through Active Management.***

The Anticipated Deliverable of “Conduct conifer removal / fuels reduction treatments in the Mill Creek watershed” would support SO No. 3372 by actively managing NPS lands to reduce the

risk of and intensity of wildfire in the Mill Creek Drainage. The Primary Deliverable of “Restore and/or improve up to 5 stream miles of habitat for BCT” would also support this Secretarial Order by assisting in the restoration of Strawberry Creek, a watershed that is still recovering from a wildfire.

- ***SO No. 3373: Evaluating Public Access in Bureau of Land Management Public Land Disposal and Exchanges (focus is on Sec. 4.b.(3) Potential increased public recreational access to existing public lands resulting from the proposed land acquired through an exchange (acquisition).***

Not Applicable.

- ***SO No. 3376: Increasing Recreational Opportunities through the use of Electric Bikes.***

Not Applicable.

C. Department of the Interior Priorities:

- ***Identifying steps to accelerate responsible development of renewable energy on public lands and waters. We are investing in climate research and environmental innovation to incentivize the rapid deployment of clean energy solutions, while reviewing existing programs to restore balance on America’s public lands and waters to benefit current and future generations.***

Not Applicable.

- ***Strengthening the government-to-government relationship with sovereign Tribal Nations. We understand that tribal sovereignty and self-governance, as well as honoring the federal trust responsibility to Tribal Nations, must be the cornerstones of federal Indian policy.***

This project will involve local Tribes. GBNPF is designing our education program and already has an established relationship of working with three local area Tribes. GBNPF will invite middle and high school students from these local Tribes to assist with GRBA’s BCT restoration projects. This program has the potential to lay the foundation for building good working relationships between GRBA and local Tribes.

- ***Making investments to support the Administration’s goal of creating millions of family-supporting and union jobs. This includes establishing a new Climate Conservation Corps Initiative to put a new generation of Americans to work conserving and restoring public lands and waters, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate.***

Not Applicable.

- ***Working to conserve at least 30% each of our lands and waters by the year 2030.*** *We will work to protect biodiversity, slow extinction rates, and help leverage natural climate solutions by conserving 30% of America's lands and waters by 2030. This relies on support for local, state, private, and tribally led conservation and restoration efforts that are underway across America.*

This project will protect aquatic and riparian biodiversity by improving stream habitat, reducing fuel loading and conifer encroachment, and conducting post fire restoration. It will also take conservation measures that will reduce the risk of extirpation of BCT from the State of Nevada. These efforts will occur on lands and waters that are protected by the NPS and are consistent with the 30% conservation goal.

- ***Centering equity and environmental justice.*** *The impacts of the multiple crises in the United States are not evenly distributed in our society. Communities of color, low-income families, and rural and indigenous communities have long suffered disproportionate and cumulative harm from air pollution, water pollution, and toxic sites. At every step of the way, Interior will engage diverse stakeholders across the country, as well as conduct formal consultation with Tribes in recognition of the U.S. government's trust responsibilities.*

This project will extend invitations to three local area Tribes to participate in BCT restoration projects, conduct formal consultation with Tribes, and has considered input from local stakeholders during the preliminary planning phase. This project will also provide recreational fishing opportunities to visitors that cannot afford fishing gear and to members of underserved communities.

#### D. USDA Forest Service Priorities:

- ***Controlling the COVID-19 pandemic***

It is easier for people to socially distance and less likely they will contract COVID-19 when they are recreating outside. By promoting outdoor recreation opportunities such as fishing during times of high COVID-19 transmission rates, this project may slow the spread of the disease and provide the public with a safe alternative to indoor activities.

- ***Providing economic relief***

Not Applicable.

- ***Tackling climate change***

The purpose of this project is to make recreational fishing and BCT conservation within the State of Nevada more sustainable in the face of climate change. Additional conservation populations of BCT and a BCT brood pond will be established to decrease their risk of extirpation due to drought and wildfire. Habitat improvements will create deep water refuges from increasing

temperatures and decreasing stream flows. These deep water habitat improves could have the potential to increase stream flows during the driest part of the year.

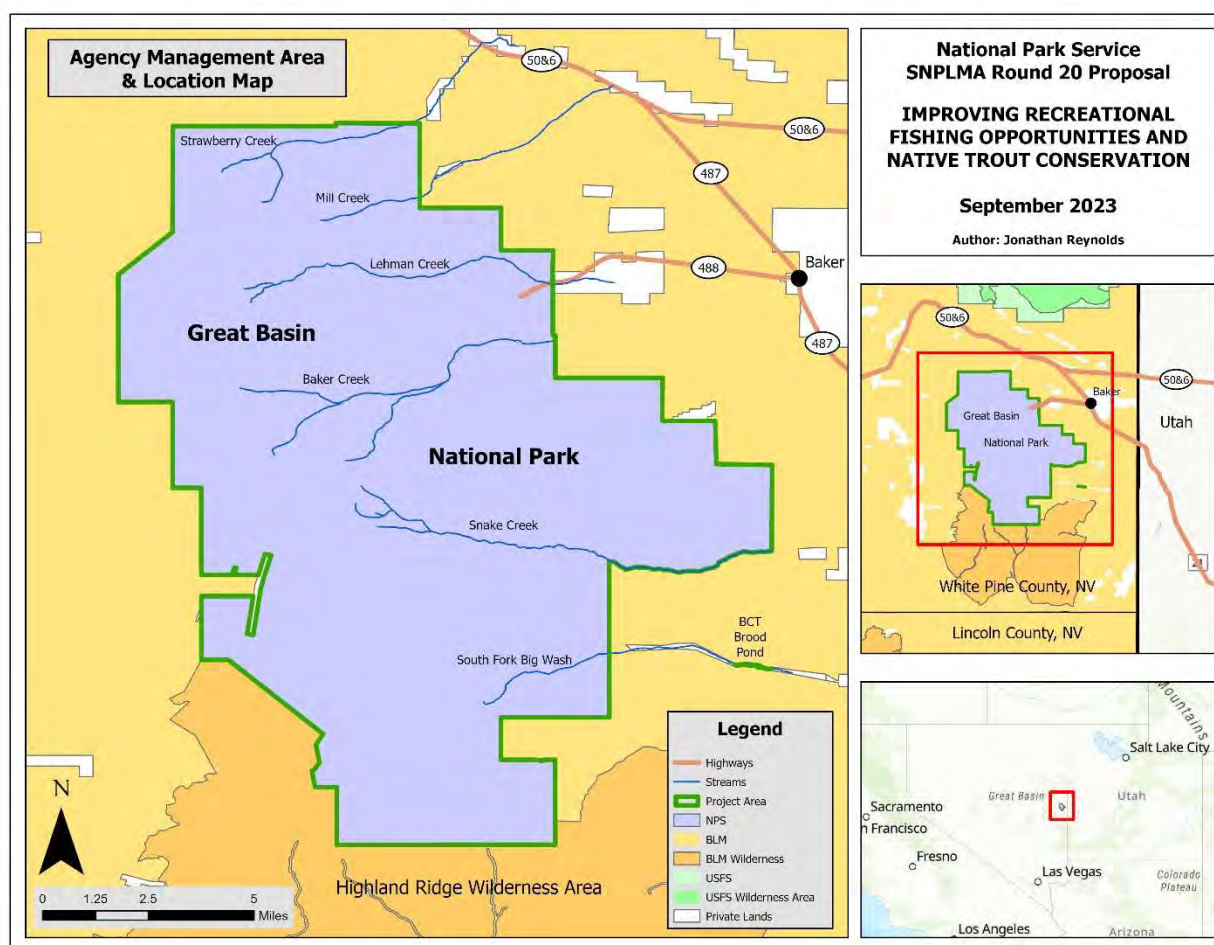
- *Advancing racial equity*

Not Applicable.

- *Improving our workforce and work environment*

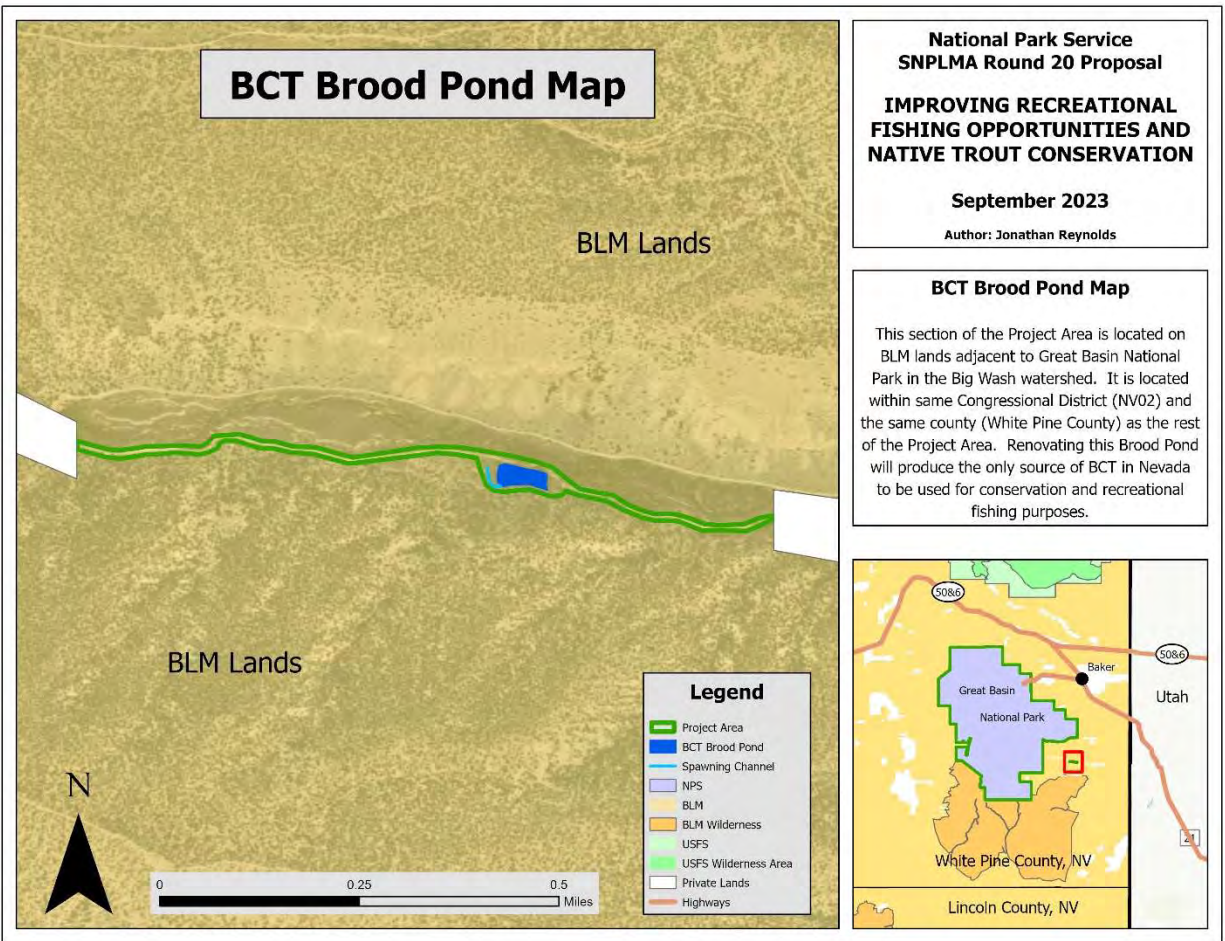
Not Applicable.

## M. MAPS

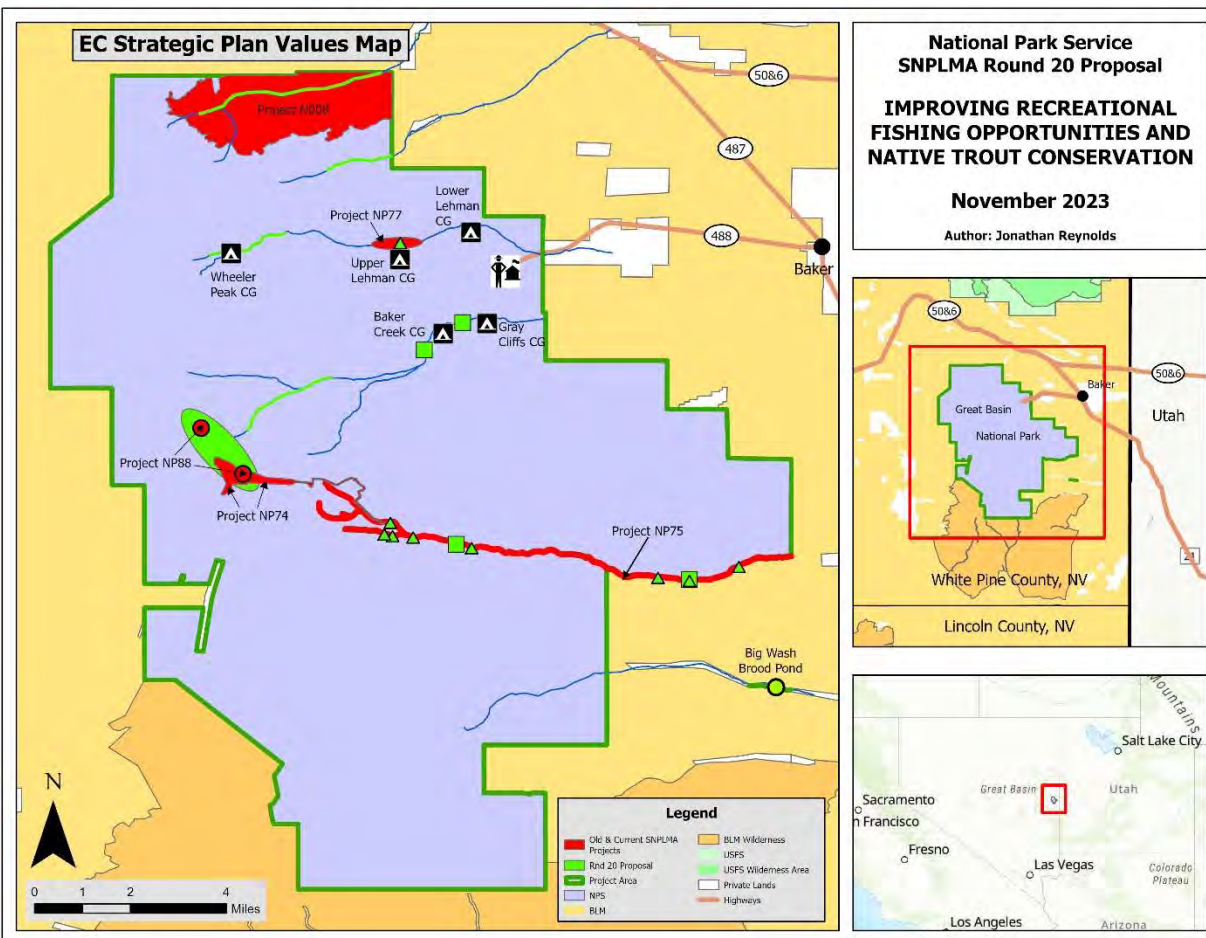


Map 1. Agency Management Area and Location Map – This map shows the entire project area which consists of Great Basin National Park and a section of adjacent BLM land located in the Big Wash watershed. The project area is in White Pine County, NV.





Map 2. BCT Brood Pond Map – This map is a close-up of the section of BLM land that is included in the project area. It shows the BCT brood pond, spawning channel, and access road. A Categorical Exclusion has already been completed to renovate the pond and spawning channel.



Map 3. EC Strategic Plan Values Map – This map shows how the proposed project is connected to current and old SNPLMA projects and the proximity of the proposed project to campgrounds, a visitor center, and the town of Baker. The proposed project is in bright green and the current and old project are in red. The green circle is the location of the BCT brood pond that will produce BCT to be stocked in Snake Creek and recently restored/improved habitat during the project. It will persist long after this project is over and will be used to stock BCT throughout Eastern White Pine County streams. The green triangles are where fish will be stocked at various campsites throughout Snake Creek and ADA compliant decks in Snake and Lehman Creeks to increase visitor enjoyment and recreational fishing opportunities. The green oval is where the park ranger patrols and litter clean ups will occur to protect cultural resources, natural resources, and the safety of the public visiting Baker and Johnson Lakes. The green stream sections are locations that will be considered for BCT habitat improvements, restoration, and reintroductions. Lastly, the green squares are potential sites to install new fishing access sites within the park.







## Photo Descriptions

### **Photo 1. Brood Pond**

This photo shows the BCT brood pond located on BLM lands in the Big Wash watershed. The peaks in the background are located within Great Basin National Park. This BCT brood pond has suffered from years of neglect and is in desperate need of renovation. The windmill aerator that can be seen on the far side of the pond needs to be rebuilt or replaced. The pond needs to be dredged. The spawning channel needs to be regraded, cleaned of silt, and re-graveled. This project will not only renovate the brood pond producing the only broodstock of BCT in Nevada, but it will also involve several local stakeholders (local property owners, Trout Unlimited, NDOW, BLM, NPS) to create a sense of shared stewardship over the pond. These stakeholders will work together beyond the life of this project to perform semi-annual maintenance on the renovated BCT brood pond to ensure it does not fall into disrepair again. The renovated pond and spawning channel will produce BCT that will be stocked into White Pine County streams for decades to come.

### **Photo 2. Brood Pond Aquatic Vegetation**

This photo shows that much of the pond has become shallow and full of aquatic vegetation. During the hottest part of the summer, trout need access to deep, cold water refuges in order to survive. These deep areas no longer exist due to years of neglect, siltation, and vegetation building up at the bottom of the pond. Each winter the aquatic vegetation seen in this photo dies and decomposes. This decomposition consumes oxygen in the water and can produce fish kills. Dredging the pond will produce the deeper, colder water trout need to survive during the summer and will decrease the growth of vegetation. Semi-annual maintenance will remove aquatic vegetation from the pond before it builds up and decomposes.

### **Photo 3. Snake Creek Fishing Deck**

This photo shows the ADA compliant fishing deck located in Snake Creek. This is one of the locations that native BCT will be stocked during the project to increase recreational angling opportunities and visitor enjoyment. BCT will be stocked at several other locations along Snake Creek including every campsite and at trailheads.

### **Photo 4. Lehman Wetlands Observation Deck**

This is the ADA compliant observation deck located in the Upper Lehman Campground. Stone stairs on the right-hand side of the deck lead down to the stream channel that flows immediately in front of/below the deck. Wild trout will be stocked/translocated into this stream channel to increase visitor enjoyment and recreational angling opportunities. Fish near this observation deck are often the only

fish that non-angling members of the public can easily see, offering visitors a chance to watch aquatic wildlife in their natural environment.

#### **Photo 5. Historic Structure**

This is one of the six historic structures within the Johnson Lake Historic Mining District that will be protected by ranger patrols at Baker and Johnson Lakes. This log cabin used to be the cookhouse for a mining operation and is located within eyesight of Johnson Lake. There are over 1,000 smaller artifacts that are scattered throughout the area that will also be protected by these ranger patrols.

#### **Photo 6. Trash at Baker Lake**

Baker and Johnson Lakes are the most popular backcountry destinations in Great Basin National Park. Unfortunately, this is an all-too-common site at Baker and Johnson Lakes. This photo shows improperly disposed of toilet paper, feces, and litter/trash left behind in the form of a pair of shorts. Other issues at these lakes include illegal fire rings, fishing violations, and camping too close to the lakeshore. This project will conduct annual litter clean-ups at both lakes to protect human health and the integrity of the fragile alpine biological community. These litter clean-ups paired with ranger patrols focused on educational outreach will eliminate many of the natural resource, cultural resource, and human health issues we see at these lakes.

## SNPLMA ROUND 19 NOMINATION Conservation Initiatives

### Performance Measures

<b>SNPLMA STRATEGIC PLAN GOAL 1: Sustain the Quality of the Outdoor Environment by Conserving, Preserving, and Restoring Natural and Cultural Resources</b>		
<b>Performance Measures for Habitat Enhancement</b>	<b>Definition of Performance Measure</b>	<b>Quantity</b>
H1 - Acres of Land Identified for Withdrawal from Multiple Use	<p>Report the number of acres of land identified for withdrawal or withdrawn from multiple use management (e.g., as the result of a cultural or biological survey, etc.).</p> <p>Report the number of acres of specially designated areas such as a wilderness area, national recreation or conservation area that are automatically withdrawn from multiple use or where use is limited as a consequence of acquisition using SNPLMA funds. Land acquired in an ACEC is not automatically withdrawn from multiple use and should be reported under L1 only.</p> <p>Report to the nearest whole acre.</p>	
H2 - Miles of Riparian Stream or Shoreline Habitat Treated, Enhanced, or Restored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the miles have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as those should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as those should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole mile.</p>	Up to 5
H3 - Miles of Riparian Stream or Shoreline Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole mile.</p>	Up to 10
H4 - Acres of Upland Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of upland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland</p>	



	<p>fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	
H5 - Acres of Upland Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of upland vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole acre.</p>	
H6 - Acres of Wetland / Riparian Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of wetland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	
H7 - Acres of Wetland / Riparian Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of wetland vegetation and/or wildlife habitats inventoried or monitored.</p> <p>Report to the nearest whole acre.</p>	
H8 - Number of Water Developments Constructed or Improved for Wildlife	<p>Report the number of water developments for use by wildlife constructed or improved/repared within all habitat types. Existing projects may be counted under this performance measure if functional improvements/repairs are made as defined in the project nomination.</p> <p>Report each development constructed or improved as one unit (e.g., one project may have three water developments).</p>	
H9 - Acres of Invasive Plant Species Treated or Restored	<p>Report the number of acres of weed infestation treated with chemical, mechanical, physical, or biological control agents for the purpose of weed control. Include acres treated by fire when fire is used as a physical control agent for weed control rather than as a hazardous fuels treatment. Each acre treated is counted only once during the life of the project, no matter how many re-treatments occurred during the project.</p> <p>Report to the nearest whole acre.</p>	
H10 - Acres of Invasive Plant Species Surveyed, Inventoried, or Monitored	<p>Report the number of acres of weed infestation inventoried or monitored. Include monitoring of weed treatment projects reported under performance measure H9.</p> <p>Report to the nearest whole acre.</p>	

H12 - Acres of Herd Management Areas Surveyed, Inventoried, or Monitored	Report the number of acres of wild horse and burro herd management areas or herd areas surveyed, inventoried, or monitored. Report to the nearest whole acre.	
H13 - Number of Conservation or Protection Actions Taken within a Herd Management Area	Report the number of actions taken within a wild horse and burro herd management area to conserve or protect the area for the benefit of the herd (e.g., fences, water developments, vegetative treatments). Report each action as one unit.	
H14 - Number of Threatened and Endangered Species Recovery Actions Implemented	Report the number of individual recovery actions performed for threatened or endangered species recovery as identified in recovery plans, conservation management plans, or land use planning documents. Include surveys, inventories, and monitoring as recovery actions. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same recovery action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	
H15- Number of Conservation Actions Implemented for Non-Listed Species	Report the number of individual conservation actions for species not listed under the Endangered Species Act. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same conservation action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	Approx. 6
H16 - Miles of Roads or Trails Decommissioned and/or Rehabilitated	Report the number of miles of roads and/or trails decommissioned and/or rehabilitated within all habitats (urban, upland, riparian, stream, trails in caves, etc.). Closure may include designation, signing, blockage by physical means, obliteration, etc. Report to the nearest whole mile.	
H17 – Miles of Roads or Trails Surveyed, Inventoried, or Monitored	Report the number of miles of roads and/or trails inventoried or monitored. Report to the nearest whole mile or linear foot. Report to the nearest whole mile.	

Performance Measures for Wildland Fire Management	Definition of Performance Measure	Quantity
F1 - Acres of Hazardous Fuels Treated – Non-Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency outside the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	Up to 250 (Anticipated Deliverable)
F2 - Acres of Hazardous Fuels Treated – Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency within the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	

Performance Measures for Cultural / Paleontological Resources	Definition of Performance Measures	Quantity
C1 - Number of Cultural or Historic Sites or Structures Stabilized or Protected	Report the number (one unit for each site or each structure) where work is completed to protect, stabilize, restore, excavate, and/or manage cultural features. For sites receiving multiple treatments, count each site only once, but if multiple structures are on a site, count each structure separately. For example, an archeological dig site would be counted as one although multiple excavations may take place on the site, whereas a site having remnants of three separate dwellings would be counted as three. Report installation of interpretive signs and structures (e.g., kiosk displays) under O6. Report administrative actions such as mineral withdrawals, closures, or special designations under H1. Report each site or structure as one unit.	6
C2 - Number of Cultural or Paleontological Artifacts Protected	Report the number of cultural and/or paleontological artifacts protected, stabilized, or catalogued. Report one unit for each repatriation or transfer of custody of Native American human remains, funerary objects, sacred objects, and/or objects of cultural patrimony (cultural items) held in collections, pursuant to Title 43 CFR Part 10.10.; each instance in which all requirements of Title 43 CFR Part 10.10 have been met but where actual repatriation has not been completed because of decisions made by lineal descendants or Indian tribes or lack of a valid claim; and reburial of repatriated cultural items on BLM public lands. Report the number of accessions cataloged, inventoried, rehoused and/or otherwise	1,000+

	<p>upgraded. Materials from several sites or localities that are accessioned and cataloged under a single accession number should be considered one unit. An accession for which any one or more of the tasks of cataloging, inventorying, or upgrading has been completed should be reported as one unit.</p> <p>Report each artifact as one unit.</p>	
C3 - Acres of Cultural / Paleontological Resources Surveyed, Inventoried or Monitored	<p>Report the number of acres of land surveyed, inventoried, or monitored for cultural and/or paleontological resources. Include acres surveyed using Class I study of existing information inventory, Class II probabilistic field survey, or Class III intensive field survey and resultant inventory as required by Section 14 of the Archaeological Resources Protection Act (ARPA) or Section 110 of the National Historic Preservation Act (NHPA).</p> <p>Report to the nearest whole acre.</p>	Up to 251 (Anticipated Deliverable)

<b>SNPLMA STRATEGIC PLAN: Other Performance Measures that Also Support the Three Values for SNPLMA Implementation of Sustainability, Connectivity, and Community</b>		
<b>Other Performance Measures</b>	<b>Definition of Performance Measures</b>	<b>Quantity</b>
O1 - Number of Hazardous Sites Remediated	<p>Report the number of hazardous sites where remediation actions are completed. Actions to be included are: removal of safety hazards, clean-up operations, restoration actions, and water quality remediation actions. Do not report temporary remediation measures.</p> <p>Report each site as one unit. When applicable, also report total weight of trash removed during clean-up operations.</p>	
O3 - Number of Law Enforcement Patrols, Incident Reports, Investigations	<p>Report the number of law enforcement patrol actions, incident reports taken, and investigations conducted.</p> <p>Report each item as one unit.</p>	Possibly 30+ (Ranger patrols will either be LE or RM staff)
O4 - Number of Scientific / Technical Reports Produced	<p>Report the number of scientific technical reports produced.</p> <p>Report each report as one unit.</p>	
O5 - Number of Outreach Contacts Made	<p>Report the number of education and outreach contacts made through interpretation and environmental education, such as number of teachers trained, number of participants in workshops, etc.</p> <p>Report each participant as one unit.</p>	Approx. 500
O6 - Number of New Interpretive or Education Publications/Signs/ Kiosks/Displays/etc. Produced	<p>Report the number of new interpretive or education publications produced, signs produced and installed, public informational websites or other electronic media presentations designed and implemented, and</p>	

	informational or interpretive kiosk displays produced and installed. Report each item produced as one unit.	
O7 - Number of Interpretive or Education Presentations Given and/or Community Events Participated in or hosted	Report the number of interpretive or educational presentations given. Report each presentation as one unit.	16-40
O9 – Number of GIS Databases Generated and/or Map Layers Produced	Report the number of GIS databases created and/or the number of map layers produced to identify the location of natural resources within the environment and provide mapping for use in educational programs. Report each database or map layer as one unit.	1 (Anticipated Deliverable)
O10 – Number of Volunteers Used	Report the number of volunteers used in educational or interpretive programs and for surveying, monitoring, or restoration activities. Report each volunteer as one unit.	15-50
O11 – Number of Databases, Reports, and Other Electronic Means of Documenting Activities	Report the number of new databases, electronic reporting tools, mathematical/statistical models, websites, or reports developed and implemented to document project and/or program work. Report each electronic document or method developed as one unit.	
O12 – Number of Management Plans/Handbooks/Manuals/Guides for Activity on Public Lands Completed (formerly under H11, F3, C4, and R1)	Report the number of new or revised ecosystem restoration, hazardous fuels reduction, recreation, cultural, resource management, or other activity plans when the decision document for the plan is signed. Revisions include modification of a significant portion of the decisions in the activity plan. Do not report minor amendments or changes in these plans. Report each plan as one unit.	

### **Glossary**

**Accession** – One or more objects and/or specimens acquired in the same manner from one source at one time for the museum property collection. Accessioning is the process of formally accepting and establishing permanent legal title (ownership) and/or custody for an object or specimen or group of objects and/or specimens. An accession can consist of materials and associated archives from a single site or fossil locality, or materials from several sites or fossil localities.

**Biological Treatments** – Treatment of vegetation using domestic animals, insects, etc.

**Chemical Treatments** – Treatment of vegetation with herbicides, etc.

**Inventory** – Collection and analysis of baseline information; counting number of a given species, cultural feature, etc.

**Mechanical Treatments** – Treatments using hand or motorized tools for mowing, chaining, ripping, thinning, seeding, etc.

**Monitoring** – Establishment of current status and/or trends in environmental variables

**Riparian Habitat** – Riparian habitat includes the interface between upland habitat and a river, stream, or lake, regardless of whether it is intermittent or perennial. Riparian habitats are characterized by vegetation adapted to growing in water or saturated soils. Includes riparian woodlands, forests, buffer zones, or strips.

**Survey** – Observing an area to determine if a species or resource exists after which an inventory may or may not be performed.

**Upland Habitat** – Upland habitats include Mojave Desert, grassland, shrub lands, pinyon juniper forests, and woodland sites.

**Wetland Habitat** – Wetlands are saturated areas, either permanently or seasonally, with characteristic vegetation adapted to its unique soil conditions.



JOE LOMBARDO  
Governor

STATE OF NEVADA

**DEPARTMENT OF WILDLIFE**

6980 Sierra Center Parkway, Suite 120

Reno, Nevada 89511

Phone (775) 688-1500 • Fax (775) 688-1595

ALAN JENNE  
*Director*

JORDAN GOSHERT  
*Deputy Director*

MICHAEL SCOTT  
*Deputy Director*

September 14, 2023

Anita Hansen  
Acting Superintendent  
Great Basin National Park  
100 Great Basin National Park  
Baker, NV 89311

**RE: Nevada Department of Wildlife Letter of Support for Great Basin National Park Round 20 Proposal**

Dear Ms. Hansen,

On behalf of the Nevada Department of Wildlife (NDOW), I would like to extend our support for the Great Basin National Park's proposal Improving Recreational Fishing Opportunities and Native Trout Conservation under the Southern Nevada Public Land Management Action (SNPLMA) Conservation Initiatives Round 20. Local and regional NDOW staff have long held a collaborative and productive partnership with the staff at Great Basin National Park and the goals identified in this proposal align closely with the mission of NDOW to manage and conserve wildlife along with enhancing recreational angling and wildlife education opportunities.

If funded, NDOW will contribute staff time and resources to be an active partner in the Fishing with a Ranger program, the restoration of the Big Wash brood pond for the conservation of Bonneville Cutthroat Trout, and Bonneville Cutthroat Trout management and conservation within Great Basin National Park. NDOW intends to be an active partner for the five-year lifespan of this project. The table below summarizes the estimated costs contributed by NDOW staff that would be primarily funded through our Sport Fish Restoration Grant and Angler Education Grant.

Table 1. NDOW Contributions to Support Great Basin National Park's Improving Recreational Fishing Opportunities and Native Trout Conservation Proposal

Program	Staff	Hourly Productive Wage	Annual Salary Contribution	Mileage @ \$0.655/mile	Annual Total Contribution	Project Total Contribution
Fishing with a Ranger	Conservation Educator 4	\$40.34 @ 20	\$806.80	N/A	\$806.60	\$4,033.00
	Conservation Educator 3	\$36.84 @ 55	\$2,026.20	\$393.00	\$2,419.20	\$12,096.00
	Biologist 4	N/A	N/A	N/A	N/A	N/A
	Biologist 3	\$36.84 @ 20 hours/year	\$736.80	\$183.40	\$920.2	\$4,601.00
	Conservation Aid 3	N/A	N/A	N/A	N/A	N/A
Big Wash Brood Pond Renovation	Biologist 4	\$40.34 @ 20 hours	\$806.80	\$393.00	\$1,199.80	\$5,999.00
	Biologist 3	\$36.84 @ 40 hours	\$1,473.60	\$275.10	\$1,748.70	\$8,743.5
	Conservation Aid 3	\$24.51 @ 40 hours	\$980.4	\$393.00	\$1,373.40	\$6,867.00
Bonneville Cutthroat Trout Restoration and Conservation	Biologist 4	\$40.34 @ 20 hours	\$806.80	\$393.00	\$1,199.80	\$5,999.00
	Biologist 3	\$36.84 @ 100 hours	\$3,684.00	\$366.80	\$4,050.80	\$20,254.00
	Conservation Aid 3	\$24.51 @ 40 hours	\$980.4	\$393.00	\$1,373.40	\$6,867.00
Equipment <sup>1</sup>						\$19,536.29
<b>NDOW Total Contribution</b>						<b>\$94,995.79</b>

<sup>1</sup> Includes backpack electrofisher, electrofishing nets, waders used by crews electrofishing, rods and reels for Fishing with a Ranger, and waders for Fishing with a Ranger.

Additionally, NDOW supports the efforts by the National Park Service staff to increase public awareness through education, wildlife viewing, and angling opportunities by improving the accessibility of native Bonneville Cutthroat Trout throughout the camp sites, trailheads, and fishing access points along Snake Creek. The staff at Great Basin National Park have also shared similar efforts will be undertaken with wild trout at the ADA accessible Observation Deck along Lehman Creek.

Great Basin National Park is in a unique position to provide park visitors with opportunities to fish for native Bonneville Cutthroat Trout while at the same time enhancing existing habitats and securing future habitats within the park and with nearby partners. Conservation of native trout and providing angling opportunities and education is supported by NDOW's Fisheries and Conservation Education Divisions, both of which would both be assisting in implementing the deliverables of this project.

The proposal being submitted by the National Park Service's Great Basin National Park staff aligns closely with the conservation initiatives of sustaining the outdoor environment and improving recreational opportunities to connect people with the outdoor environment as identified in the SNPLMA strategic plan. Additionally, it is likely the benefits realized by some of these efforts, such as the brood pond restoration, will far outlive the five years funded in this proposal which makes this an extremely valuable opportunity to secure a unique piece of conservation for Bonneville Cutthroat Trout in eastern Nevada.



Please feel to contact me if there are questions about our support and contributions to enhance this project proposal, the wildlife resources at Great Basin National Park, and the variety of visitors to Great Basin National Park. NDOW looks forward to working with the National Park Service staff on this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cody Byrne', with a long horizontal flourish extending to the right.

Cody Byrne  
Eastern Region Fisheries Supervisor  
Nevada Department of Wildlife  
775-777-2303  
cbyrne@ndow.org



From the Desk of:  
**Don Duff**  
(Aquatic Ecologist, USFS Retired)  
President, Great Basin Chapter  
P.O. Box 32  
Baker, NV 89311

August 29, 2023

Jon Reynolds  
Fishery Biologist  
100 Great Basin National Park  
Baker, NV 89311

Dear Mr. Reynolds:

The Great Basin Chapter (GBC), Trout Unlimited (TU), is in support of your Round 20 SNPLMA proposal for maintenance of the Bonneville cutthroat trout (BCT) brood pond in Big Wash Creek area south of Baker, NV. Our Chapter has been involved in this project for the last 20 years and we can support your project for continued operation and maintenance of this important BCT brood pond.

In order to assist in your project proposal, the GBC TU can commit some 500 volunteer man-hours valued at \$32 per hour for \$16,000 as well as miscellaneous materials, such as a boat, motor, batteries, a wind aerator, and other maintenance items, supplies, and tools, estimated at a value of \$600. In addition, we plan to submit a TU Embrace-a-Stream Grant for \$10,000 for TU's FY 2024 grant cycle.

Please do not hesitate to contact us if more information is need concerning the GBC's support for this project.

Sincerely,

Don Duff, President  
Great Basin Chapter  
Trout Unlimited



# United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
Ely District Office  
702 North Industrial Way  
Ely, Nevada 89301  
<https://www.blm.gov/nevada>

In Reply Refer To:  
6840 (NVL0000)

**SEP 07 2023**

Anita Hansen  
Great Basin National Park  
100 Great Basin National Park  
Baker, NV 89311

Dear Ms. Hansen:

The Bureau of Land Management (BLM) is pleased to provide this letter of support for the National Park Service's (NPS) Round 20 SNPLMA Proposal, entitled *Improving Recreational Fishing Opportunities and Native Trout Conservation*. The project includes the renovation of the Bonneville cutthroat trout brood pond, located on BLM lands adjacent to Great Basin National Park.

The Bonneville cutthroat trout is a BLM sensitive species which requires special consideration for conservation, maintenance, and restoration activities. The renovation of the brood pond will provide a sustainable population of Bonneville cutthroat trout for future opportunities for stocking streams on BLM, NPS, and Forest Service lands to enhance the overall population and distribution of this important native trout species. In turn increasing future recreational fishing opportunities throughout the Ely District.

The BLM fully supports the SNPLMA project and looks forward to working closely with the National Park Service during renovation of the brood pond.

Sincerely,

Robbie J. McAboy  
Ely District Manager



JOE LOMBARDO  
Governor

STATE OF NEVADA

**DEPARTMENT OF WILDLIFE**

6980 Sierra Center Parkway, Suite 120

Reno, Nevada 89511

Phone (775) 688-1500 • Fax (775) 688-1595

ALAN JENNE  
*Director*

JORDAN GOSHERT  
*Deputy Director*

MICHAEL SCOTT  
*Deputy Director*

September 14, 2023

Anita Hansen  
Acting Superintendent  
Great Basin National Park  
100 Great Basin National Park  
Baker, NV 89311

RE: Nevada Department of Wildlife Letter of Support for Great Basin National Park Round 20 Proposal

Dear Ms. Hansen,

On behalf of the Nevada Department of Wildlife (NDOW), I would like to extend our support for the Great Basin National Park's proposal Improving Recreational Fishing Opportunities and Native Trout Conservation under the Southern Nevada Public Land Management Action (SNPLMA) Conservation Initiatives Round 20. Local and regional NDOW staff have long held a collaborative and productive partnership with the staff at Great Basin National Park and the goals identified in this proposal align closely with the mission of NDOW to manage and conserve wildlife along with enhancing recreational angling and wildlife education opportunities.

If funded, NDOW will contribute staff time and resources to be an active partner in the Fishing with a Ranger program, the restoration of the Big Wash brood pond for the conservation of Bonneville Cutthroat Trout, and Bonneville Cutthroat Trout management and conservation within Great Basin National Park. NDOW intends to be an active partner for the five-year lifespan of this project. The table below summarizes the estimated costs contributed by NDOW staff that would be primarily funded through our Sport Fish Restoration Grant and Angler Education Grant.

Table 1. NDOW Contributions to Support Great Basin National Park's Improving Recreational Fishing Opportunities and Native Trout Conservation Proposal

Program	Staff	Hourly Productive Wage	Annual Salary Contribution	Mileage @ \$0.655/mile	Annual Total Contribution	Project Total Contribution
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Additionally, NDOW supports the efforts by the National Park Service staff to increase public awareness through education, wildlife viewing, and angling opportunities by improving the accessibility of native Bonneville Cutthroat Trout throughout the camp sites, trailheads, and fishing access points along Snake Creek. The staff at Great Basin National Park have also shared similar efforts will be undertaken with wild trout at the ADA accessible Observation Deck along Lehman Creek.

Great Basin National Park is in a unique position to provide park visitors with opportunities to fish for native Bonneville Cutthroat Trout while at the same time enhancing existing habitats and securing future habitats within the park and with nearby partners. Conservation of native trout and providing angling opportunities and education is supported by NDOW's Fisheries and Conservation Education Divisions, both of which would both be assisting in implementing the deliverables of this project.

The proposal being submitted by the National Park Service's Great Basin National Park staff aligns closely with the conservation initiatives of sustaining the outdoor environment and improving recreational opportunities to connect people with the outdoor environment as identified in the SNPLMA strategic plan. Additionally, it is likely the benefits realized by some of these efforts, such as the brood pond restoration, will far outlive the five years funded in this proposal which makes this an extremely valuable opportunity to secure a unique piece of conservation for Bonneville Cutthroat Trout in eastern Nevada.

Please feel to contact me if there are questions about our support and contributions to enhance this project proposal, the wildlife resources at Great Basin National Park, and the variety of visitors to Great Basin National Park. NDOW looks forward to working with the National Park Service staff on this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cody Byrne', with a long, sweeping horizontal line extending to the right.

Cody Byrne  
Eastern Region Fisheries Supervisor  
Nevada Department of Wildlife  
775-777-2303  
cbyrne@ndow.org



**From the Desk of:**  
**Don Duff**  
**(Aquatic Ecologist, USFS Retired)**  
**President, Great Basin Chapter**  
**P.O. Box 32**  
**Baker, NV 89311**

August 29, 2023

Jon Reynolds  
Fishery Biologist  
100 Great Basin National Park  
Baker, NV 89311

Dear Mr. Reynolds:

The Great Basin Chapter (GBC), Trout Unlimited (TU), is in support of your Round 20 SNPLMA proposal for maintenance of the Bonneville cutthroat trout (BCT) brood pond in Big Wash Creek area south of Baker, NV. Our Chapter has been involved in this project for the last 20 years and we can support your project for continued operation and maintenance of this important BCT brood pond.

In order to assist in your project proposal, the GBC TU can commit some 500 volunteer man-hours valued at \$32 per hour for \$16,000 as well as miscellaneous materials, such as a boat, motor, batteries, a wind aerator, and other maintenance items, supplies, and tools, estimated at a value of \$600. In addition, we plan to submit a TU Embrace-a-Stream Grant for \$10,000 for TU's FY 2024 grant cycle.

Please do not hesitate to contact us if more information is need concerning the GBC's support for this project.

Sincerely,

Don Duff, President  
Great Basin Chapter  
Trout Unlimited

**[EXTERNAL] letter of support**

Robin Crouch <rcrouch7172@gmail.com>

Wed 11/1/2023 8:03 PM

To: Reynolds, Jonathan S <Jonathan\_Reynolds@nps.gov>

 1 attachments (14 KB)

SNPLMA letter of support, Nov 2023.docx;

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Hi Jonathan,

Here is the letter I promised. Unfortunately, my printer is not working right now so I can't print or sign it. Hopefully you can use it anyway.

--

Robin Crouch  
Hidden Canyon Retreat



November 2, 2023

Jonathan Reynolds

Great Basin National Park

100 Great Basin National Park

Baker, NV 89311

Dear Jonathan:

Hidden Canyon Ranch, Inc. is pleased to submit this letter in support of the National Park Service's (NPS) Round 20 SNPLMA Proposal, entitled "Improving Recreational Fishing Opportunities and Native Trout Conservation." Our portion of this project includes the renovation of the Bonneville cutthroat trout brood pond which also serves as the water source for irrigation on our private property, under long term lease from BLM.

Protection of the Bonneville cutthroat trout which is native to our mountains and restoration of their natural habitat has been our goal for over 20 years. In April 2002 the Great Basin Chapter of Trout Unlimited awarded a Certificate of Appreciation to Hidden Canyon Guest Ranch for our efforts to preserve and restore the Bonneville cutthroat trout in the Big Wash Creek watershed. We have continuously tried to maintain and improve the trout population on our land.

We fully support the SNPLMA project and look forward to working closely with the National Park Service for the duration of this project.

Sincerely,

Robin L. Crouch

Hidden Canyon Ranch, Inc.

Instructions: Put project cost estimates in Tabs 1-8. The values from those tabs will roll-up to this summary worksheet. The Non-Federal Contribution can be entered in Tabs 1-8 as a whole amount, it does not need to be broken out by unit cost. Non-Federal entities must use the standard form for an assistance agreement SF-424A Budget Non-Construction (PDF) and Budget Detail (Word document).

**PROJECT BUDGET**

<b>Project Name:</b>	Improving Recreational Fishing Opportunities and Native Trout Conservation	<b>Date:</b>	9/14/2023
<b>Project Manager:</b>	Jonathan Reynolds	<b>Agency:</b>	NPS
<b>Cost Categories</b>		<b>SNPLMA</b>	<b>Non-Federal Contribution</b>
1. Personnel (labor plus benefits)		\$ 987,264.00	\$ 77,509
2. Travel		\$ 15,450.00	\$ 13,952
3. Training		\$ 9,800.00	\$ -
4. Equipment		\$ 73,004.00	\$ 20,136
5. Supplies/Materials		\$ 116,750.00	\$ 10,000
6. Contracts and/or Agreements		\$ 680,384.00	\$ -
7. Vehicle Use		\$ 41,035.00	\$ -
8. Other Necessary Expenses		\$ 15,375.00	\$ -
<b>9. TOTAL PROJECT BUDGET</b>		<b>\$ 1,939,062.00</b>	<b>\$ 121,597</b>

Notes:

## 1. PERSONNEL

Include labor costs for all aspects of project implementation where agency/entity labor will perform the work, e.g. planning and environmental documentation, section 106 compliance, labor to perform implementation, project management, interdisciplinary team (ID team), engineering, etc. Labor expense documentation must correlate the individual labor expense with the deliverable, task, or subtask. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total labor costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Fish Biologist, Project Manager - Planning, execution, monitoring, controlling, quarterly reporting, and closeout of project	8,200	Hours	\$ 58	\$ 475,600	\$ -
Biological Science Technician GS07 - Field Lead when Project Manager is in office	3,120	Hours	\$ 32	\$ 99,840	\$ -
Biological Science Technician GS05 - Manual labor to implement project	4,160	Hours	\$ 26	\$ 108,160	\$ -
Park Ranger, Law Enforcement - Backcountry patrols of Baker and Johnson Lakes for cultural and natural resource protection and educational outreach	2,080	Hours	\$ 32	\$ 66,560	\$ -
Compliance Specialist - NEPA, ID Team Member	80	Hours	\$ 48	\$ 3,840	\$ -
Archeologist - Cultural Program Manager, Section 106 compliance, ID Team Member	240	Hours	\$ 58	\$ 13,920	\$ -
Archeologist - Section 106 compliance, Field Lead for cultural resource surveys	400	Hours	\$ 58	\$ 23,200	\$ -
Archeological Technician - Section 106, manual labor for cultural resource surveys	400	Hours	\$ 26	\$ 10,400	\$ -
Interpretation Rangers - Outreach Presentations	864	Hours	\$ 26	\$ 22,464	\$ -
Maintenance Workers - Assisting with litter clean-ups	240	Hours	\$ 35	\$ 8,400	\$ -
Heavy Equipment Operator - WG-10 (1, 3 months) - Brood Pond Renovation	480	Hours	\$ 50	\$ 24,000	\$ -
Heavy Equipment Operator - WG-8 (1- 3 months) - Brood Pond Renovation	480	Hours	\$ 45	\$ 21,600	\$ -
Laborers WG-5 (2 - 3 months) - Brood Pond Renovation	960	Hours	\$ 35	\$ 33,600	\$ -
Maintenance Worker WG-8 (2 - 3 months) - Brood Pond Renovation	960	Hours	\$ 45	\$ 43,200	\$ -
Administrative Officer - Tracking budget, accounting, purchasing, transfer requests, task orders, agreements, and contracts	560	Hours	\$ 58	\$ 32,480	\$ -
NDOW Biologist 4 - assistance with planning and implementation of BCT management, habitat improvements, and Brood Pond	200	Hours	\$ 40		\$ 8,068
NDOW Biologist 3 - assistance with implementation of BCT management, habitat improvements, Brood Pond, and "Fishing with a Ranger" Program	800	Hours	\$ 37		\$ 29,472
NDOW Conservation Educator 4 - assistance with "Fishing with a Ranger" program planning	100	Hours	\$ 40		\$ 4,034
NDOW Conservation Educator 3 - assistance with "Fishing with a Ranger" program implementation	275	Hours	\$ 37		\$ 10,131
NDOW Conservation Aid 3 - assistance with field work	400	Hours	\$ 25		\$ 9,804
work	500	Hours	\$ 32		\$ 16,000

<b>Total</b>	<b>\$ 987,264</b>	<b>\$ 77,509</b>
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## 2. TRAVEL

Travel expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total travel costs.

Description of Travel and Purpose	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
GRBA Fish Biologist, Project Manager - backcountry travel for project implementation	25	Trip	\$ 148	\$ 3,700	\$ -
Biological Science Technician GS07 - backcountry travel for project implementation	15	Trip	\$ 148	\$ 2,220	\$ -
Biological Science Technician GS05 - backcountry travel for project implementation	20	Trip	\$ 148	\$ 2,960	\$ -
GRBA Fish Biologist, Project Manager - travel to meetings for educational outreach purposes, present on project	4	Trip	\$ 730.00	\$ 2,920	\$ -
GRBA Fish Biologist, Project Manager - travel to fish habitat improvement trainings	3	Trip	\$ 730.00	\$ 2,190	\$ -
Biological Science Technician GS07 - travel to rotenone (pesticide) training	1	Trip	\$ 730.00	\$ 730	\$ -
Biological Science Technician GS05 - travel to rotenone (pesticide) training	1	Trip	\$ 730.00	\$ 730	\$ -
NDOW Biologist 4 - travel to the project area	5	Annually	\$ 786.00		\$ 3,930
NDOW Biologist 3 - travel to the project area	5	Annually	\$ 825.30		\$ 4,127
NDOW Conservation Educator 3 - travel to the project area	5	Annually	\$ 393.00		\$ 1,965
NDOW Conservation Aid 3 - travel to the project area	5	Annually	\$ 786.00		\$ 3,930

Total	\$	15,450	\$	13,952
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### 3. TRAINING

Training expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Example, contracting officer representative or program officer/assistance agreement training, training for chainsaw use, training for pesticide application, visual resource management, etc. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total training costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
GRBA Fish Biologist, Project Manager - continuing educational credits to maintain certified aquatic pesticide applicator's license needed to perform rotenone projects	12	Each	\$ 100	\$ 1,200	\$ -
GRBA Fish Biologist, Project Manager - stream restoration / fish habitat improvement training	3	Each	\$ 2,000	\$ 6,000	\$ -
Biological Science Technician GS07 - AFS piscicide training course, 40 hours	1	Each	\$ 1,300	\$ 1,300	\$ -
Biological Science Technician GS05 - AFS piscicide training course, 40 hours	1	Each	\$ 1,300	\$ 1,300	\$ -

<b>Total</b>	\$	9,800	\$	-
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#### 4. EQUIPMENT

Purchase, lease, or rental of equipment (not included in a contract or agreement) for project implementation. Equipment must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). SNPLMA will only pay for the value of the equipment used during the project. The value of the equipment must be documented at the beginning and end of use to determine the amount SNPLMA will pay, if greater than \$5,000. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Multiparameter water quality SONDEs	2	Each	\$ 9,969	\$ 19,938	
Multiparameter water quality handheld instrument	1	Each	\$ 1,746	\$ 1,746	
Living Stream - to raise BCT while brood pond is under renovation	1	Each	\$ 15,000	\$ 15,000	
Solar Aerator - for brood pond	1	Each	\$ 4,860	\$ 4,860	
Rental Excavator Long Reach 326 CAT	1	Month	\$ 10,164	\$ 10,164	\$ -
Rental Dozer D4 CAT	2	Month	\$ 7,260	\$ 14,520	\$ -
Rental Excavator 315 CAT	1	Month	\$ 6,776	\$ 6,776	\$ -
NDOW - Smith Root Backpack Electrofisher, nets, waders, rods and reels		Total	\$ 19,536		\$ 19,536
Trout Unlimited - Aluminum boat, trolling motor, batteries		Total	\$ 600		\$ 600

Total	\$	73,004	\$	20,136
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### 5. SUPPLIES AND MATERIALS

Supplies and materials necessary to complete the project. Supplies/materials must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Supplies/materials must be the minimum amount necessary to accomplish the project; purchasing extra supplies/materials to "stock the cache" for post project management activities is prohibited. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Office Supplies - pens, pencils, write-in-the rain paper, field notebooks, clipboards	5	Annually	\$ 250	\$ 1,250	\$ -
General Field Supplies- waders, buckets, nets, raft, dry suits, snorkel, tent, packs etc.	5	Annually	\$ 5,294	\$ 26,470	\$ -
Replacement sensors for multiparameter water quality instruments	4	Annually	\$ 2,380	\$ 9,520	\$ -
Calibration solutions for multiparameter water quality instruments	5	Annually	\$ 1,366	\$ 6,830	\$ -
CFT Legumine - Liquid Rotenone to perform stream treatments	18	5 Gallon Drum	\$ 900	\$ 16,200	\$ -
PrenFish Prentox - Powdered Rotenone to perform stream treatments	1	110 lb. drum	\$ 582	\$ 582	\$ -
Potassium Permanganate - to deactivate rotenone below barriers	1	25 Kilo Pail	\$ 394	\$ 394	\$ -
Drip bucket materials (valve, tubing, bucket)	15	Each	\$ 26	\$ 390	\$ -
Safety Supplies / PPE for rotenone treatment (Tyvek suits, respirators, goggles, gloves, etc.)	3	Per Treatment	\$ 1,418	\$ 4,254	\$ -
Backpack pump sprayers	12	Each	\$ 130	\$ 1,560	\$ -
Spinning Rods and Reels - for visitors use during the "Fishing w/ a Ranger" program	10	Each	\$ 100	\$ 1,000	\$ -
Fly Fishing Rods and Reels - for visitors use during the "Fishing w/ a Ranger" program	10	Each	\$ 500	\$ 5,000	\$ -
Fishing Tackle for Initial Rod Setup (line, weights, hooks) - for visitor use during "Fishing w/ a Ranger"	1	Annually	\$ 800	\$ 800	\$ -
Fishing Tackle Replacement (line, weights, hooks, bait) - for visitor use during "Fishing w/ a Ranger"	4	Annually	\$ 100	\$ 400	\$ -
Bentonite supper tote - Brood Pond Renovation	20	Each	\$ 1,460	\$ 29,200	\$ 10,000
8 inch Black HDPE pipe - Brood Pond Renovation	500	Each	\$ 21	\$ 10,500	\$ -
8 inch HDPE pipe valve - Brood Pond Renovation	2	Each	\$ 1,200	\$ 2,400	\$ -

<b>Total</b>	<b>\$ 116,750</b>	<b>\$ 10,000</b>
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## 6. CONTRACTS AND AGREEMENTS

Contracts and/or agreements (grants, cooperative agreements, assistance agreements, stewardship agreements, interlocal or state agreements, etc.) necessary to implement the project's purpose and deliverables (including tasks and subtasks, as appropriate). Extra or more robust documentation may be necessary if the contract and/or agreement is for multiple projects (e.g. a Master Agreement or CESU agreement). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total grant and agreements used to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
Task Agreement for crew to assist with fuels reduction and habitat improvements	6	Each	\$ 20,050	\$ 120,300	\$ -
Interagency Agreement – eDNA Analysis	1	Each	\$ 36,584	\$ 36,584	\$ -
CESU Agreement for Genetic Analysis	90	Fin Clip	\$ 150	\$ 13,500	\$ -
Task Agreement for YY Brook Trout Eggs	4	Annually	\$ 50,000	\$ 200,000	\$ -
Contract for cultural resource survey in Mill Creek for compliance - Section 106 (Anticipated)	1	Each	\$ 90,000	\$ 90,000	\$ -
Contract for assessment of historic structures in Johnson Lake Historic District (Anticipated)	1	Each	\$ 95,000	\$ 95,000	\$ -
Cooperative / Task Agreement for Educational Curriculum and Outreach (Anticipated)	5	Annually	\$ 25,000	\$ 125,000	\$ -
<b>Total</b>				<b>\$ 680,384</b>	<b>\$ -</b>



### 7. VEHICLE USE

Use of an agency/entity vehicle, purchase of a new vehicle, rental of vehicle, or any other vehicle use not covered under Equipment. If possible, use the agency/entity fixed operation rate (FOR) multiplied by the unit (miles or hours) over the life of the project. The FOR includes depreciation and wear and tear on the vehicle tires, wiper blades, routine vehicle maintenance, etc. If special tires or replacement tires or other vehicle equipment is necessary, please show it under "Equipment." Vehicle expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total vehicle use to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
GSA Lease for project manager and field crew	5	Annual Lease	\$ 6,000	\$ 30,000	\$ -
GSA Vehicles (3 vehicles for 3 months)	3	Months	\$ 595	\$ 1,785	\$ -
GSA Dump truck (2 vehicle for 3 months)	6	Months	\$ 1,200	\$ 7,200	\$ -
GSA Transport (1 vehicle)	1	Months	\$ 1,200	\$ 1,200	\$ -
GOV Loader (1 vehicle for 2 months)	2	Months	\$ 425	\$ 850	\$ -

Total	\$ 41,035	\$ -
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### 8. OTHER NECESSARY EXPENSES

Other Necessary Expenses are time and materials necessary for project implementation but are not specific to any one deliverable (including tasks and subtasks, as appropriate). Other Necessary Expenses include, but are not limited to: management and administrative support, support services (timekeeper, IT, travel, purchase agent, contracting officer, grant management officer, etc.), utilities (e.g. telephone, power, internet), etc. Preferably these costs are directly billed/charged to the project; however, if a percentage is used then the percentage should be proportional to the burden of the project, and the percentage of burden must be recalculated at least annually, or as the agency/entity project portfolio changes. If you included the labor, equipment, and/or supplies and materials in the other sheets, do not include them here. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total other necessary expenses to implement the project. This is not a complete list. Contact the SNPLMA Division for guidance on other necessary expenses.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
IT services to install hardware, software, or service SNPLMA-funded computer equipment	5	Year	\$ 1,020	\$ 5,100	\$ -
Furniture and fixtures for SNPLMA-funded employee workspace	5	Year	\$ 375	\$ 1,875	\$ -
Human Resource/Relations Tasks for SNPLMA-funded Personnel	5	years	\$ 1,680	\$ 8,400	\$ -

<b>Total</b>	<b>\$ 15,375</b>	<b>\$ -</b>
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**SNPLMA Round 20  
Conservation Initiatives Project Addendum**

**Nomination:** Tab 2

**Entity:** U.S. Fish & Wildlife Service (SNAP Project with BLM, FS, and NPS)

**Project:** Landscape-Level Migration, Monitoring, Outreach, and Restoration

**Remarks/Clarifications Needed:**

**Section D - Project Deliverables-Primary:**

1. This is a SNAP project. Partners need to identify which agencies are responsible for which task(s). Is FWS doing all the design, planning, and installations on the other partner's land?
2. Bullet #8 "Engage with local tribal partners and conservation organizations to identify how underserved communities could benefit from Motus stations or environmental education."  
**Clarification Needed - This is more of a Standard Deliverable. There is no tangible/measurable task.**
3. Bullet #13 "Share results with conservation partners to assist with the decision support tool through the Wetland Evaluation Tool (WET) Platform."  
**Clarification Needed - This is more of a Standard Deliverable. There is no tangible/measurable task.**

**Section D - Project Deliverables-Anticipated:**

1. "Identify at-risk wetland ecosystems outside southern Nevada for partner agencies to promote wetland diversity and waterbird habitat resilience."  
**Clarification Needed - Is this just referring to Northern NV, or to other state(s)? SNPLMA funds cannot be used to survey/map/etc., outside of Nevada; Clark, Lincoln, and White Pine Counties (and Carson City limited to lands within the Carson City boundary and within the 100-year FEMA flood plain of the Carson River).**

**Section F - Project Timeframe:**

1. This project is requesting 6 years to complete rather than the usual 5 years for a Conservation Initiative project.

**Section G - Level of Project Readiness:**

1. Project is stating it is 'shovel-ready though nomination states 'some are currently undergoing NEPA', which implies NEPA is not done, thus not ready.

### **Section M - Maps:**

1. **Agency Management Map** – This map shows yellow pins which are towers already purchased but pending installation. Two of these yellow pins are outside of Nevada. Clarification needed that SNPLMA funds will not be used for these installations.

### **Section Q – Letters of Support:**

1. **There is no Letter of Support from SNAP Partner Bureau of Land Management.**

### **Performance Measures:**

1. **Performance Measure H6** “Number of acres of wetland vegetation and/or wildlife habitat treated, enhanced, or restored.”  
**Performance Measure H10** “Number of acres of weed infestation inventoried or monitored”  
Answer declares 575 acres, though the nomination identifies appx 150 acres. Clarification needed on how this figure was arrived at.

### **Budget:**

1. **Volunteers Math error in Nomination** - 15 volunteers contributing 175 hours is 2,625 total hours not 2,634. Rounding labor rate to \$32 makes the contribution value \$84,000, instead of \$84,288, and the overall project contribution would then be \$421,500.
2. **NDOW Contribution in Nomination** – Clarification needed that NDOW is not only installing the towers that are going on non-federal land, but are also using NDOW funds, and not SNPLMA funds, to purchase the whole towers, and not just the installation supplies. SNPLMA CI cannot pay for items to be installed on non-federal lands. Will NDOW also be doing the maintenance on these towers?
3. **Supplies and Materials tab in Excel spreadsheet** – “Motus deployment registration fees NPS, BLM, FS, USFWS” lists 5 Units to be purchased though there are only 4 entities in this project. Is the 5<sup>th</sup> unit for the non-federal land tower installs? SNPLMA CI cannot pay for non-federal items.
4. **Contracts and Agreements tab in Excel spreadsheet** – “Contracting for NEPA compliance. NPS, USFWS, BLM, FS” lists 3 Units for funding though there are 4 entities. Did one entity get inadvertently missed?

**Southern Nevada Public Land Management Act  
Conservation Initiatives  
Round 20**

**U.S. Fish and Wildlife Service (lead)**

Clark, Lincoln, and White Pine Counties



**Southern Nevada Agency Partnership**



Landscape-level Migration Monitoring, Outreach, and Restoration

Amount Requested: \$5,435,854.00

## A. BACKGROUND INFORMATION

Migration is a fascinating phenomenon that can capture the imagination of all humans. We can all connect with or be impressed by a small bird that flew thousands of miles in a few days or weeks. We can appreciate when a duck decides to leave Canada and spend the winter in sunny Nevada. We can picture a bat traveling out of the country to spend time in another one. We can marvel at a butterfly traveling down our continent and into the next.

Our ability to describe the journeys of these animals has improved exponentially in the past decade with increasingly advanced technology including the Motus Network of receiver stations and smaller transmitters than was possible even a decade ago. Observing the migratory journeys of birds, bats, and even insects, is now not only possible, but affordable. These studies provide a wealth of opportunity, not only to identify key habitats, but to deliver a clear conservation message to a large audience. Scientists typically struggle to connect their subject matter with the communities around them. The subject of migration, because of its intriguing nature, relatability, and real-world applications, is perfect for interpreting to the community. This project will improve the study of migration in Nevada, an important migratory corridor along the Pacific Flyway, and use the data gathered to better connect with our local communities and better inform habitat management decisions.

The U.S. Fish and Wildlife Service (USFWS) is requesting funding for an interagency project to establish a landscape-scale migratory monitoring and improvement program in Nevada. This program involves six key components:

1. Working with partners to build new Motus towers to increase coverage of Nevada for the national Motus Network.
2. Deploying Motus tags on migratory organisms to support the network, study migration, identify key habitats, support land management agencies, and engage the public.
3. Deploying GSM (Global System for Mobile Communications) transmitters on larger birds, including wading birds and waterfowl, to study migration, identify key habitats, support land management agencies, and engage the public.
4. Establish a landscape-scale monitoring program for an endangered migratory bird subspecies, the Southwestern Willow Flycatcher, that breeds throughout southern Nevada and migrates to central America.
5. Restoring critical migratory bird nesting and stopover habitat
6. Engaging the public by creating educational and community science opportunities for partners and the public.

This project centers around the establishment of a regional-scale system for data collection and public involvement, and it also focuses on Pahrnatagat National Wildlife Refuge (hereafter, “the Refuge”) as a key “laboratory” for translating new information about migratory birds into site-specific conservation. This focus is based on Pahrnatagat’s central importance as a migratory stopover and breeding habitat in southern Nevada and on previous investments of SNPLMA funding on the Refuge.

*Component 1: Working with partners to build new Motus towers to increase coverage of southern Nevada for the national Motus Network and engage the public.*

The Motus Network is an international collaborative research effort used to understand wildlife movement, and specifically migration patterns, connectivity, and habitat needs of migratory animals. Its primary purposes are to establish a collaborative, open-source partnership among researchers, resource management agencies, and educational facilities to better understand the full life cycle, migration stopover needs, and conservation issues of migratory birds. Until recently, migration patterns of small birds could only be studied by chance recaptures of individually marked birds, which could only describe basic migration routes and habitats used. The Motus Network uses a series of automated radio telemetry stations that can detect and record data on any animal outfitted with a Motus-compatible transmitter. Advances in technology, such as smaller transmitters and stronger receivers, allow birds to be detected up to ten miles from a station. A system of Motus stations along migration flyways and known stopover sites will fill in knowledge gaps on exact migration pathways, timing of migration, connectivity and importance of stopover sites, and migration habitat needs of small migratory animals.

While a Motus Network has already been firmly established in the eastern United States, the western states within the Pacific flyway have recently started to develop the western Motus Network. The Partners in Flight Western Working Group is coordinating these efforts and developed a prospectus for establishing a Motus Wildlife Tracking System Network for the West in 2018<sup>1</sup>. The Pacific flyway is one of four major migratory routes of North American birds. The Pacific Flyway lies between the Pacific Ocean and the Rocky Mountains. Within large flyways are flight corridors, which migratory species use to move across the landscape to fulfill their annual life cycle requirements. These flight corridors and important habitats are lesser known, especially within the Great Basin and Mojave Deserts. Photo 1 shows organisms marked with Motus tags, and examples of flight paths discovered using data collected by the Motus Network. This information helps managers identify management needs, priorities, and migration timing to ensure these essential habitats are available for targeted species.

The actual coverage of Motus stations is still relatively sparse in the Pacific flyway, particularly in its interior arm that reaches through Nevada (Photo 2). In this proposed work, we want to expand the network through this critical region for migratory birds while also allowing local managers to use new information to answer habitat needs questions and monitor habitat use throughout the year in southern and eastern Nevada. Motus is the most effective way to monitor non-game, small migratory species where mark/recapture sampling does not provide inadequate datasets.

*Component 2: Deploying Motus tags on migratory organisms to support the network, study migration, identify key habitats, support land management agencies, and engage the public.*

In addition to supporting the continental Motus network, the proposed project will support important local research on sensitive migrant species, such as Southwestern Willow Flycatcher (*Empidonax traillii extimus*; federally endangered), Phainopepla (*Phainopepla nitens*; Species of Greatest Conservation Need in Nevada), LeConte's Thrasher (*Toxostoma lecontei*; Species of Greatest Conservation Need in Nevada), phalaropes (*Phalaropus* spp.; Species of Greatest Conservation Need in Nevada), Cinnamon Teal (*Spatula cyanoptera*; Species of Greatest Conservation Need in Nevada), Mexican free-tailed bat (*Tadarida brasiliensis*), and

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<sup>1</sup> The full prospectus is uploaded on the "Additional Requirements" tab.

Hoary Bat (*Aeorestes cinereus*). All these species are found within the vicinity of existing and proposed Motus receiver stations and provide the opportunity for novel research on their stayover length in each protected area, their connectivity to other stopover sites, and in-depth habitat use studies. These opportunities will provide new and important insights into conservation strategies for migratory species, and strengthen partnerships with local communities, school and college classes, and non-profits working in the area who can sustain the long-term engagement in studying migrants through the Motus Network.

This project will provide funding to hold Motus workshops to train more professionals to attach tags to organisms and to install Motus receiver stations. It is our hope that by providing training and building additional towers in the state, researchers will have fewer barriers to using this technology to support their management goals of migratory organisms, including birds, bats, and invertebrates.

*Component 3: Deploying GSM (Global System for Mobile Communications) transmitters on larger birds, including wading birds and waterfowl, to study migration, identify key habitats, support land management agencies, and engage the public.*

While the Motus Network is an appropriate monitoring mechanism for small organisms, larger organisms such as wading birds or waterfowl, because of their larger size, can support carrying a larger transmitter. This expands the available technology for the study of their migration movements. Global Positioning System (GPS) or Global System for Mobile Communications (GSM) transmitters typically record the exact location of a bird every 30 minutes (or however often their transmitter is set up to record). The data are then transferred via cellular networks back to the researcher through online access. Many are solar-powered and will last the life of the bird. This means, in essence, that once we attach a transmitter to an individual, we can see where that bird is located every 30 minutes for the rest of its life. Obviously, this provides a wealth of information. GSM transmitters provide location, altitude, dates, times, and ambient temperature readings that biologists can use to determine migration characteristics, habitat use timing, and drivers from environmental triggers, and pinpoint accuracy in various habitats. They can identify stopover locations, stopover duration, important migratory corridors, wintering locations, and lifespan. GSM transmitters can be used on developing habitat management and monitoring plans involving umbrella species, such as white-faced ibis (*Plegadis chihi*) and cinnamon teal (*Spatula cyanoptera*), where large sample sizes are not feasible, and mark/recapture returns are low. Photo 3 shows a white-faced ibis with a GSM transmitter attached using a backpack harness. Both Motus and GSM transmitters offer biologists the ability to obtain multiple years of data collection.

*Component 4: Establish a landscape-scale monitoring program for an endangered migratory bird subspecies, the Southwestern Willow Flycatcher, that breeds throughout southern Nevada and migrates to central America.*

The Southwestern Willow Flycatcher (SWFL, *Empidonax trailii extimus*) is an endangered subspecies of Willow Flycatcher found in small numbers in riparian habitats in California, Arizona, and Nevada. Pahrnagat NWR is located at the northern edge of the range of the Southwestern Willow Flycatcher and houses a natural breeding population in a mature willow forest adjacent to the refuge's Upper Lake. This breeding population has been the most



successful in the region for many years and has been studied in cooperation with SWCA Environmental Consultants to varying degrees (Photo 4). Monitoring is a key component of the National Wildlife Refuge System, and an essential step in maintaining our knowledge of endangered species status as our world continues to change. Using funding from this nomination, we will expand the monitoring efforts of Southwestern Willow Flycatcher in Clark and Lincoln counties which are within the range of this species. This expansion will help land managers assess the importance of each breeding location to the landscape-level population, identify key areas to focus habitat restoration efforts, maximize impact of limited resources, and support endangered species recovery efforts in the region.

*Component 5: Restoring critical migratory bird nesting and stopover habitats.*

This project will identify important migratory bird habitats and identify habitats that are not being used by migratory birds. Our goal is to improve underused habitats, create suitable habitat, and improve use by migratory birds on public lands in Clark, Lincoln, and White Pine Counties. Funding for restoration activities on public lands can be difficult to acquire, and this grant will provide the opportunity to restore areas along important migratory corridors identified using telemetry data.

Ultimately, data on bird migration become actionable at the management level. More specifically, migration data can identify specific locations and habitats that provide critical resources for migratory birds. These locations can then be protected or enhanced, and additional habitat that meets criteria for migratory animals can be created. Over time, we envision data collected by the landscape scale migratory monitoring system to inform management actions across southern and eastern Nevada, but for the duration of this project, we will focus on implementing conservation actions informed by migratory data on the Refuge, a known important migratory bird stopover location. Restoration efforts will include riparian restoration to support habitat for the endangered Southwestern Willow Flycatcher and wetland enhancement to support the plethora of waterfowl that rely on Pahrnagat as a migratory stopover or wintering habitat.

*Component 6: Public engagement by creating educational and community science opportunities for partners and the public*

Migration studies, and particularly those using the Motus Network, provide excellent opportunities for inviting the public to be part of conservation in their communities. Significant time will be spent building and strengthening partnerships with school groups, local tribes, and community-based conservation organizations. For this project, we propose to hold demonstrations educating school groups, conservation partners, and community scientists on banding/tagging, migration studies, and Motus technologies (Photo 5). We will provide volunteers with the opportunity to engage in data collection and interpretation using the educator resources publicly available on the Motus website. New interpretive signs near Motus stations will inform the public on the fascinating and dynamic movements of local wildlife and how researchers are studying them.

Finally, this project will provide funding to hold Motus workshops to train more professionals how to install Motus receiver stations and attach tags to organisms. It is our hope that by providing training and building additional towers in the state, researchers will have fewer

barriers to using this technology to support their management goals of migratory organisms, including birds, bats, and invertebrates.

**a. Describe Relationship to Prior Approved Projects and/or Phases Relevant to this Project (SNPLMA funded or not), and any anticipated Future Phases**

Outside of SNPLMA, the proposed project directly ties into the USFWS's, Bureau of Reclamation's, Nevada Department of Wildlife's and NPS's ongoing Motus projects in southern Nevada. Six Motus receivers have been installed on refuges, and several more have been purchased and are planned to be installed in the upcoming year. Several species of migratory birds have already been fitted with transmitters. The project would enhance and expand the current Motus network in southern Nevada for monitoring small migratory species. Not only would the Motus network be used to monitor avian response to restoration and habitat management practices, but the project would expand and create new partnerships with agencies, non-profits, and educational institutions that will ensure maintenance of the receivers in the future. A portion of the GSM transmitters purchased as part of this project would support the ongoing project initiated by Fish and Wildlife's Intermountain West Joint Venture to study wetland resilience in the western United States.

The project nomination will have a direct relationship with four previously funded SNPLMA projects on Pahrnagat National Wildlife Refuge.

- FW75 Riparian Habitat Restoration for Southwest Willow Flycatchers and Conservation Priority Bird Species in Southern Nevada. – The Riparian habitat restoration project was a project that allowed riparian habitat to be expanded on both Pahrnagat and Desert NWRs. During this project, riparian habitat on Pahrnagat NWR was retreating due to the lack of natural processes that allowed soft-seeded tree species to regenerate. The project was focused within the Critical Habitat designated area of Pahrnagat NWR, and some opportunities on Desert NWR. During the project, planting methods were evaluated to determine best management practices (BMP) of establishing riparian habitat in the desert southwest. The habitat works and the information learned from FW75 will be used to continue more riparian expansion throughout the refuge.
- FW39 Water in the Desert: Water Delivery System – The project nomination will have direct ties to the Refuge water delivery system that currently supplies water to the water delivery system pipeline (CI39). CI39 has allowed the Refuge an efficient way to transport water throughout the Refuge, the Refuge can supply new units with water. With the proposed wetland restoration in this project proposal, several units will again be a productive wetland management unit for migratory birds.
- FW 42 Upper Lake Modernization and Water Management Improvements – This project continues to provide much needed improvements to water conservation projects on Pahrnagat NWR. These water conservation improvements will have direct impacts to providing quality wetland and riparian habitats to migratory birds that are dependent on these rare habitats for survival. The Upper Lake Modernization and Water Management Improvements allow the refuge manager at Pahrnagat NWR to alter the amount of water available more precisely in the North Marsh – the primary nesting area for Southwestern Willow Flycatcher. The Flycatcher monitoring proposed for this project would assist the manager with developing the most beneficial water management scheme for the

flycatchers. The refuge will also have capacities to increase restoration acreages of riparian and wetland nesting habitats to our endangered and species of special concern in the intermountain west because of these water management improvements.

- FW69 Modernization of Groundwater Wells for Wildlife Refuge Habitat Conservation – Water from the wells will be delivered to improved water management structures funded in Round 18 and will allow the Refuge to further modernize the water delivery and water conservation practices used to manage wetland and riparian habitats for migratory birds. FW69 will increase the available water and will have significant impacts to the Refuge’s long-term plan to manage the wetland habitats in the face of long-term droughts and climate change to benefit migratory animals.

**b. Acknowledgement of Stand-Alone Project and no Guarantee of Funding for Future Phases**

The USFWS acknowledges that the proposed project is stand-alone and that there is no guarantee of funding for future phases.

## **B. EXECUTIVE COMMITTEE’S SNPLMA STRATEGIC PLAN VALUES**

*Conservation Initiative projects have two goals identified in the Strategic Plan:*

- *Goal 1: Sustain the quality of the outdoor environment by conserving, preserving, and restoring natural and cultural resources.*

*Goal 2: Improve the quality of life for all publics in urban and rural communities by enhancing recreational opportunities that connect people with the outdoor environment*

*Nominated projects should meet these two goals by focusing on the three SNPLMA core values, connectivity, sustainability, and community. Every nomination must explain how the three values are promoted by the project.*

- **Sustainability:**  
With the uncertainty of quality nesting and migration stopover habitats in the desert southwest, it is critical for managers to plan long-term to support endangered and sensitive wetland-dependent species. Riparian areas in Nevada support the highest density of breeding birds and are critical migratory stopover habitats for a diverse range of species. Faced with climate change currently affecting habitat quality and quantity, bird populations have been declining in recent years. This project will provide the capabilities of establishing long term monitoring systems for managers. It is critical that we establish a system for identifying shifts in migration patterns and habitat use to direct decisions on habitat restoration and management as funding and water quantity decline in coming years. Using umbrella and endangered species as a monitoring metric, managers can use data from southwestern willow flycatcher, white-faced ibis, phainopepla, LeConte’s trashers, cinnamon teal, bat species, and other organisms to identify critical

areas, determine use, determine survival, assess site fidelity, and evaluate reproductive success for years to come. This project will address long term management decisions on the Pahrangat NWR and throughout Nevada on the management and restoration of crucial habitats for decades to come.

The project nomination addresses recovery actions for the southwestern willow flycatcher.

1. Recovery Action 5.1 – Facilitate and institute effective survey and monitoring programs. Past efforts to compete survey and monitoring of the endangered southwestern willow flycatcher has been sporadic over the past decade. It is impossible to implement a recovery plan without knowing what the species population levels are, limiting factors on nesting, and if the species is expanding to new areas. The project nomination addresses this recovery action and puts in place a monitoring plan on approximately six known sites on USFWS, BLM, BOR and NPS lands and expands current monitoring being conducted along the Lower Colorado River.
2. Recovery Action 5.2 – Monitor effects of management and restoration practice. Monitoring effects of past restoration has been very difficult to impossible to achieve for this recovery action. This project nomination directly addresses this shortfall and sets up a long-term monitoring device through banding and transmitters that will allow managers to monitor the effects of restoration on this umbrella species, while also addressing the recovery action.
3. Recovery action 5.3 – Survey to determine dispersal movements and colonization events. This nomination also directly addresses this recovery action. Currently, there are limited surveys that allow managers and biologist to meet this recovery action. This nomination will allow a long-term monitoring system to be set to monitor post breeding dispersal and new meta populations using transmitters and Motus. Until recently, the effectiveness of monitoring this important metric has been nearly impossible.

The Motus network is designed to be established permanently, so the proposed project is expected to be very sustainable. Similar efforts in eastern states were made over a decade ago and the established receiver stations are still automatically recording birds migrating through the area. Many nanotransmitters, including most used in the proposed project, are solar-powered and therefore send signals throughout the lifetime of the bird. The receiver stations, once installed, can also receive signals through the lifetime of the receiver station, and many of the eastern states have reported that even after ten years, they are still collecting bird data.

- Connectivity:

Through partnerships with local non-profits and educational institutions, we plan to use funds from this project to train partner organizations, schools, universities, and volunteer groups to take over the maintenance of the receiver stations and use the data collected by the stations for local educational and research projects. The data collected in the Motus network are open-source, meaning that they are uploaded into a global database where

they are managed and retained in perpetuity, and most importantly, where they remain visible to the public (for details, see the Motus dashboard at <https://motus.org/dashboard/#e=main>).

The project will monitor the nesting success, preferred foraging habitat, and natal dispersal of southwest willow flycatchers on a landscape scale which allow managers and biologist to identified connected habitats and populations on a landscape scale. There will be approximately five known nesting colonies monitored in Clark and Lincoln Counties. includes areas and will connect with the community by holding public volunteer planting events. These actions will enhance opportunities for visitors to connect with nature by improving birding, hiking, hunting, nature journaling, wildlife photography, and observing cultural resources.

The project will allow biologists to gain the information that is needed to effectively implement adaptive management approaches at specific sites throughout Nevada. At the Refuge, this approach will ensure that important habitat resources and corridors are identified and that they receive adequate water through the dry seasons to continue to support the species that depend on them. In addition to connecting important habitats locally, improving these areas at the Refuge furthers the Refuge's purpose to protect important wetlands and wet meadows for wetland dependent migratory birds and endangered species of the Pacific Flyway. Pahrangat is but one link in a chain of increasingly rare wetland and riparian habitats across the arid western United States. The Refuge provides essential staging, wintering, and breeding habitat for over 230 species of migratory birds traveling along the Pacific Flyway. Birds migrate hundreds of miles before stopping and refueling on the Refuge before flying several hundred more miles across the Mojave and Sonoran deserts to the Imperial Valley and wetland habitats in Mexico.

Along with birds, the Refuge serves as migration hubs to Nevada's native big game species, like Mule Deer. The habitats that are managed using umbrella avian species will stairstep down to other wildlife of southern Nevada that depend on the life nourishing water and lush vegetation to fulfill critical life history requirements for the big game animals that move through the Refuge. We will actively restore or enhance approximately 15 acres of riparian and approximately 125 acres of wetland habitat by planting native species and or adjusting management actions because of monitoring needs of southwestern willow flycatcher, white-face ibis, and cinnamon teal. r

- Community:

The proposed project will specifically seek to close the gap between bird conservation research and public education. Motus is particularly useful in bringing the public, particularly students, in direct contact with real data and birds that matter to their community, as it not only engages the public to learn about local birds that are tagged and where they go, but also shows them how connected their local protected site is to sites throughout the western continent by way of migrating birds. We plan to hold targeted workshops and Motus training for local communities, particularly focusing on schools and colleges, as well as non-profits engaged in conservation science. The long-term goal is to engage local communities enough in the Motus network that the maintenance of the receiver stations is supported in the long-term regardless of future funding of this project.

This project will allow biologists and managers the ability to secure critical habitats to manage habitats more effectively to meet the annual life cycle needs for migratory birds, bats and other wildlife. On Refuges and other public lands destinations for outdoor recreation, these key habitats and umbrella species are highly sought by visitors. Because of the sustainability of the project nomination, the Refuge will have the ability to maintain these sensitive and important wetland habitats to support these iconic species for visitors to enjoy over the next decades. Riparian habitats adjacent to existing public use trails that contain interpretive panels outlining the importance of nesting habitats in the refuge wetlands and riparian habitats teach refuge visitors the importance of these rare habitats. The trails around the Visitor Center and Black Canyon showcase interpretive panels from the Nuwu/Nuwuvi perspective and the cultural importance of water in the Pahranaagat Valley. By being able to identify and more effectively use adaptive management to provide life history requirements and improve nesting habitats on the refuge, we are estimating that there will be a large increase of quality of outdoor recreation activities in these areas. Activities such as birding, hiking, nature journaling, observing wildlife, and wildlife photography, and hunting will have greater impacts to local and regional communities with potentially more visitors coming to these rural sites to recreate, ultimately positively impacting tourism dollars in southern Nevada's rural towns.

### **C. PURPOSE STATEMENT**

The Southern Nevada Agency Partnership, led by the U.S. Fish and Wildlife Service, proposes to develop a landscape-scale migratory wildlife monitoring network on BLM, NPS, BOR, and USFWS land in Clark, Lincoln, and White Pine counties. This project will support and grow the Motus Network, support and conduct research on migratory and endangered species, engage local communities, identify key habitats for restoration, inform management decisions, and restore wetland and riparian habitats.

### **D. PROJECT DELIVERABLES**

#### Primary Deliverables:

- Design, plan and install between 10 and 30 Motus receiver stations in three counties (Clark, Lincoln, White Pine) within 3 years.
- Deploy up to 500 Motus transmitters on migratory species over approximately 4-5 years.
- Deploy up to 150 GPS/GMS transmitters on migratory waterbirds over 3-4 years.
- Establish and implement landscape-scale surveys for Southwestern Willow Flycatcher at approximately five nesting locations in Clark and Lincoln Counties.
- Provide at least 5 Motus receiver station installation or tagging workshops for partners and professionals.
- Complete approximately 15 acres of riparian restoration and approximately 125 acres of wetland enhancement.

- Host or organize at least 15 Motus workshops or education sessions to engage schools, colleges, and non-profits in the Motus network and the resulting conservation research institutions.
- Engage with local tribal partners and conservation organizations to identify how underserved communities could benefit from Motus stations or environmental education.
- Create at least one migration-themed environmental education/interpretation program.
- Support at least one graduate student to assist with data management and analysis.
- Design and install informational signs or kiosks at up to 20 Motus receivers that are in publicly accessible locations for public interpretation.
- Purchase and install up to 30 nodes in the Desert National Wildlife Refuge Complex to extract habitat use data from motus-tagged birds in the area (especially thrashers and phainopepla).
- Share results with conservation partners to assist with the decision support tool through the Wetland Evaluation Tool (WET) Platform.

#### Anticipated Deliverables:

- Create and distribute annual project reports to all participating agencies and community.
- Create and distribute annual reports of SWFL nesting results to all federal land management agencies.
- Identify migration networks across the Pacific Flyway.
- Identify crucial nesting and stopover habitats in riparian and wetland systems.
- Identify at-risk wetland ecosystems outside southern Nevada for partner agencies to promote wetland diversity and waterbird habitat resilience.

#### Standard Deliverables:

- Completing environmental compliance documents, such as NEPA, Section 106, and Section 7 that participating federal agencies need for the scope of the project nomination.
- Completing updates to Master Banding Permits for marking umbrella species previously mentioned and deploying Motus transmitters and GSM transmitters.
- Completing compliance documentation and training needed to mark endangered species, such as SWFL on Master Banding Permits.
- Developing scope of works for contracting and agreements.
- Reviewing bid proposals and providing technical representation for Contracting Officer.
- Reviewing and approving invoices.
- Compiling budget information.
- Oversee or implement project activities and deliverables.
- Conduct appropriate review throughout various stages of deliverables.
- Share data through scientific network.
- SNPLMA Close-out Package

## **E. PROJECT LOCATION**

### **Identify County in Nevada where Project will be carried out:**

Clark, Lincoln, and White Pine counties.

**Identify Congressional District(s):**

Nevada Congressional District 1  
 Nevada Congressional District 2  
 Nevada Congressional District 3  
 Nevada Congressional District 4

**Latitude and Longitude:**

See maps below.

This project includes Clark, Lincoln and White Pine Counties, and the approximate center point is 37.26266, -115.09519.

**F. PROJECT TIMEFRAME**

The timeframe of the proposed project is 6 years. The first three years are dedicated to installation of receiver stations and bird-tagging, and the remaining three years will include continued bird tagging, community outreach, assistance in maintenance of the stations and assistance with local research conducted using the Motus receivers. Data analysis of location data, because it creates large datasets, is a time-consuming process that would not be completed in the standard 5-year total project timeframe. Additionally, because of recent delays in the federal contracting process, the life cycle of the organisms involved, supply chain issues with receiver station building supplies, and the collaborative nature of this project, we anticipate needing 6 years to fully implement and complete the project.

## Year 1:

- Design and plan Motus receiver station installation locations
- Design signage to accompany Motus stations
- Complete environmental compliance documentation at applicable sites
- Install Motus receiver stations and accompanying signage where possible
- Update master banding permit
- Deploy GSM transmitters
- Deploy Motus transmitters
- Install monitoring nodes at Desert NWR
- Plan and establish contracting for landscape-scale SWFL monitoring, monitor if possible
- Provide Motus installation or tagging workshops
- Engage with local tribal partners and conservation organizations to identify how underserved communities could benefit from Motus stations or environmental education
- Create and distribute annual project report to all participating agencies and community

## Year 2:

- Install Motus receiver stations and accompanying signage
- Deploy GSM transmitters
- Deploy Motus transmitters
- Monitor SWFL populations
- Provide Motus installation and tagging workshops
- Engage with local tribal partners and conservation organizations to identify how underserved communities could benefit from Motus stations or environmental education



- Support at least one graduate student to assist with data management and analysis.
- Create and distribute annual project report to all participating agencies and community
- Create and distribute annual report of SWFL nesting results to all federal land management agencies

Year 3:

- Install Motus receiver stations and accompanying signage
- Deploy GSM transmitters
- Deploy Motus transmitters
- Develop and plan Motus-themed environmental education/outreach events
- Monitor SWFL populations
- Provide Motus installation or tagging workshops
- Engage with local tribal partners and conservation organizations to identify how underserved communities could benefit from Motus stations or environmental education
- Support at least one graduate student to assist with data management and analysis.
- Create and distribute annual project report to all participating agencies and community
- Create and distribute annual report of SWFL nesting results to all federal land management agencies
- 

Year 4:

- Deploy GSM transmitters
- Deploy Motus transmitters
- Monitor SWFL populations
- Provide Motus installation or tagging workshops
- Host or organize Motus-themed environmental education/outreach events
- Analyze data to identify maximum benefit restoration areas
- Plan restoration efforts (riparian restoration and wetland enhancement)
- Support at least one graduate student to assist with data management and analysis.
- Create and distribute annual project report to all participating agencies and community
- Create and distribute annual report of SWFL nesting results to all federal land management agencies
- Share results with conservation partners

Year 5:

- Deploy Motus transmitters
- Monitor SWFL populations
- Provide Motus installation or tagging workshops
- Implement restoration efforts (riparian restoration and wetland enhancement)
- Host or organize Motus-themed environmental education/outreach events
- Support at least one graduate student to assist with data management and analysis.
- Create and distribute annual project report to all participating agencies and community
- Create and distribute annual report of SWFL nesting results to all federal land management agencies
- Share results with conservation partners
- Identify migration networks across the Pacific Flyway.
- Identify crucial nesting and stopover habitats in riparian and wetland systems.

- Identify at-risk wetland ecosystems outside southern Nevada for partner agencies to promote wetland diversity and waterbird habitat resilience.
- Share data through scientific network.

Year 6:

- Monitor SWFL populations
- Host or organize Motus-themed environmental education/outreach events
- Support at least one graduate student to assist with data management and analysis.
- Create and distribute annual project report to all participating agencies and community  
Create and distribute annual report of SWFL nesting results to all federal land management agencies
- Share results with conservation partners
- Identify migration networks across the Pacific Flyway.
- Identify crucial nesting and stopover habitats in riparian and wetland systems.
- Identify at-risk wetland ecosystems outside southern Nevada for partner agencies to promote wetland diversity and waterbird habitat resilience.
- Share data through scientific network.
- SNPLMA Close out package

Table 1: Deliverables and Implementation Timeframe:

<b>Deliverable</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
(1) <b>Standard Deliverable:</b> Completing environmental compliance documents, such as NEPA, Section 106, and Section 7 that participating federal agencies need for the scope of the project nomination	Planning and Design					Final Documentation and Closeout
(2) <b>Standard Deliverable:</b> Completing updates to Master Banding Permits for marking umbrella species previously mentioned and deploying Motus transmitters and GSM transmitters.	Planning and Design					Final Documentation and Closeout
(3) <b>Standard Deliverable:</b> Completing compliance documentation and training needs to mark endangered species such as SWFL on Master banding Permit.	Planning and Design					
(4) <b>Standard Deliverable:</b> Based on the results of the EA, USFWS will publish a Finding of No Significant Impact (FONSI) statement or Environmental Impact Statement (EIS) and Record of Decision (ROD).	Planning and Design	Planning and Design Construction and Installation				Final Documentation and Closeout
(5) <b>Standard Deliverable:</b> Compiling budget information.	Throughout Project Duration					
(6) <b>Standard Deliverable:</b> Developed scopes of works for contracting and review bid proposals.		Planning and Design	Construction and Installation			Final Documentation and Closeout
(7) <b>Primary Deliverable:</b> Design, plan, and install approximately 8 Motus receiver stations.		Planning and Design	Construction and Installation			Final Documentation and Closeout

<b>Deliverable</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
<b>(8) Primary Deliverable:</b> Present education on Motus towners and training season for local communities and conservation partners.		Planning and Design	Planning and Design	Planning and Design	Planning and Design	Final Documentation and Closeout
<b>(9) Primary Deliverable:</b> Establish landscape scale surveys for SWFL monitoring in Clark and Lincoln Counties.	Planning and Design	Survey and results	Survey and results	Survey and results	Survey and results	Survey and results Final/ Documentation and Closeout
<b>(10) Primary Deliverable:</b> Attachment of approximately 500 Motus transmitters	Planning and Design	Transmitter Deployment	Transmitter Deployment	Transmitter Deployment	Transmitter Deployment	Transmitter Deployment /Final Documentation and Closeout
<b>(11) Primary Deliverable:</b> Attachment of approximately 150 GSM transmitters.	Planning and Design	Transmitter Deployment	Transmitter Deployment	Transmitter Deployment	Transmitter Deployment	Transmitter Deployment /Final Documentation and Closeout
<b>(12) Standard Deliverable:</b> Reviewing and approving invoices.		Throughout Project				Final Documentation and Closeout
<b>(13) Primary Deliverable:</b> Support at least one graduate student.	Planning and Design	Data management and analysis.				Final Documentation and Closeout
<b>(14) Primary Deliverable:</b> Engage with local tribal partners and conservation organization to identify benefits from Motus station information.	Planning and Design	Data sharing	Data sharing	Data sharing	Data sharing	Final Documentation and Closeout
<b>(15) Primary Deliverable:</b> Results shared with conservation partners to assist with refinement of the decision support tool through WET.			Data sharing	Data sharing	Data sharing	Final Documentation and Closeout
<b>(16) Anticipated Deliverable:</b> Identifying migration networks across the Pacific Flyway.			Data sharing	Data sharing	Data sharing	Final Documentation and Closeout
<b>(17) Primary Deliverable:</b> Install approximately 30 Motus nodes on refuge within Desert Complex.			Monitoring and restoration	Monitoring and restoration	Monitoring and restoration	Final Documentation and Closeout
<b>(18) Primary Deliverable:</b> Completing habitat restoration and enhancement in			Monitoring and restoration	Monitoring and restoration	Monitoring and restoration	Final Documentation and Closeout

<b>Deliverable</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
riparian and wetland systems from results on Pahrnagat NWR.						
<b>(19) Primary Deliverable:</b> Provide at least 5 Motus workshops for tower installation or tagging workshops.			Workshop	Workshop	Workshop	Final Documentation and Closeout
<b>(20) Primary Deliverable:</b> Design and install informational signs or kiosks on approximately 20 receiver locations.	Planning Design	Install signs or kiosks	Install signs or kiosks			Final Documentation and Closeout
<b>(21) Anticipated Deliverable:</b> Annual reports of data to all participating agencies and community.			Data sharing	Data sharing	Data sharing	Final Documentation and Closeout
<b>(22) Anticipated Deliverable:</b> Annual reports to participating agencies on SWFL nesting success and colonization efforts in Clark and Lincoln Counties.			Data sharing	Data sharing	Data sharing	Final Documentation and Closeout
<b>(23) Anticipated Deliverable:</b> Identify at risk wetland ecosystem outside southern Nevada for partners agency to promote wetland diversity.			Data sharing	Data sharing	Data sharing	Final Documentation and Closeout
<b>(24) Standard Deliverable:</b> Overseeing project activities and deliverables.		Throughout Project Duration				
<b>(25) Standard Deliverable:</b> Project management by a refuge employee on the project		Throughout Project Duration				
<b>(26) Anticipated Deliverable:</b> Sharing data through scientific networks.						Share data Through Scientific networks

## **G. LEVEL OF PROJECT READINESS FOR IMPLEMENTATION**

Is this a shovel-ready project?  Yes  No

We consider the project shovel ready. Several receiver stations can be installed, and birds can be tagged with transmitters as soon as funding is approved, and items can be purchased. Some planned receiver stations are currently undergoing NEPA for other installations, and even if there are delays, the proposed work will be implemented in phases that allow for delays in some receiver locations. In addition, alternate locations, where NEPA review is not required, have been identified for all receivers. The USFWS and project partner Great Basin Bird Observatory have the capacity and permits to carry out transmitter tagging of birds, and a full-time coordinator for receiver installation, set-up, and training workshops for partners will be hired under the proposed budget.

## **H. FUTURE OPERATING AND MAINTENANCE**

The Motus network is designed to be established permanently, so the proposed project is expected to require little maintenance in the long-term. Motus receiver stations are designed and constructed to withstand typical weather events. When stations are installed in an area with wireless internet or cellular network access, updates to the software are automatically downloaded and installed. Very little upkeep is needed. Any costs of maintaining the stations (for example, pre-existing internet subscriptions) will be covered by the agency on whose land the station was installed.

Similar efforts in eastern states were made over a decade ago and the established receiver stations are still automatically recording birds migrating through the area. Many transmitters, including most used in the proposed project, are solar-powered and therefore send signals throughout the lifetime of the bird. The receiver stations, once installed, can also receive signals through the lifetime of the receiver station, and many of the eastern states have reported that even after ten years, they are still collecting bird data.

## **I. PROJECT BUDGET**

Complete the project budget using the provided Excel spreadsheet template and upload as a separate document to the “Submissions” tab in the Nomination Portal. Do not embed the project budget in this document.

An estimated total of \$421,788.00 for in-kind labor, materials, and supplies from NDOW, GBBO, and USFWS volunteers will be contributed to the completion of this project. Volunteer hours were valued at \$32 per hour (rounded) for both GBBO and USFWS volunteers.

- There are an estimated 10-15 volunteers from GBBO that will assist with the installation of Motus towers, deployment of transmitters, and planning for restoration. The project estimates of 15 volunteers providing 175 hours per year to for a total of 2634 hours for a total of \$84,288 in-kind contribution.

- NDOW will contribute in-kind contributions by providing expense associated to labor for planning, coordination, and installation of seven Motus towers on non-federal lands. Average at least 6 staff members involved in the process of planning, obtaining supplies and materials, coordinating, and the actual installation of the towers on each of the seven sites. NDOW staff will also contribute an estimated 2500 hours for this project. Average salary and fringe rates for NDOW employees is \$59/hour, for a total of \$147,500 of in-kind contribution to the project.
- NDOW will be supplying the materials and supplies to purchase and install the seven towers. Using prices estimates from previously installed towers to completion, the total is \$18,000 per Motus tower. For NDOW to install seven Motus towers, a total of 126,000 of in-kind contribution will be completed.
- USFWS will contribute a minimum of an average 10 volunteers per year for project planning, capturing migratory wildlife, installing transmitters, processing records, and completing habitat restoration over five years of the project. Over the five years of completing deliverables of the project, it is estimated that USFWS volunteers will contribute 2000 hours for a total in-kind contribution of \$64,000.

## J. KEY CONTACTS

Authorized Officer: Kevin J. DesRoberts, Project Leader  
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 Phone Number: 702-515-5451

Project Manager: James R. Vinson, Wildlife Refuge Manager  
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Budget Officer: Leanne Abel  
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## K. RANKING CRITERIA

The Ranking Criteria are used to evaluate the nomination against the goals for the Conservation Initiatives category. Nominating entities are not to include either the total point value or the point values by criteria in their responses. Nominations will be reviewed and scored by the Conservation Initiatives subgroup. Explain how the project meets each applicable criterion.

1. **The nomination supports habitat enhancement, cultural resources, environmental health and protection, and/or public health and safety through connectivity and sustainability.** Include as many project subtypes as applicable to your nomination. Points for this criterion will be awarded on how well the nomination addresses the concepts within the factors, and the quality/quantity of results the project provides. The examples identified are not an all-inclusive list.

A. **Habitat Enhancement.** *The following are examples of project subtypes for habitat enhancement goals, objectives, or actions: Enhances or connects habitats, migratory corridors, or protected areas; Protects endangered species; Proactive steps to prevent listing; Invasive species treatment and/or control (plant and/or animal); Restoration of habitat for sensitive species at the watershed and/or landscape level; Project addresses climate change; Water quality and quantity monitoring; Cave management; Restoration of springs/streams/rivers; Road decommissioning and rehabilitation/restoration; Reintroduction or augmentation of species to restore overall ecosystem; Mitigates impacts of drought.*

Answer:

This project addresses habitat enhancement by identifying and documenting which specific riparian and wetland habitats are particularly important for migratory wildlife and which are most at risk of degradation due to climate change and reduced water quantity. It also aids in evaluating past restoration projects by documenting how species have responded to land management. The project also includes riparian and wetland restoration and enhancement projects on public lands.

**Enhances or connects habitats, migratory corridors, or protected areas:**

Many migratory corridors in the Pacific Flyway are currently insufficiently documented. By tagging a variety of umbrella species, answers to how important breeding and stop-over habitats are connected can be found. The project will also provide tools to answer how various migratory corridors overlap and interact with specific habitats. The results will give land managers answers to which habitats in specific areas should receive additional protections and enhancements. By using a telemetry-based monitoring approach, managers and biologists can proactively develop long- and short-term management plans and objectives at various scales, especially in the face of existing impacts of climate change in the desert southwest.

The project will also identify areas that are critical for protection to breeding and migrating wildlife, especially birds. One area of weakness that land managers are faced with is planning for reduction of resources in the future. Resources like water availability and funding seem to be the largest unknowns that challenge decision making. This nomination would allow a science-based approach to identify these critical and sensitive habitats. The reduction of guesswork that the project would provide would allow better focus of limited resources to have a greater impact in preserving habitat integrity.

The habitat restoration and enhancement component of this project would further contribute to connecting habitats by creating suitable wetland habitats for use by migratory species in areas where large spaces exist between these rare habitats. The habitat improvements of the project would provide additional conservation and enhancements to these sensitive wetland areas and increase suitability for nesting and migrating birds. This project would allow public land managers to make an immediate impact to riparian and wetland areas in a time when bird populations have been declining.

Habitat restoration on the Refuge will not only expand nesting and stop-over habitat to riparian dependent migratory birds and bats that faithfully migrate to the Refuge to nest or refuel before crossing vast expanses of desert, but conducting riparian restoration will connect a currently fragment habitat type. Connecting fragment portions of riparian habitat will greatly



improve useability by eliminating insular segments, allowing greater use for all the refuge's native wildlife.

**Protects endangered species:**

Information is very powerful when conserving endangered species. This project will contribute to our knowledge base and recovery of the endangered Southwestern Willow Flycatcher in southern Nevada by implementing a landscape-scale monitoring effort of this endangered subspecies. This effort will document relationships between populations, identify areas best suited for habitat improvement, and identify key migration or dispersal patterns. Additional research conducted on migratory umbrella species as part of this project will inform land managers of important ecological areas. These umbrella species represent a suite of animals that rely upon wetland or riparian habitats. By studying umbrella species, we will learn about areas important to many species, including threatened or endangered species such as the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) and Yuma Clapper Rail (*Rallus obsoletus yumanensis*).

With habitat enhancement being part of the project, locations on the Refuge that currently support the largest nesting population of Southwestern Willow Flycatchers will continue to be protected. The current riparian habitat consists of old growth willow. Habitat restoration will connect fragmented riparian areas together, and increase nesting habitat, allowing the current carrying capacity of nesting flycatchers to increase. Because the restoration is being completed on a national wildlife refuge with a refuge purpose of protecting migratory birds, the habitat will be protected for decades to come. This will contribute to a long-term recovery effort for the Southwestern Willow Flycatcher.

**Proactive steps to prevent listing:**

The project will allow land managers and biologists to become proactive instead of reactive when developing management objectives and long-term management plans by using sustainable telemetry-based technology. Several species of special conservation concern, including LeConte's Thrasher, Phainopepla, and Cinnamon Teal, will be targeted by this project. Available habitats for these species are in decline, and many important lifecycle stages remain a mystery. This project will provide important information about migration patterns, cycles, and changes, and identify home range and habitat use information. This information will help land managers better prepare and manage these species, and if implemented properly, could help prevent them from being listed under the Endangered Species Act in the future. This project also includes riparian and wetland habitat restoration which will directly enhance the habitat for use by migratory animals.

Habitat improvements and restoration benefiting identified umbrella species will also work proactively with the conservation and management of imperiled species, such as the Least Bell's Vireo (*Vireo bellii pusillus*). Using umbrella species to model and drive habitat improvements have greater reaching impacts to all species that use and rely on these rare and critical habitats. The habitat improvement and restoration also provide stop-over habitat to the recently listed Western Yellow-billed Cuckoo. Defragmenting riparian habitat will likely have lasting improvements for Western Yellow-billed Cuckoo migration in southern Nevada. Evaluating bird migrations on a landscape scale will begin to reveal critical habitats that would be otherwise unknown to land managers. This proactive management approach is a large step forward in the future management of imperiled species in southern Nevada.

### **Invasive species treatment and/or control (plant)**

Invasive species such as Russian knapweed (*Acroptilon repens*), perennial whitetop (*Lepidium latifolium*), and tamarisk (*Tamarix* spp.) degrade natural habitats, and can force species to adapt or abandon previously suitable habitats. This project addresses restoration and enhancement of riparian and wetland habitats to improve and create suitable native habitats that can support migratory birds and other wildlife for future generations to enjoy. To accomplish a successful restoration effort, invasive species will have to be treated and controlled to give native plantings a chance to establish and out compete the invasive species. Areas that will be identified for restoration or enhancement will have a treatment plan developed that addresses pre- and post-restoration treatments. Moving into the future, the project will give the needed data to land managers to identify degraded and invasive-infested habitats, and target treatments in important riparian and wetland areas.

### **Restoration of habitat for sensitive species at the watershed or landscape level**

The project is structured to address conservation needs at a landscape level. Management of migratory birds and other animals cannot be fully achieved without incorporating landscape scale approach, which greatly increased the complexity of developing management strategies. Because of the nature of managing migratory birds, habitat restoration efforts locally have a much larger scaled impact. Habitat restoration associated with this project, along with future restoration identified because of the project will support a landscape level functionality of southern Nevada, with larger impacts flyway wide. The telemetry component of the project will assist land managers to identify important areas based on the level of use by migrating animals. Preferred habitat structure identified by monitoring umbrella species through Motus- and GSM-tagged individuals will allow land managers and biologists to implement restoration in existing areas that contain suitable conditions (i.e., a water source) but do not support the needed habitat structure. This will improve the migratory connectivity and suitability of the landscape within a migratory corridor.

By using umbrella species as a guide for habitat improvements, a suite of species would benefit from the habitat improvements. On the Refuge, habitat management cannot be done for every species that occurs. The use of umbrella species allows habitat management to be completed that would benefit a suite of other species. Sensitive species that would benefit from the riparian and wetland management would include northern leopard frog (*Lithobates pipiens*), loggerhead shrike (*Lanius ludovicianus*), peregrine falcon (*Falco peregrinus*), sandhill crane (*Antigone canadensis*), big brown bat (*Eptesicus fuscus*), canyon bat (*Parastrellus hesperus*), and monarch butterfly (*Danaus plexippus plexippus*). This short list demonstrates the overarching impacts that this project nomination would have not only on the Refuge, but the southern Nevada landscape.

### **Climate Change**

Migration, in particular the timing of the initiation of migration, has changed in some species as the climate has changed. Earlier spring weather results in earlier insect activity, which affects the availability of food for migratory animals during their migration. This also has great effects on breeding and brood rearing. In response to changing climates, some species of migratory birds have begun to change breeding locations and now depend on new locations to successfully complete their life cycles. This has been noted over the past decade, and questions

are being generated about how land management agencies can adapt and manage for these changing migrations and breeding grounds. This project will help address and answer some of these questions by studying migratory patterns in a variety of species. The information gained from using modern technology will contribute to our knowledge of how the world is changing in response to climate change.

The project will also assist land managers with identifying critical nesting and stop-over habitats in the arid southern Nevada landscape. Supporting analyses will provide evaluations of land-use changes and impacts of climate change by monitoring wetlands upon which umbrella species, such as the White-faced Ibis and Cinnamon Teal, depend. This project will provide important information about wetland habitat resilience over time and assist with steering decision from land management agencies on supporting critical breeding and stop-over wetland habitats with a continued diminishing water supply resulting from climate change. Being proactive in identifying limiting factors caused by climate change is the only way these sensitive wetland habitats will remain functioning in the desert southwest.

### **Water Quality and Quantity Monitoring**

As previously mentioned, the project will provide important data to land managers by identifying critical wetland habitats to restore and enhance, using data gained by modern technology. The project will identify important nesting and stop-over wetland habitats and habitat structure. This will allow land managers to better focus limited resources, such as water, to support these life-giving habitats for all wildlife that use southern Nevada. As water quantity continues to decrease in southern Nevada due to climate change and drought, land managers will have the ability to focus water budgets and management on these key wetland habitat types, which will allow for a potentially great impact to migratory species and better direct management by eliminating potential water waste.

### **Mitigates Impacts to Drought**

The southern Nevada landscape has been suffering from drought over the past decade. As a result of this prolonged drought, land managers have been asking important questions on how to better focus the limited resources that are available, especially water. All wildlife depends on water, and some species, such as the White-faced Ibis, depend on water and wetlands to complete every stage of their life cycle. Riparian and wetland habitats tend to have the highest density of wildlife and support higher species richness than surrounding habitats. These areas become critical in times of drought when species from surrounding habitats move to the area creating increased pressure on limited resources. By identifying and enhancing these valuable habitats to support a higher abundance of wildlife in times of drought, we are creating a buffer for survival of many species.

This project was developed to employ automated telemetry technology to answer questions about managing wetland systems in the face of severe and prolonged drought that will likely be exacerbated in the future. Because of the distance covered by migratory species, it is nearly impossible to monitor a species across their entire life cycle unless some form of telemetry is used. With the use of modern technology like Motus and GSM systems, this information is now available and accessible for managers and biologist to accomplish this once impossible feat. Information gained through this type of technology reveals habitat types needed throughout a lifecycle, including preferred habitat structure. The information this project learns

will allow land managers to better focus limited water supplies to support crucial wetland habitats identified because of this project across the southern Nevada landscape.

B. Cultural Resources. *The following are examples of project subtypes for cultural resources goals, objectives, or actions: surveys; National Register (eligible or currently approved); Protection/site stewards; Restoration/stabilization; and tribal involvement in the planning, design and/or implementation.*

Answer:

### **Surveys**

This project will include surveys for cultural resources in any undisturbed areas where towers are expected to be installed as part of Section 106 compliance planning. Additionally, several areas that will be studied as part of this project are important areas of the natural landscape which have traditional cultural significance. The availability of water in the desert is an important resource for nomadic peoples. Maintaining the natural landscape in these areas by protecting areas of importance not only for migratory animals but for people as well, protects these sensitive sites for the enjoyment of future generations.

### **National Register (currently approved)**

Pahranagat NWR is a culturally important area for the Nuwu/Nuwuvi people. The Black Canyon unit of the Refuge is listed as a significant Archaeological District by the National Register of Historic Places. Black Canyon also hosts interpretive elements along the hiking trail that showcase the Nuwu/Nuwuvi culture and heritage and educate visitors about Black Canyon as a sacred site as well as the important habitats that drew ancient people to the site. Habitat restoration and enhancement efforts would improve wildlife habitat within and adjacent to the cultural resource sites of Black Canyon and improve visitor understanding by seeing the habitats firsthand and not just reading from interpretive panels.

Using data from the project, would better stabilize the existing wetland habitats. This would be accomplished by improving the wetland habitat structure to improve breeding and stop-over habitats. With current fragmented riparian habitats in and adjacent to Black Canyon, this project would allow better connectivity of Black Canyon to the rest of the Refuge. Maintaining lush riparian and wetland habitat in Black Canyon preserves the integrity of the site by maintaining the ecological context that supported its creation.

### **Restoration/Stabilization**

Using data from the project, we would better stabilize the existing wetland habitats. This would be accomplished by improving the wetland habitat structure to improve breeding and stop-over habitats. With current fragment riparian habitats in and adjacent to Black Canyon, this project would allow better connectivity of Black Canyon to the rest of the refuge.

Lower Lake on Pahranagat NWR is the only natural lake, and the terminus of the water flows in the Pahranagat Valley. Lower Lake is a significant cultural site for the Nuwu/Nuwuvi people from past to present. The habitat value of migrating birds that have visited the refuge over several millennia makes this location important to the local tribes. The project will allow managers and biologists to develop short- and long-term plans by analyzing data gained from the use of telemetry. This information will allow better habitat stabilization and protection for future generations to enjoy.

### **Tribal Involvement or Consultation**

The interpretive elements of the Refuge's Visitor Center and trails were developed with partnerships and intimate involvement of the Nuwu/Nuwuvi tribes. If this project is funded, the Service will present the proposed work plan as well as any assessment documents generated for the project to Nuwu/Nuwuvi partners. Because the Refuge is located within the Nuwu/Nuwuvi ancestral homelands, the Service consults and collaborates with the tribes on all planned large conservation projects.

C. Environmental Health and Protection and/or Public Health and Safety. *The following are examples of project subtypes for public health and safety goals, objectives, or action: Illegal litter/dumping cleanup; Information kiosks and signs; Addresses and mitigates adverse impacts to resources caused by the volume of people using the resource; Resolving trespass/encroachment/illegal use of public lands (i.e. homeless encampments, marijuana grow sites)/boundary surveys; Abandoned mine land (AML) with habitat restoration component; Improve the sustainability of the landscape health and ecosystem function; Remove the threat of catastrophic fire loss of the ecosystem; Improve water quality and/or mitigate the threat of soil erosion.*

Answer:

#### **Information kiosks and/or signs**

Information kiosks will be installed adjacent to Motus towers in public areas to inform the public of their purpose and the goals of the project. Where needed, protective fencing will be installed in to protect Motus stations in areas that are easily accessible to the public. This will reduce the vulnerability of vandalism. Interpretative programs will be developed and performed at public lands and in schools with the goal of connecting individuals with nature, which is an excellent way to improve health and happiness. In addition, engaging community scientists with volunteer opportunities helps strengthen their connection with nature, and provides a sense of community which has been shown to improve public health.

#### **Improve the sustainability of the landscape health and ecosystem function**

The project nomination will improve landscape health and ecosystem function by using migratory animals to identify key habitats, inform land managers of the location and status of those habitats, and contribute to their protection. With the use of modern technology and the use of umbrella species to identify important breeding and stop-over habitats, land managers and biologists will possess tools and knowledge gained from having real time telemetry information to identify sensitive habitat and focus management to maintain a healthy ecosystem for all wildlife in southern Nevada. Managers are already dealing with highly altered ecosystem functions, and processes that once drove sectional control and habitat dynamics have been removed. Managers faced with highly altered systems are required to actively manage these habitats to provide functionality. The project nomination brings modernized tools for managers to use to identify crucial habitats that migratory birds rely on for nesting and stop-over habitats. These migratory birds make long distance migrations on the faith that these habitats will be there, especially when wetland habitats such as riparian and emergent wetland systems are so sparse in the arid southwest. This project not only improves the knowledge base of revealing

migration corridors but allows biologist the opportunity to learn habitat structure from heavily used habitats. Having this information allows for long term planning and sustainability to provide these rare and critical habitats in the face of climate change and droughts.

The project provides an avenue to use of modern technology like Motus and GSM systems to gain priceless information on migration dynamic and habitat use, and the project also provides a means to make immediate habitat restoration and enhancements on the landscape. By using data collected from modern telemetry, managers and biologists can target degraded habitats and develop plans to restore and enhance surrounding degraded habitats back to functional, native habitats, better suited for supplying the necessary life history requirements to southern Nevada migratory wildlife.

#### **Improve water quality and/or mitigate the threat of soil erosion**

The project nomination provides wetland habitat restoration and enhancement to immediately improve degraded wetland habitats in riparian and wetland systems in southern Nevada. On Pahranaagat NWR, wetland restoration is not only important to achieving refuge purpose, but also improves water quality through wetland filtration to ground water systems. Pahranaagat's 4,000 acres of wetland habitats play a significant role in providing surface water storage and improving water quality to ground water systems for southern Nevada. Ground water that is filtered through the Pahranaagat Valley is interlinked with surrounding basins, such as Coyote Springs Valley, Delamar Valley, and Kane Spring Valley. With very few wetlands in southern Nevada, it is imperative that wetland conservation and restoration remain active to promote native, healthy ecosystems not only for the wildlife that call them home, but for ensuring filtration continues to provide water quality to recharge the limited water supplies that all of southern Nevada depends on.

## **2. The nomination promotes sustainability by providing benefits in the near and long term by implementing actions to conserve and sustain healthy and resilient landscapes and providing durability, and relevancy.**

A. Conserves resources to ensure availability to current and/or future generations through management of natural and/or cultural resources for public benefit and sustainable social and economic utilization.

Answer:

#### **Actions to sustain healthy and resilient landscapes for the current public benefit:**

The project nomination is designed to address conservation needs at a landscape level. Management of migratory birds and other animals cannot be fully achieved without incorporating a landscape-scale approach, which greatly increases the complexity of developing management strategies. Because of the nature of managing migratory animals, habitat restoration efforts locally have a much larger scaled impact. Habitat restoration associated with this project, along with future restoration identified because of the project, will support a landscape level functionality of southern Nevada, with larger impacts flyway wide. The telemetry component of the project will assist land managers in identifying important areas based on the level of use by migrating animals. Preferred habitat structure identified by monitoring umbrella species through Motus and GSM marked individuals will allow land managers and biologists to implement restoration in existing areas that contain suitable conditions (i.e., a water source) but do not support the needed habitat structure. By focusing restoration efforts from data gained from

modernized telemetry, management and restoration efforts can be more focused to maximize the limited resources that are available for managers to have greater impact to sustain a native and healthy ecosystem that the migratory wildlife depends on in southern Nevada public lands. These healthy and resilient landscapes will benefit the public by improving the accessible areas of the Refuge to improve the ecological experience of visitors.

**Public Benefit for Sustainable Social and Economic Utilization:**

Pahranagat NWR e attracts a wide variety of migratory species due to the presence of wetland habitats in an otherwise arid desert region. Many people visit the Refuge due to their interest in hunting and wildlife observation, in particular duck hunting and birdwatching. These user groups patronize the local town of Alamo's facilities and services including motels, grocery stores and gas stations. The local economy in Alamo is greatly bolstered by the influx of wildlife-related tourism dollars. By ensuring long-term sustainable wetland habitats on the Refuge, this project nomination will protect and possible grow the wildlife tourism industry in the Pahranagat Valley, due to the recreational enjoyment and economic benefit for current and future generations of locals and visitors.

The surrounding landowners in the Pahranagat Valley have begun to take advantage of the waterfowl populations that currently use the Refuge. Landowners are now leasing their private fields to hunters, which brings more revenue into the small town of Alamo. The improvements proposed in this project will allow the Refuge to more effectively manage the wetlands and continue to provide a sustainable attraction for migratory birds and hunters alike.

This project nomination will also continue to promote and establish long-term community involvement in the collection of scientific data on migratory species in the region. Having outreach events on Pahranagat NWR that allows community member to connect with the refuge and understand the refuge's importance in providing nesting and stopover sites in the Pacific flyway, community participants can gain a better understanding and appreciation for migratory birds and other migratory animals that depend on the refuge for their habitat needs.

With outreach materials and signs containing educational information placed at Motus tower locations, local stewardship of sensitive species should become apparent to visitors. Visitors can gain a stronger understanding and increase awareness in birding and citizen science efforts.

B. Will remain relevant and continue to provide a benefit beyond the existence of SNPLMA.

Answer:

The modernized telemetry technology, such as the Motus network, will remain relevant as long as researchers wish to study the complex phenomenon of migration, habitat use, life history of migratory wildlife needs, and survival of tagged species. For this, there is no end in sight. Motus towers will continue to function if a power source and an internet connection are available (and they can even function without an internet connection if a site steward visits the station twice a year). The data are housed in perpetuity on the Motus website for future generations to access and compare to future movement data. The restoration efforts completed as part of this project will provide seeds to the landscape and ideally will continue to flourish in these areas, providing habitat for future generations of migratory species.

The Refuge will always need to find the best science to provide critical habitat to nesting and migrating birds. The information that can be gathered through modernization of wildlife monitoring tools and impacts to focus management needs will continue to be relevant for generations to come. This project nomination sets the groundwork to establishing a critically needed system to help land managers and biologist answer management questions about population status, population survival, habitat needs, habitat structure, identify habitats throughout an organism's life cycle, and address shortfalls in endangered species recovery plans, all on a landscape level. Without having a dependable monitoring system in place, adaptive management cannot be adequately implemented. Managers must ask a management question – make a plan/design – apply the management action – monitor – evaluate/learn – adjust management. By applying this cycle, the goals of the project nomination will far exceed the life of SNPLMA.

C. Conserves or restores the functionality, resilience, and integrity of biological communities.

Answer:

With the use of modern technology and the use of umbrella species to identify important breeding and stop-over habitats, land managers and biologists will possess tools and knowledge gained from having real time telemetry information to identify sensitive habitat and focus management to maintain a healthy ecosystem for all wildlife in southern Nevada. Managers are already dealing with a highly altered ecosystem. Functions and processes that once drove sectional control and habitat dynamics have been removed. Managers faced with highly altered systems are required to actively managed these habitats to provide functionality. The project nomination brings modernized tools for managers to use to identify crucial habitats that migratory birds rely on for nesting and stop-over habitats. These migratory birds make long distance migrations on the faith that these habitats will be there, especially when wetland habitats such as riparian and emergent wetland systems are so sparse in the arid southwest. This project not only improves the knowledge base of revealing migration corridors but allows biologists the opportunity to learn habitat structure from heavily used habitats. Having this information allows for long term planning and sustainability to provide these rare and critical habitats in the face of climate change and droughts.

The project not only provides an avenue to use modern technology like Motus and GSM systems to gain priceless information on migration dynamics and habitat use, but the project also provides a means to make immediate habitat restoration and enhancements on the landscape. By using data collected from modern telemetry, managers and biologists can target degraded habitats and develop plans to restore and enhance surrounding degraded habitats back to functional, native habitats better suited for supplying needed life history requirements to southern Nevada's migratory wildlife

D. Conserves or restores cultural resources through prudent management and prevention of damage, injury, decay, waste, or loss.

Answer:

This project will include surveys for cultural resources in any undisturbed areas where towers are expected to be installed as part of Section 106 compliance planning. Additionally, several areas that will be studied as part of this project are important areas of the natural



landscape which have traditional cultural significance. The availability of water in the desert is an important resource for nomadic peoples. Maintaining the natural landscape in these areas by protecting areas of importance not only for migratory animals but for people as well, protects these sensitive sites for the enjoyment of future generations.

**3. The nomination promotes community, connecting humans to engage in the protection and the integrity of biological communities or cultural sites. Encourages people to connect with habitats, migratory corridors, protected areas, etc., and to appreciate and care for the environment.**

A. Encourages people to meaningfully connect with their natural environment and helps them appreciate and be a steward for the environment. Provides information and resources to educate and engage people in understanding their role in protection and maintenance of the natural environment by providing opportunities for them to connect to the natural resources directly or virtually or provides education of the environment.

Answer:

The project nomination will allow SNAP agencies to develop, host, and participate in outreach events to promote the Motus network, and provide the ability for others to assist with training on tagging. Participants will gain an understanding and appreciation of the importance of having modernized systems in place that allows resource professionals to gain complex answers to resource questions related to climate change. Participants in these hands-on workshops will have the means to develop a connection to the resources (migratory wildlife) and can promote citizen science within their communities.

Improving the natural habitats on Pahrangat NWR and connecting fragmented segments of riparian habitats will improve wildlife use by providing additional continuous habitat for wildlife corridors. These riparian corridors pass along the Upper Lake, visitor center, and trails where significant public use occurs. Having quality habitat from restoration and/or enhancement will significantly improve visitor experience around these areas. Visitors come to the Refuge for birding, hiking, nature journaling, wildlife photography, and observing cultural resources - activities will be enriched by restoring native habitat the areas around the Visitor Center and in Black Canyon. Educational outreach events and recruiting volunteers to help with planting events in these areas will provide further opportunities for them to connect to natural resources directly and educate them about the Refuge's natural and cultural resources.

B. The nomination clearly defines and includes a stewardship component (federal or non-federal) to broaden support and reduce long-term costs by minimizing the human impact on the environment through an education plan with clear curricula and achievable goals and objectives.

Answer:

The National Wildlife Refuge System uses interpretation and environmental education as a key component in delivering the System's mission. Without providing

education to all stakeholders, agency/refuge support will not persist, making it impossible to create and trail resource stewards that will continue with the task of providing critical habitats to migratory wildlife species. Having identified the need to connect people to nature and develop natural resource stewards, the refuge has developed multiple interpretative and educational programs with objectives to teach visitors the importance of providing wetland habitat to migratory wildlife in southern Nevada. The objective is to provide these events once per month and between outreach, education, and visitor center contacts, to reach approximately 20,000 people annually. Total visitation to the refuge is 50,000 visitors annually. As visitors learn the importance of being stewards and bring awareness to sensitive habitats and species, the impacts human disturbances would have would lessen with education. This will be an ongoing task to connect humans to nature, especially in a digital world we have today.

Along with the resources the refuge is doing and will continue to do to broaden support for the refuge, this project nomination identifies providing outreach to strengthen support for increasing the partnerships and scope of the Motus Network after the project is completed. These training will be designed and planned with objectives to teach others how to use and install these systems. There is very limited training opportunity for people to learn tagging techniques. As part of this nomination, certified training professionals would be hired to hold workshops in our region for professionals interested in increasing their Motus impact. Being able to provide these types of training would provide a compounding effect on increasing skills and developing partnerships to continue to deliver a landscape scale wildlife monitoring program.

- C. Preserves the past (cultural or historic sites) for present or future generations.

Answer: [Click or tap here to enter text.](#)

This project will include surveys for cultural resources in any undisturbed areas where towers are expected to be installed as part of Section 106 compliance planning. Additionally, several areas that will be studied as part of this project are important areas of the natural landscape which have traditional cultural significance. The availability of water in the desert is an important resource for nomadic peoples. Maintaining the natural landscape in these areas by protecting areas of importance not only for migratory animals but for people as well, protects these sensitive sites for the enjoyment of future generations.

Pahranagat NWR is a culturally important area for the Nuwu/Nuwuvi people. The Black Canyon unit of Pahranagat NWR is listed as a significant Archaeological District by the National Register of Historic Places. Black Canyon also hosts interpretive elements along the hiking trail that showcase the Nuwu/Nuwuvi culture and heritage and educate visitors about Black Canyon as a sacred site as well as the important habitats that drew ancient people to the site. Habitat restoration and enhancement efforts would improve wildlife habitat within and adjacent to the cultural resource sites of Black Canyon and improve visitor understanding by seeing the habitats firsthand and not just reading from interpretive panels.

4. **The nomination enhances partnerships to promote cooperation, collaboration, and stewardship. The nomination has identified committed non-SNPLMA sources of**

**funding or in-kind contributions in the development and/or implementation of the project.**

- A. The nomination promotes partnerships to promote collaboration which addresses and meets the needs of more than one agency (federal or state).

Answer:

The project nomination is a multiagency collaboration and submitted as a Southern Nevada Agency Partnership (SNAP) project. To meet the goals and objectives of a landscape scale project, multiple land management agencies will be invested into the success of obtaining funding from this project. Agencies that will benefit from this project include U.S Fish and Wildlife Service, U.S. Parks Service, Bureau of Land Management, U.S. Forest Service, Intermountain West Joint Venture, and Nevada Department of Wildlife.

The project supports the cooperative goal of conserving the southwestern willow flycatcher (SWFL). The southwestern willow flycatcher is both a Federal and State Endangered Species, and a Species of Conservation Priority in Nevada's Wildlife Action Plan. By increasing available water at the Refuge, managers can support potential SWFL habitat in riparian corridors that are currently too drought-stressed to mature into the appropriate habitat characteristics required by the SWFL.

The project supports the conservation of wetland habitats for migratory birds which addresses the shared needs and goals of agencies like the Nevada Department of Wildlife as well as all other state and federal agencies in the Pacific Flyway. The Refuge provides a critical migration stopover for birds in the Pacific Flyway including shorebirds, sandhill crane, waterfowl, wading birds, raptors, and neotropical migrants. This project addresses needs outlined in the North American Waterfowl Management Plan, and the Lower Colorado Valley Population of Sandhill Crane Management Plan, Southwestern Willow Flycatcher Recovery Plan, among others. The Refuge actively participates in partnerships and collaboration with multiple agencies and no profit organizations to effectively manage migratory wildlife species. This project nomination would not only strengthen the partnerships that are currently in place but create new partnerships as a result of outreach and training programs that will be offered to train others.

- B. The nomination involves non-Federal, public partners, citizen groups or organizations in the development or accomplishment of resource management goals and other activities to prevent waste, damage, or neglect.

Answer:

As a SNAP project, each land management agency will depend on support from non-federal partners to complete this project. Great Basin Bird Observatory (GBBO) will be a key partner in delivering conservation programs related to the establishment of Motus. Local Red Rock Audubon (RRA) volunteers help with completing the needed field work portion of the project. RRA provided volunteers for refuge events and will be an essential part in developing citizen science stewards as part of this project.

As part of the project, the Refuge will implement an active restoration program. We will partner with volunteers from the local community and citizen groups such as the Red Rock Audubon Society and the Nevada Native Plant Society by holding planting events and intend to plant up to 1,000 cuttings or root stock of native vegetation in areas identified as important to Motus or GSM tagged birds. The Refuge will work with the local Wildlife Habitat Improvement of Nevada (WHIN) to coordinate volunteer work dates in addition to implementing any needed assistance to complete wetland restoration activities.

C. Project has support for the planning, design, and/or implementation from non-profit, local, or state government, academia, tribal, or youth initiatives.

Answer: As a SNAP project, each federal land management agency depends on support from non-federal partners to complete this project. GBBO, Intermountain West Joint Venture (IMWJV), Nevada Department of Wildlife, the University of Nevada Reno's Nevada Cooperative Wildlife Research Unit, and local landowners will have support for the implantation of this project. As mentioned earlier, the importance of this project and the information that can be gained from having modernized telemetry monitoring system is very important for all partners involved. All the agencies and non-profit partners involved are faced with the same dilemma when tasked with conserving and managing migratory species. The information gained would be shared with all agencies and universities through the Movebank platform. This platform allows worldwide sharing of data to aid in habitat conservation and assist universities in completing research.

As part of the nomination, outreach and training events will be developed to strengthen support for increasing the partnerships and scope of the Motus network after the project is completed. These training will be designed and planned with objectives to teach other how employ these systems. There is very limited training opportunity for people to learn tagging techniques.

Pahranagat NWR is a culturally important area for the Nuwu/Nuwuvi people. The Black Canyon unit of Pahranagat NWR is listed as a significant Archaeological District by the National Register of Historic Places. Black Canyon also hosts interpretive elements along the hiking trail that showcase the Nuwu/Nuwuvi culture and heritage and educate visitors about Black Canyon as a sacred site as well as the important habitats that drew ancient people to the site. Habitat restoration and enhancement efforts would improve wildlife habitat adjacent to the cultural resource sites of Black Canyon and improve visitor understanding by seeing the habitats firsthand and not just reading from interpretive panels. Data from the project, would assist managers to answer management questions to better stabilize the existing wetland habitats. Maintaining healthy riparian and wetland habitats on the Refuge preserves the integrity of the site by maintaining the ecological context that supported its creation.

D. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project, (i.e., volunteer labor valuation to be computed at the rate used by the Department of the Interior, non-federal employees' actual hourly rate plus the value of any fringe benefits

received, actual costs for material, equipment, and supplies. ***Overhead costs may not be included in determining in-kind contributions.***

Answer:

In-kind contributions identified for the project nomination are as follows and are represents non-appropriated funding:

Partnership in-kind contributions:

Volunteer labor: \$ 84,288

NDOW in-kind contributions:

Labor: \$ 147,500

Equipment (Supplies and materials for Motus Tower installation on non-federal lands): \$126,000

USFWS Volunteer in-kind contributions:

Volunteer labor: \$64,000.00

Total in-kind contributions: \$421,788.00

## L. ORDERS AND PRIORITIES

Respond to the Executive Orders, Secretarial Orders, Department of the Interior Priorities, and USDA Forest Service Priorities as they apply to the purpose of the nomination.

### A. Executive Orders (EO):

- ***EO No. 13855: Promoting Active Management of America's Forests, Range Lands to Improve Conditions and Reduce Wildfire Risk***

This project supports this EO by identifying key areas along migratory corridors where management actions would be most beneficial to migratory animals, and by restoring riparian forest habitat for migratory birds along the Pacific Flyway.

- ***EO No. 14004: Ensuring the Future is Made in All of America by All of America's Workers***

During the bidding process, the US Fish and Wildlife Service will work with the Contracting Officer to ensure that supplies and materials are all purchased by American companies if available and practical and can meet the government's needs. American-made products will likewise be purchased when available and appropriate for the project. When organizing Motus workshops, the organizers will make a conscious effort to reach out to groups that are traditionally underrepresented in

wildlife science to make the workshop opportunity available to all Americans in the region.

- ***EO No. 14063: Use of Project Labor Agreements for Federal Construction Projects (applicable to projects estimated at \$35 million or more)***  
Not applicable.
- ***EO No. 14072: Strengthening the Nation’s Forests, Communities, and Local Economies***  
This project will strengthen portions of the Nation’s Forests by informing land managers about the immediate needs of migratory animals using those forests and by restoring forest lands in Southern Nevada. This project will engage with communities, increasing their bond with their local public land and increasing their ability to connect with the nature around them. Connecting with nature is an excellent way to increase the happiness, resilience, and sustainability of communities. This project will stimulate local economies because Motus workshops, held near Motus stations, will bring visitors to new communities where they will lodge, eat, and purchase other goods as needed.
- ***EO No. 14096: Revitalizing Our Nation’s Commitment to Environmental Justice for All***  
The Motus Network has made great strides to provide access to real-time scientific data to anyone with access to an internet connection. While we cannot battle the issue of nationwide Wi-Fi coverage, we can contribute to this network that improves the everyday American’s ability to understand, observe, and interact with scientific data. Therefore, anyone with access to a local library or school computer could see the results of these efforts. Additionally, a conscious effort will be made to provide environmental education or interpretative programs to schools in urban communities in southern Nevada where access to nature may be logistically difficult for families.

#### B. Secretarial Orders

- ***SO No. 3347: Conservation Stewardship and Outdoor Recreation.***

The project nomination supports SO 3347 by the outreach and stewardship development capabilities that the project possess. As previously mentioned, migration is an excellent topic to use as a foot in the door to inspire people to think about and possibly appreciate nature. We hope that the environmental outreach that will develop because of this project will inspire members of these communities to become conservation stewards and help protect the lands upon which these animals rely to rest during their long journeys. When people visit the sites of the towers, they will be accessing public lands that are available for other types of outdoor recreation, and this exposure may further inspire them to explore these areas in more depth. Restoring riparian and wetland habitat will leave a lasting conservation legacy for future generations to enjoy. If left in

the current state, these important and rare habitats will continue to degrade, and loss of habitat could potentially have lasting consequences to Nevada's migratory bird corridors. Many outdoor recreationists in southern Nevada take advantage of wildlife viewing and photography opportunities. Restoration efforts will increase the quality and quantity of these recreational opportunities in these areas.

- ***SO No. 3356: Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories.***

The project nomination support SO 3356 by supporting and maintaining wetland habitats on Pahrangat NWR that are crucial to support migratory waterfowl. The nomination identifies Cinnamon teal as an umbrella species with wetland restoration and wetland enhancement. By using an umbrella species for monitoring habitat quality and wetland resilience, land managers will have the ability to focus wetland management on nesting and stopover waterfowl habitats that also benefit other migratory species.

Pahrangat NWR offer hunting on 1/3 of the wetland acres of the refuge. With wetland improvements and wildlife conservation practices being implemented because of the project nomination, hunting opportunity will continue to be available and possibly improve as a result of achieving the deliverables of this nomination. As previously outlined, the project nomination is supported by all federal and state agencies. The project nomination is a USFWS administered SNAP project that will require coordination from all federal land management agencies, as well as NDOW. We also encourage tribal participation in all aspects of the project nomination because the majority of the land is on Nuwu/Nuwuvi ancestral lands.

- ***SO No. 3362: Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors.***

The project nomination supports SO 3362 by the habitat restoration in riparian and wetland ecosystems. Not only is riparian and wetland restoration important to migratory birds, but quality wetlands also provide life giving sources of water for western big game species. Mule deer (*Odocoileus hemionus*) rely on the same habitats as migratory birds. The project nomination identifies fragmented riparian habitats for restoration. An objective of the project nominate is to connect as many insular riparian habitats as possible and eliminate habitat fragmentation. This would overall improve habitat quality in western big-game migration corridors.

- ***SO No. 3366: Increasing Recreational Opportunities on Lands and Waters Managed by the U.S. Department of the Interior***

The project nomination supports SO 3366 through providing many outdoor recreation opportunities on southern Nevada's public lands. Recreationist in southern Nevada take advantage of wildlife viewing and photography opportunities. The restoration activities planned as part of this project will improve these recreational opportunities and create new opportunities in some areas of Pahrangat National Wildlife Refuge,

which receives 60,000 visitors annually and is managed by the US Fish and Wildlife Service under the US Department of the Interior. Pahranaagat NWR also offers fishing and waterfowl and small game hunting opportunities that will continue to thrive as managers gain tools to better aid management decision in the face of climate change

- ***SO No. 3370: Conservation Stewardship and Increasing Public Access to Urban National Wildlife Refuges.***

The project nomination supports SO 3370. The Park Ranger stationed at Desert National Wildlife Refuge is uniquely positioned to bring information about the Motus Network and, at the same time, the Refuge, to schools in Urban Las Vegas. This project will provide funding to develop an interpretative program about the Motus Network, which will inform students about the existence of the refuge and its importance to migratory wildlife.

Pahranaagat NWR is located within 100 miles of Las Vegas, the largest city in Nevada. Being near Las Vegas, and adjacent to the Desert National Wildlife Refuge, an Urban Refuge, Pahranaagat NWR serves as a link to Nevada's largest urban population. The Refuge is visited by approximately 60,000 visitors annually with most visitors being from the Las Vegas metropolitan area. This project provides improvements that provide quality, rare, aquatic outdoor recreation opportunities that are severely limited in southern Nevada

- ***SO No. 3372: Reducing Wildfire Risks on Department of the Interior Land Through Active Management.***

Not Applicable

- ***SO No. 3373: Evaluating Public Access in Bureau of Land Management Public Land Disposal and Exchanges (focus is on Sec. 4.b.(3) Potential increased public recreational access to existing public lands resulting from the proposed land acquired through an exchange (acquisition).***

Not applicable.

- ***SO No. 3376: Increasing Recreational Opportunities through the use of Electric Bikes.***

Pahranaagat NWR has one trail that is meets SO 3376. The Waterway Trail is a major biking trail between the Visitor Center and the campgrounds. Waterway Trail is named for the meandering stream that used to flow alongside the trail and support riparian habitat. The project would allow the Refuge to continue to support riparian habitat along the trail which provides critical migration habitat to birds, as well as favorite foraging and loafing habitat for other species, such as mule deer. Maintaining this habitat will provide the biking and e-biking user group with a unique experience while biking along the trail. The overall experience of having all four senses being stimulated as a result of water running, shrubs blooming, birds singing, and moving



about through the riparian habitat should increase the overall experience for those using this special biking trail.

C. Department of the Interior Priorities:

- ***Identifying steps to accelerate responsible development of renewable energy on public lands and waters.*** *We are investing in climate research and environmental innovation to incentivize the rapid deployment of clean energy solutions, while reviewing existing programs to restore balance on America's public lands and waters to benefit current and future generations.*

Not applicable.

- ***Strengthening the government-to-government relationship with sovereign Tribal Nations.*** *We understand that tribal sovereignty and self-governance, as well as honoring the federal trust responsibility to Tribal Nations, must be the cornerstones of federal Indian policy.*

SNAP agencies recognize Nuwu/Nuwuvi ancestral tribal lands throughout southern Nevada. USFWS has developed working partnerships with the Nuwu/Nuwuvi over the years. As part of the partnership that USFWS has developed, the USFWS shares ecological information and knowledge with our tribal partners to work together to develop restoration plans outlined with this project nomination.

- ***Making investments to support the Administration's goal of creating millions of family-supporting and union jobs.*** *This includes establishing a new Climate Conservation Corps Initiative to put a new generation of Americans to work conserving and restoring public lands and waters, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate.*

The project nomination supports priority by through the need to contract several aspects of the project nomination. The project nomination will consist of construction supplies needed for erecting Motus towers, as well as the electronics and technology that will be needed to bring a landscape scale Motus network online. In addition, the project nomination will require hundreds of transmitters to attach on migratory wildlife. All of which will support American jobs.

The project also supports increasing quality of habitat in riparian habitats, which will both improve biological diversity and increase reforestation for carbon sequestration around private agricultural ranches.

- ***Working to conserve at least 30% each of our lands and waters by the year 2030.*** *We will work to protect biodiversity, slow extinction rates, and help leverage natural climate solutions by conserving 30% of America's lands and waters by 2030. This relies on support for local, state, private, and tribally led conservation and restoration efforts that are underway across America.*

- The project nomination meets this priority on all our public lands. SNAP agencies are working to protect and conserve biodiversity. The project nomination uses umbrella species to identify important habitats. This information allows land managers to focus management for migratory wildlife and improve overall biological diversity in southern Nevada's wetland systems. This mission is supported by all the project partners, SNAP agencies, state agencies, and NGO partners. The project nomination identifies an endangered species as a umbrella species for riparian nesting habitats. By utilizing an endangered species, management focus and monitoring efforts can be implemented to address recovery plan goals and objectives. Not only will these habitat restoration and enhancement project help endangered species, but also imperial species that utilize the same habitats during nesting and migration stopovers. By increasing habitat value, the project will help to contribute to the slowing listing and extinction rates. It is the mission of the USFWS to conserve habitats and species for benefits of generations to come.
- ***Centering equity and environmental justice.*** *The impacts of the multiple crises in the United States are not evenly distributed in our society. Communities of color, low-income families, and rural and indigenous communities have long suffered disproportionate and cumulative harm from air pollution, water pollution, and toxic sites. At every step of the way, Interior will engage diverse stakeholders across the country, as well as conduct formal consultation with Tribes in recognition of the U.S. government's trust responsibilities.*

Many of the sites within the area of interest of the project nomination lie within rural and Nuwu/Nuwuvi homelands. Improving wetland function within the scope of the project nomination will have positive impacts to water quality being delivered back into the groundwater supply. Decreasing fragmentation of habitats will also provide more green spaces, especially being so close to Las Vegas. Increasing carbon sequestration from habitat restoration in close proximity to a large metropolitan city will help offset pollutants being produced from the city. Visitors to the refuges represent all ethnic groups, which learn about the importance of having these natural spaces and the need to conserve wildlife habitat. By providing the education our visitor centers provide on federal lands, we can start developing a diverse group of stakeholders to tackle the larger challenges natural resources face from ongoing pollutants.

During the contracting phase, the USFWS will make every effort to identify 8A companies that have the expertise and capabilities to complete contacting components. This avenue allows minority-owned business to have priority for contracts that the federal agencies are soliciting for.

The SNAP agencies recognize Nuwu/Nuwuvi ancestral tribal lands throughout southern Nevada. USFWS has developed working partnerships with the Nuwu/Nuwuvi over the years. As part of the partnership that USFWS has developed, the USFWS shares ecological information and knowledge with our tribal partners to work together to develop restoration plans outlined with this project nomination.

#### D. USDA Forest Service Priorities:

- ***Controlling the COVID-19 pandemic***

Not applicable.

- ***Providing economic relief***

During the contracting phase, the USFWS will make every effort to identify 8A companies that have the expertise and capabilities to complete contacting components. This avenue allows minority owned business to have priority for contracts that the federal agencies are soliciting for.

- ***Tackling climate change***

A main portion of the project nomination involves establishing a modernized telemetry system that can track migratory wildlife throughout a lifecycle. The use of umbrella species will give land managers and biologist the ability to track wetland resilience and land management use change over time. Data that is gathered through tracking of certain species, such as white-faced ibis and cinnamon teal, can be uploaded into the WET platform that can track surface water and habitats over time. Continuing to incorporate data gained from monitoring migratory water dependent birds allows the best tracking of drought conditions and land management use change that is caused by climate change.

- ***Advancing racial equity***

During the contracting phase, the USFWS will make every effort to identify 8A companies that have the expertise and capabilities to complete contacting components. This avenue allows minority-owned business to have priority for contracts that the federal agencies are soliciting. The SNAP agencies recognize Nuwu/Nuwuvi ancestral tribal lands throughout southern Nevada. USFWS has developed working partnerships with the Nuwu/Nuwuvi over the years. As part of the partnership that USFWS has developed, the USFWS shares ecological information and knowledge with our tribal partners to work together to develop restoration plans outlined with this project nomination.

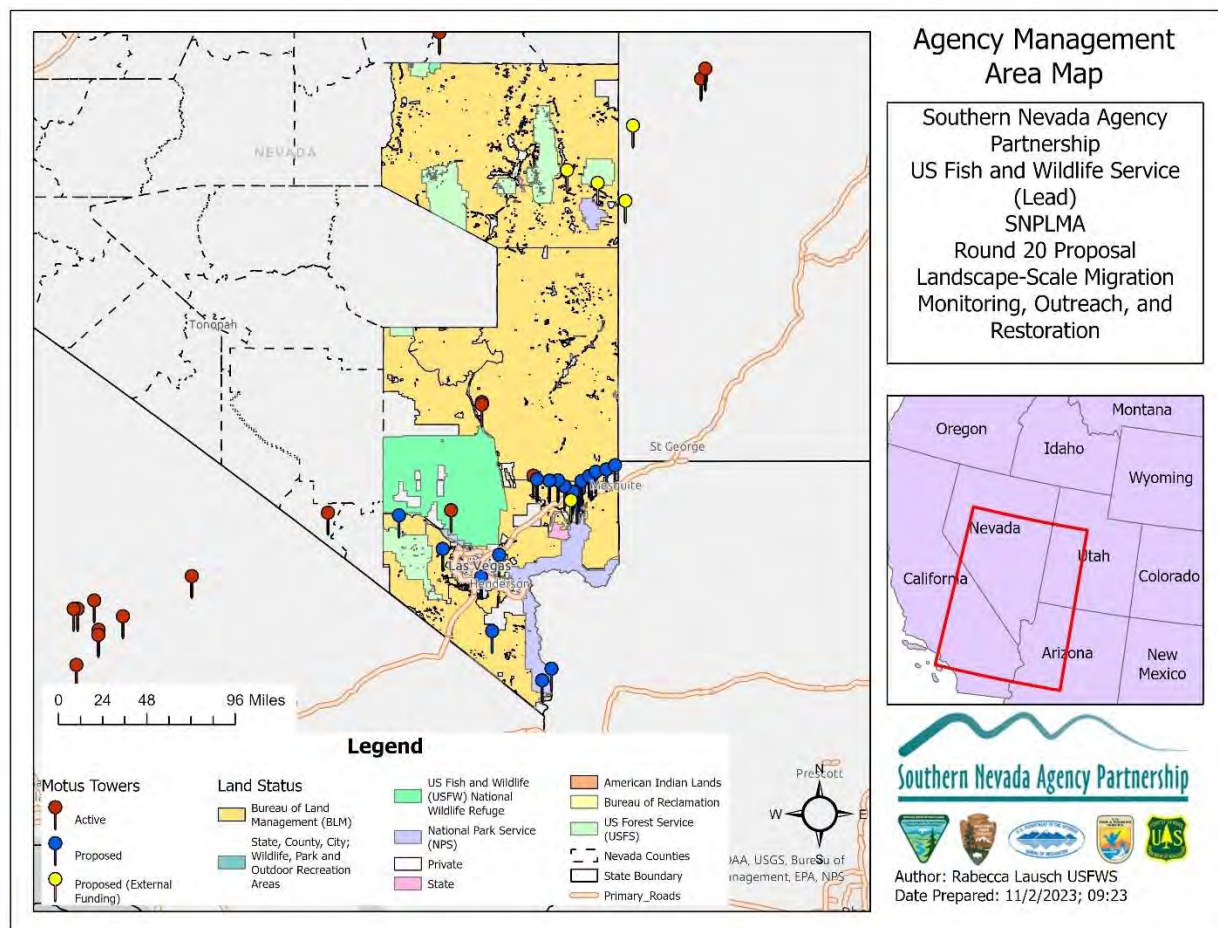
- ***Improving our workforce and work environment***

The project nomination supports this priority through the need to contract several aspects of the project nomination. The project nomination will consist of construction supplies needed for erecting Motus towers, as well as the electronics and technology that will be needed to bring a landscape scale Motus network online. In addition, the project nomination will require hundreds of transmitters to attach on migratory wildlife. All of which will support American jobs.

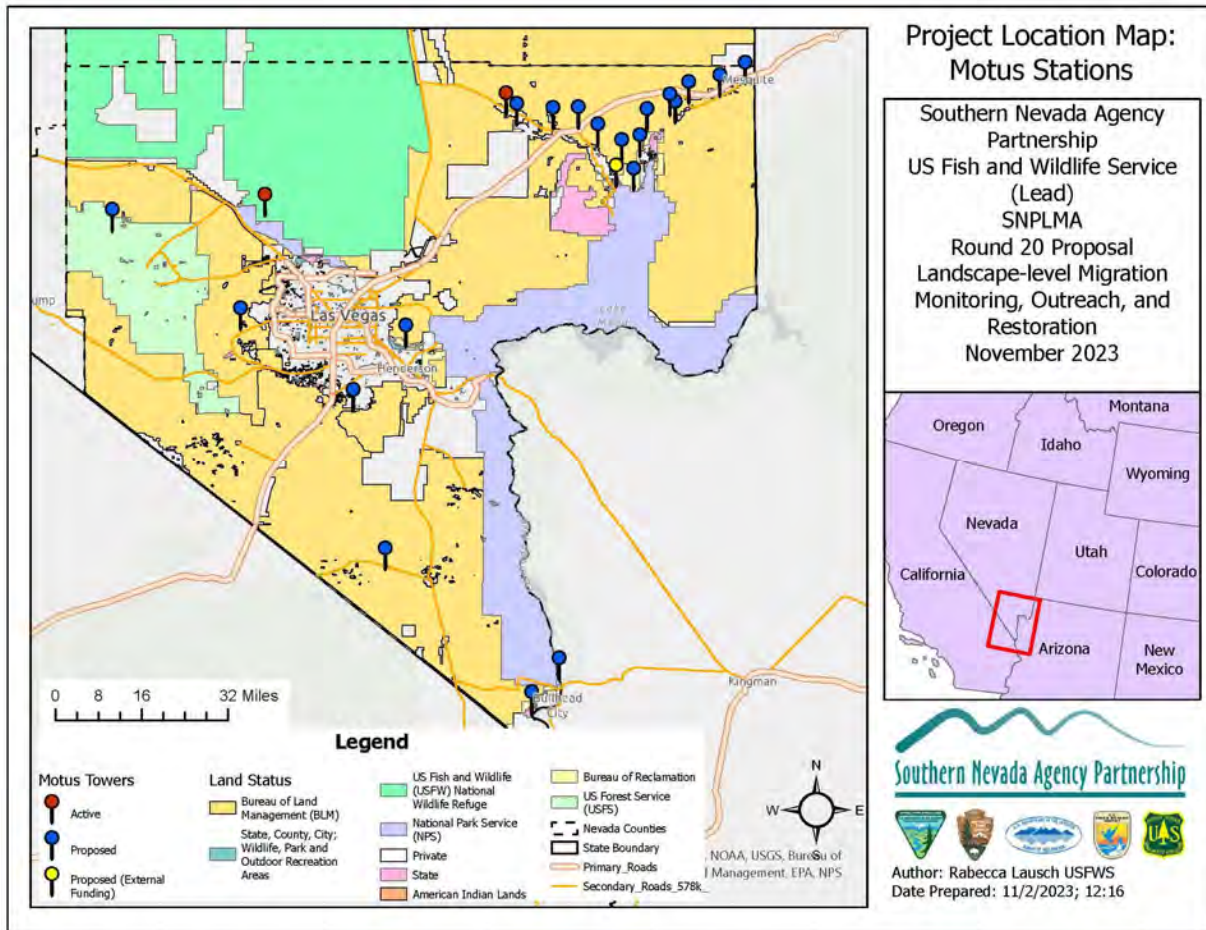
The project also supports increasing quality of habitat in riparian habitats, which will both improve biological diversity and increase reforestation for carbon sequestration around private agricultural ranches.

## M. MAPS

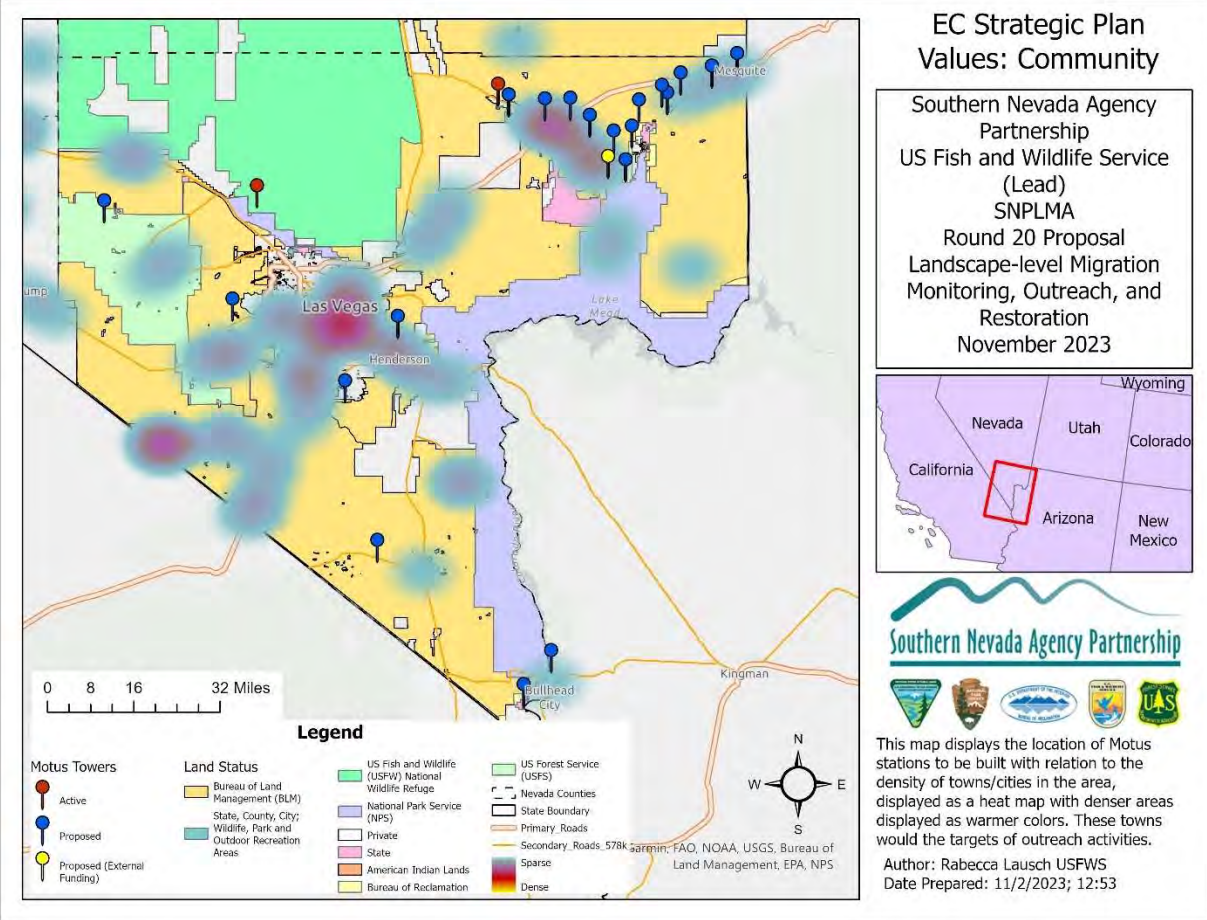
Maximum of six maps, labeled with a description. Insert here and upload maps as JPEG in the Nomination Portal.



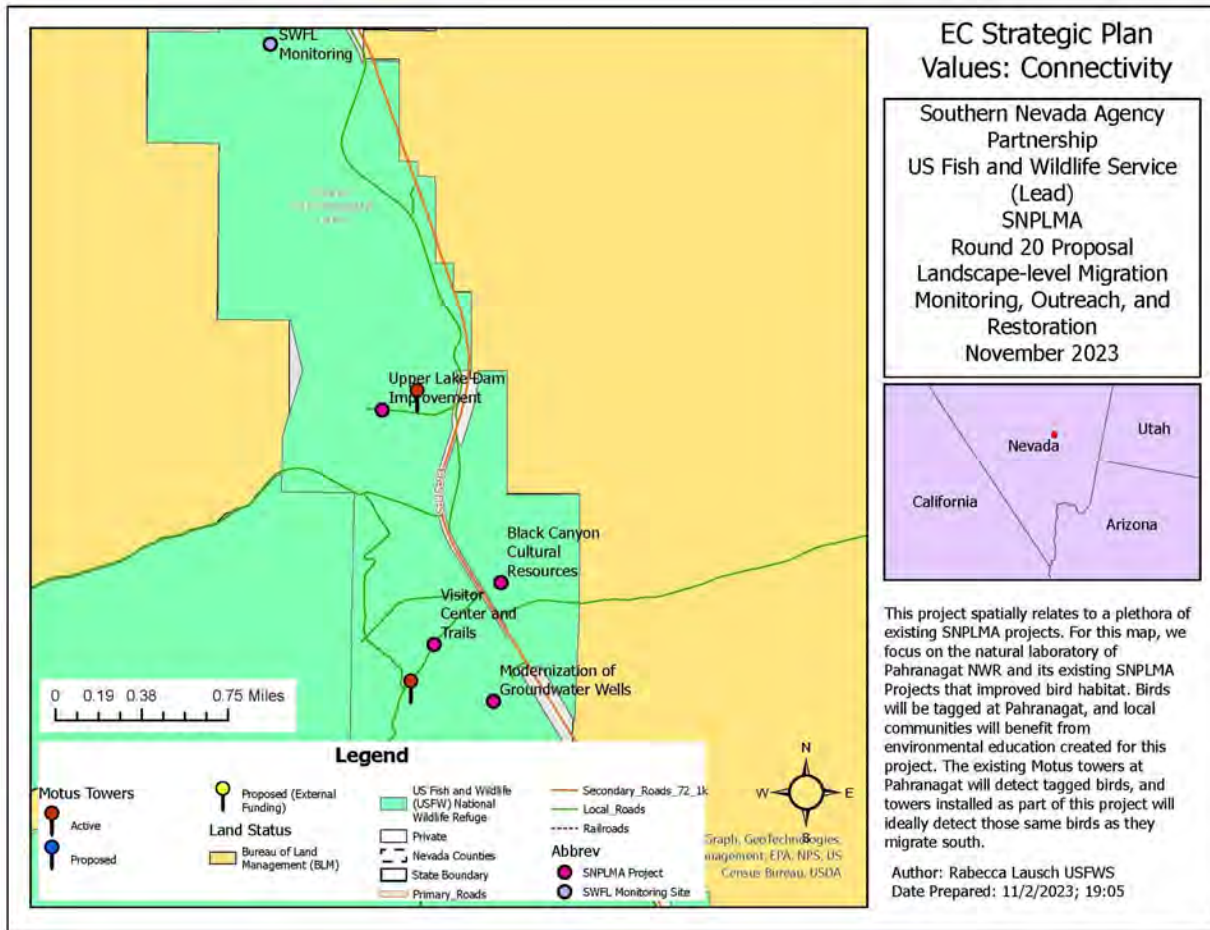
Map 1: Agency Management Area Map. This map displays the entire project location including Clark, Lincoln, and White Pine Counties. This map displays land ownership in these counties and displays the locations of Motus Towers (aka receiver stations) that are installed and active (red pins), already purchased but pending installation (yellow pins), or proposed to be purchased and installed as part of this project (blue pins).



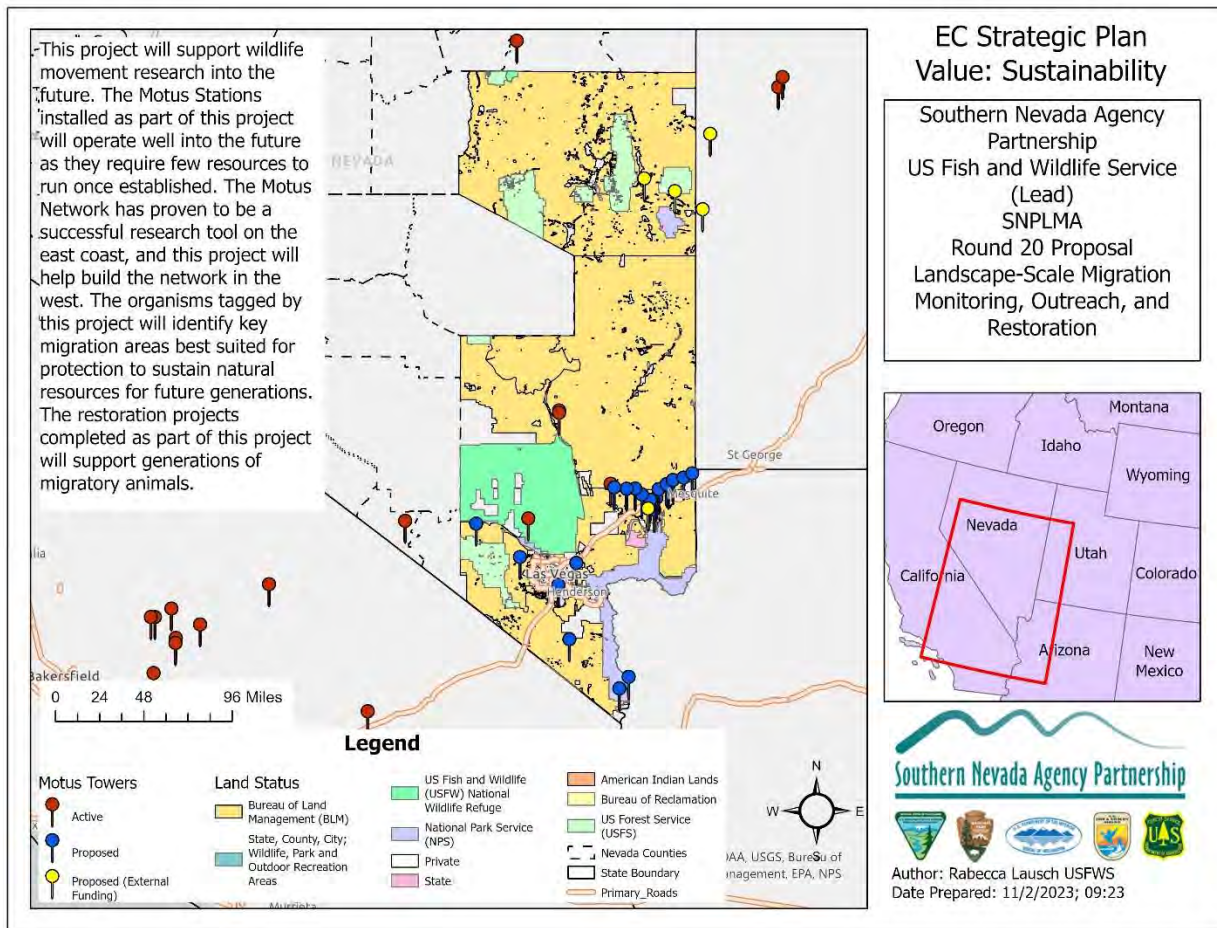
Map 2: Project Location Map. This map displays the locations of the Motus towers that are proposed to be installed as part of this project. Most of these towers will be installed on BLM land in Clark County. While other project activities will occur outside of this map, like bird tagging, Motus workshops, and restoration activities, all these activities would be difficult to display clearly in one map.



Map 3: EC Strategic Plan Values: Community. This map displays the density of towns adjacent to locations proposed for Motus tower installations. The density of towns in the area is displayed as a heat map, with warmer colors displaying denser areas. These towns would be among the first to be targeted by outreach activities and interpretative and environmental education programs.



Map 4: EC Strategic Plan Values: Connectivity. This project spatially relates to a plethora of existing SNPLMA projects. For this map, we focus on the natural laboratory of Pahranaagat NWR and its existing SNPLMA projects that improved migratory bird habitat. Birds will be tagged at Pahranaagat, and local communities will benefit from environmental education created for this project. The existing Motus towers at Pahranaagat will detect tagged birds, and towers installed as part of this project will ideally detect those same birds as they migrate south.



Map 5: EC Strategic Plan Value: Sustainability. This project will support wildlife movement research into the future. The Motus stations installed as part of this project will operate well into the future as they require few resources to run once established. The Motus Network has proven to be a successful research tool on the east coast, and this project will help build the network in the west. The organisms tagged by this project will identify key migration areas best suited for protection to sustain natural resources for future generations. The restoration projects completed as part of this project will support generations of migratory animals.

**N. PHOTOS**

Maximum of six photos, up to 20mg each or less. Provide descriptions. Insert here and upload photos as JPEG in the Nomination Portal.



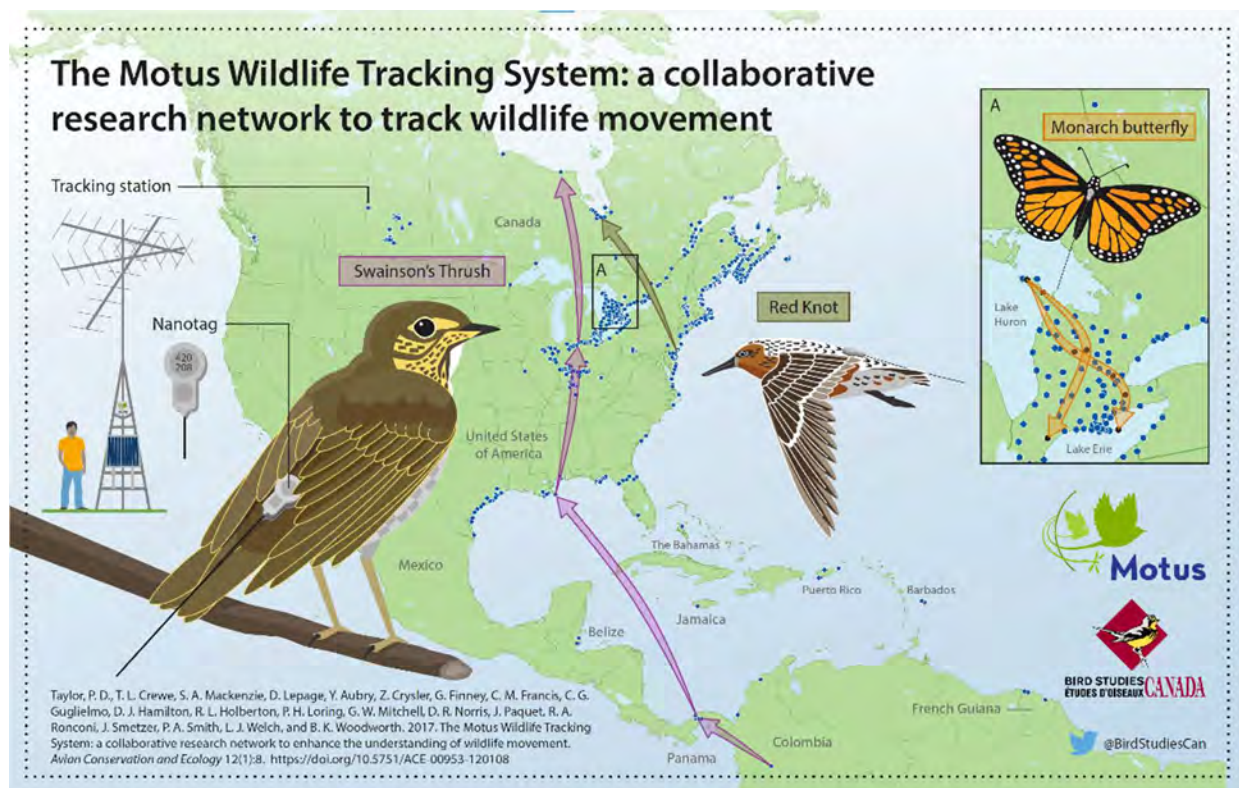


Photo 1: This figure shows examples of migration routes and movements documented through the Motus Network (from [www.motus.org](http://www.motus.org)), as well as an illustration of a motus tracking station (aka tower or receiving station), a nanotag (aka transmitter) and a few organisms wearing tags.

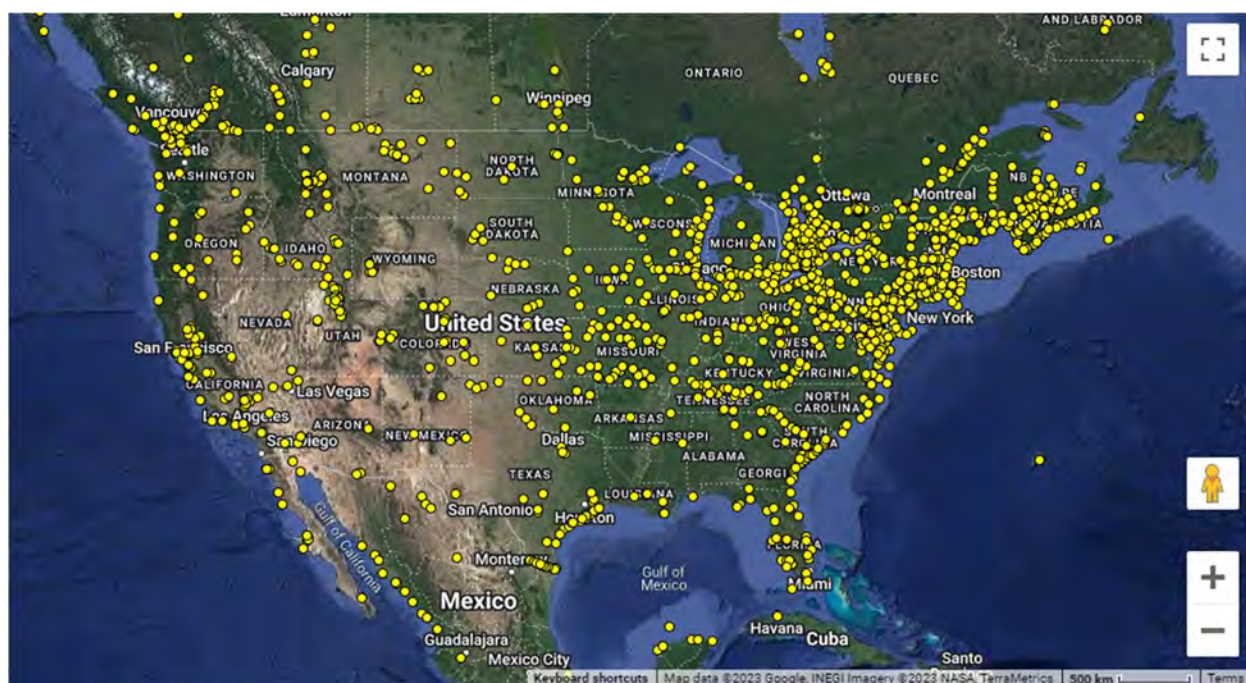


Photo 2: Current coverage of Motus receiver stations in North America as of 11/2/2023 (from [www.motus.org](http://www.motus.org)). The eastern United States has a noticeably denser array of Motus stations than

the western United States. Currently, the only active stations in Nevada are located at Ash Meadows, Desert, Pahranaagat, Moapa Valley, and Ruby Lake National Wildlife Refuges.



Photo 3: The phainopepla has been fitted with a leg loop harness Motus radio-transmitter. The radio-transmitter is powered with a small battery and solar array that sends signals periodically that will be captured by the Motus tower stations. These small transmitters can last the life of the bird, so animals will continue to provide migration and habitat use data for multiple years.



Photo 4: This white-faced ibis is being fitted for a backpack harness to secure the GSM transmitter, seen here. This GSM transmitter will send location data for this bird back to biologists, informing the biologist of where on earth this bird has been every 30 minutes since its release, and data will continue to be sent until the end of the bird's life.



Photo 5: These Southwestern Willow Flycatcher nestlings are receiving unique combinations of leg bands so that they can be identified by sight. This helps determine post-fledging survival and the potential for dispersal information if they are re-sighted at other monitored sites.



Photo 6: A biologist with the Northeast Motus collaboration demonstrates bird banding and tagging for an elementary school class in Pennsylvania. This is an example of the type of outreach that could be funded by this grant. Photo: <https://www.northeastmotus.com/educational-opportunities>

## SNPLMA ROUND 19 NOMINATION Conservation Initiatives

### Performance Measures

<b>SNPLMA STRATEGIC PLAN GOAL 1: Sustain the Quality of the Outdoor Environment by Conserving, Preserving, and Restoring Natural and Cultural Resources</b>		
<b>Performance Measures for Habitat Enhancement</b>	<b>Definition of Performance Measure</b>	<b>Quantity</b>
H1 - Acres of Land Identified for Withdrawal from Multiple Use	<p>Report the number of acres of land identified for withdrawal or withdrawn from multiple use management (e.g., as the result of a cultural or biological survey, etc.).</p> <p>Report the number of acres of specially designated areas such as a wilderness area, national recreation or conservation area that are automatically withdrawn from multiple use or where use is limited as a consequence of acquisition using SNPLMA funds. Land acquired in an ACEC is not automatically withdrawn from multiple use and should be reported under L1 only.</p> <p>Report to the nearest whole acre.</p>	0
H2 - Miles of Riparian Stream or Shoreline Habitat Treated, Enhanced, or Restored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the miles have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as those should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as those should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole mile.</p>	3
H3 - Miles of Riparian Stream or Shoreline Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole mile.</p>	7
H4 - Acres of Upland Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of upland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland</p>	0

	<p>fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	
H5 - Acres of Upland Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of upland vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole acre.</p>	0
H6 - Acres of Wetland / Riparian Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of wetland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	575
H7 - Acres of Wetland / Riparian Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of wetland vegetation and/or wildlife habitats inventoried or monitored.</p> <p>Report to the nearest whole acre.</p>	1100
H8 - Number of Water Developments Constructed or Improved for Wildlife	<p>Report the number of water developments for use by wildlife constructed or improved/repared within all habitat types. Existing projects may be counted under this performance measure if functional improvements/repairs are made as defined in the project nomination.</p> <p>Report each development constructed or improved as one unit (e.g., one project may have three water developments).</p>	0
H9 - Acres of Invasive Plant Species Treated or Restored	<p>Report the number of acres of weed infestation treated with chemical, mechanical, physical, or biological control agents for the purpose of weed control. Include acres treated by fire when fire is used as a physical control agent for weed control rather than as a hazardous fuels treatment. Each acre treated is counted only once during the life of the project, no matter how many re-treatments occurred during the project.</p> <p>Report to the nearest whole acre.</p>	25
H10 - Acres of Invasive Plant Species Surveyed, Inventoried, or Monitored	<p>Report the number of acres of weed infestation inventoried or monitored. Include monitoring of weed treatment projects reported under performance measure H9.</p> <p>Report to the nearest whole acre.</p>	525

H12 - Acres of Herd Management Areas Surveyed, Inventoried, or Monitored	Report the number of acres of wild horse and burro herd management areas or herd areas surveyed, inventoried, or monitored. Report to the nearest whole acre.	0
H13 - Number of Conservation or Protection Actions Taken within a Herd Management Area	Report the number of actions taken within a wild horse and burro herd management area to conserve or protect the area for the benefit of the herd (e.g., fences, water developments, vegetative treatments). Report each action as one unit.	0
H14 - Number of Threatened and Endangered Species Recovery Actions Implemented	Report the number of individual recovery actions performed for threatened or endangered species recovery as identified in recovery plans, conservation management plans, or land use planning documents. Include surveys, inventories, and monitoring as recovery actions. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same recovery action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	2
H15- Number of Conservation Actions Implemented for Non-Listed Species	Report the number of individual conservation actions for species not listed under the Endangered Species Act. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same conservation action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	5
H16 - Miles of Roads or Trails Decommissioned and/or Rehabilitated	Report the number of miles of roads and/or trails decommissioned and/or rehabilitated within all habitats (urban, upland, riparian, stream, trails in caves, etc.). Closure may include designation, signing, blockage by physical means, obliteration, etc. Report to the nearest whole mile.	0
H17 – Miles of Roads or Trails Surveyed, Inventoried, or Monitored	Report the number of miles of roads and/or trails inventoried or monitored. Report to the nearest whole mile or linear foot. Report to the nearest whole mile.	0



Performance Measures for Wildland Fire Management	Definition of Performance Measure	Quantity
F1 - Acres of Hazardous Fuels Treated – Non-Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency outside the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	0
F2 - Acres of Hazardous Fuels Treated – Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency within the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	0

Performance Measures for Cultural / Paleontological Resources	Definition of Performance Measures	Quantity
C1 - Number of Cultural or Historic Sites or Structures Stabilized or Protected	Report the number (one unit for each site or each structure) where work is completed to protect, stabilize, restore, excavate, and/or manage cultural features. For sites receiving multiple treatments, count each site only once, but if multiple structures are on a site, count each structure separately. For example, an archeological dig site would be counted as one although multiple excavations may take place on the site, whereas a site having remnants of three separate dwellings would be counted as three. Report installation of interpretive signs and structures (e.g., kiosk displays) under O6. Report administrative actions such as mineral withdrawals, closures, or special designations under H1. Report each site or structure as one unit.	0
C2 - Number of Cultural or Paleontological Artifacts Protected	Report the number of cultural and/or paleontological artifacts protected, stabilized, or catalogued. Report one unit for each repatriation or transfer of custody of Native American human remains, funerary objects, sacred objects, and/or objects of cultural patrimony (cultural items) held in collections, pursuant to Title 43 CFR Part 10.10.; each instance in which all requirements of Title 43 CFR Part 10.10 have been met but where actual repatriation has not been completed because of decisions made by lineal descendants or Indian tribes or lack of a valid claim; and reburial of repatriated cultural items on BLM public lands. Report the number of accessions cataloged, inventoried, rehoused and/or otherwise	0

	<p>upgraded. Materials from several sites or localities that are accessioned and cataloged under a single accession number should be considered one unit. An accession for which any one or more of the tasks of cataloging, inventorying, or upgrading has been completed should be reported as one unit.</p> <p>Report each artifact as one unit.</p>	
C3 - Acres of Cultural / Paleontological Resources Surveyed, Inventoried or Monitored	<p>Report the number of acres of land surveyed, inventoried, or monitored for cultural and/or paleontological resources. Include acres surveyed using Class I study of existing information inventory, Class II probabilistic field survey, or Class III intensive field survey and resultant inventory as required by Section 14 of the Archaeological Resources Protection Act (ARPA) or Section 110 of the National Historic Preservation Act (NHPA).</p> <p>Report to the nearest whole acre.</p>	0

<b>SNPLMA STRATEGIC PLAN: Other Performance Measures that Also Support the Three Values for SNPLMA Implementation of Sustainability, Connectivity, and Community</b>		
<b>Other Performance Measures</b>	<b>Definition of Performance Measures</b>	<b>Quantity</b>
O1 - Number of Hazardous Sites Remediated	<p>Report the number of hazardous sites where remediation actions are completed. Actions to be included are: removal of safety hazards, clean-up operations, restoration actions, and water quality remediation actions. Do not report temporary remediation measures.</p> <p>Report each site as one unit. When applicable, also report total weight of trash removed during clean-up operations.</p>	0
O3 - Number of Law Enforcement Patrols, Incident Reports, Investigations	<p>Report the number of law enforcement patrol actions, incident reports taken, and investigations conducted.</p> <p>Report each item as one unit.</p>	0
O4 - Number of Scientific / Technical Reports Produced	<p>Report the number of scientific technical reports produced.</p> <p>Report each report as one unit.</p>	2
O5 - Number of Outreach Contacts Made	<p>Report the number of education and outreach contacts made through interpretation and environmental education, such as number of teachers trained, number of participants in workshops, etc.</p> <p>Report each participant as one unit.</p>	120
O6 - Number of New Interpretive or Education Publications/Signs/ Kiosks/Displays/etc. Produced	<p>Report the number of new interpretive or education publications produced, signs produced and installed, public informational websites or other electronic media presentations designed and implemented, and</p>	10

	informational or interpretive kiosk displays produced and installed. Report each item produced as one unit.	
O7 - Number of Interpretive or Education Presentations Given and/or Community Events Participated in or hosted	Report the number of interpretive or educational presentations given. Report each presentation as one unit.	15
O9 – Number of GIS Databases Generated and/or Map Layers Produced	Report the number of GIS databases created and/or the number of map layers produced to identify the location of natural resources within the environment and provide mapping for use in educational programs. Report each database or map layer as one unit.	4
O10 – Number of Volunteers Used	Report the number of volunteers used in educational or interpretive programs and for surveying, monitoring, or restoration activities. Report each volunteer as one unit.	50
O11 – Number of Databases, Reports, and Other Electronic Means of Documenting Activities	Report the number of new databases, electronic reporting tools, mathematical/statistical models, websites, or reports developed and implemented to document project and/or program work. Report each electronic document or method developed as one unit.	2
O12 – Number of Management Plans/Handbooks/Manuals/Guides for Activity on Public Lands Completed (formerly under H11, F3, C4, and R1)	Report the number of new or revised ecosystem restoration, hazardous fuels reduction, recreation, cultural, resource management, or other activity plans when the decision document for the plan is signed. Revisions include modification of a significant portion of the decisions in the activity plan. Do not report minor amendments or changes in these plans. Report each plan as one unit.	3

### **Glossary**

**Accession** – One or more objects and/or specimens acquired in the same manner from one source at one time for the museum property collection. Accessioning is the process of formally accepting and establishing permanent legal title (ownership) and/or custody for an object or specimen or group of objects and/or specimens. An accession can consist of materials and associated archives from a single site or fossil locality, or materials from several sites or fossil localities.

**Biological Treatments** – Treatment of vegetation using domestic animals, insects, etc.

**Chemical Treatments** – Treatment of vegetation with herbicides, etc.

**Inventory** – Collection and analysis of baseline information; counting number of a given species, cultural feature, etc.

**Mechanical Treatments** – Treatments using hand or motorized tools for mowing, chaining, ripping, thinning, seeding, etc.

**Monitoring** – Establishment of current status and/or trends in environmental variables

**Riparian Habitat** – Riparian habitat includes the interface between upland habitat and a river, stream, or lake, regardless of whether it is intermittent or perennial. Riparian habitats are characterized by vegetation adapted to growing in water or saturated soils. Includes riparian woodlands, forests, buffer zones, or strips.

**Survey** – Observing an area to determine if a species or resource exists after which an inventory may or may not be performed.

**Upland Habitat** – Upland habitats include Mojave Desert, grassland, shrub lands, pinyon juniper forests, and woodland sites.

**Wetland Habitat** – Wetlands are saturated areas, either permanently or seasonally, with characteristic vegetation adapted to its unique soil conditions.



**G**REAT **B**ASIN  
**B**IRD **O**BSERVATORY

1755 E. Plumb Lane #256A Phone/Fax: 775.323.4226  
Reno, NV 89502 [www.gbbo.org](http://www.gbbo.org)

3 November, 2023

Beth Young  
SNPLMA Conservation Initiatives and Capital Improvements Program Manager  
Southern Nevada Public Lands Management Act, Round 20 Nominations Committee

**Re:** USFWS Nomination “Landscape-level Migration Monitoring, Outreach, and Restoration”

Dear SNPLMA Committee:

This letter is in support of funding this nomination, as southeastern Nevada is in critical need for additional migratory bird monitoring efforts and a better understanding of the conservation needs of several sensitive species, particularly those that have been recognized by multiple agencies as Species of Greatest Conservation Need. The Clark, Lincoln, and White Pine counties region is at a nexus for most bird and bat species that migrate through the Pacific flyway, and this nomination can provide a significant step toward better knowledge on how to protect the habitats these species need during the stage in their life cycle where mortality is often highest.

This nomination is particularly strong in supporting the three criteria of the program, connectivity, sustainability, and community. Until recently, it has been difficult to characterize the connectivity of different migration stopover habitat locations, and with recent advancements in technology, the proposed work will finally close the loop on understanding how habitat preservation and restoration advances the network of connected migratory bird habitats in the interior west. The Motus and satellite transmitter technology also provide built-in sustainability, as these are designed to last years after the funded project ends, and future students of bird migration and conservation can continue to benefit from the monitoring network. Finally, through multiple workshops and classroom sessions, the project will engage the community of non-profits, schools, and other partners in taking advantage of the educational opportunities and ownership of the natural resources that are part of the local community, an effort that we hope will be sustained well beyond the conclusion of this project. As a local non-profit, GBBO commits to do our best to make that happen and help create a permanent community effort toward conservation of birds in our region. For the proposed work, GBBO is prepared to contribute \$84,300 in in-kind match to cover volunteer hours and logistical support (see budget detail).

Sincerely,

Elisabeth Ammon, PhD.  
Executive Director  
(775) 722-9116  
[ammon@gbbo.org](mailto:ammon@gbbo.org)





JOE LOMBARDO  
Governor

STATE OF NEVADA

## DEPARTMENT OF WILDLIFE

6980 Sierra Center Parkway, Suite 120

Reno, Nevada 89511

Phone (775) 688-1500 • Fax (775) 688-1595

ALAN JENNE  
Director

JORDAN GOSHERT  
Deputy Director

CALEB MCADOO  
Deputy Director

MIKE SCOTT  
Deputy Director

November 1, 2023

Michelle Leiber  
SNPLMA MSHCP Program Manager  
Bureau of Land Management  
SNPLMA Division  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

**RE: Letter of Support for USFWS SNPLMA Round 20 Connectivity and Importance of Migration Stop-over Habitats for Wetland and Riparian Birds in Southeastern Nevada**

Dear Ms. Leiber:

I am pleased to write this letter in support of the **Connectivity and Importance of Migration Stop-over Habitats for Wetland and Riparian Birds in Southeastern Nevada**. This project will greatly enhance the ability of the Nevada Department of Wildlife (Department) to continue to manage wildlife in Nevada. The Motus Network is a passive way of recording data on animal movements using lightweight tags that can be attached to a wide variety of animals. As these animals pass near Motus stations, valuable information is gained on their movements, habitat use, and seasonal shifts. Seasonal movement and migration corridors for most species are poorly known yet remain important to the well-being of wildlife. Gaining a greater understanding of wildlife movement in Nevada is a key goal in the State Wildlife Action Plan and remains a focal effort for the Department.

A goal the Department has is to gain a network of Motus stations across the state at strategic locations, which will allow us to make informed decisions on wildlife management. This SNPLMA proposal allowing USFWS to install Motus stations in eastern Nevada is one step towards that goal. If funded, the SNPLMA proposal will complement other efforts the Department is planning to undertake. The Department is committed to installing up to seven Motus stations on non-federal lands in eastern Nevada within the next five years. This effort will greatly increase the coverage of Nevada under this plan.

Motus stations are being deployed across the country in all states. Having additional stations throughout Nevada will contribute to our overall knowledge of wildlife across the west and the nation.

Thank you for your consideration in funding this proposal. If you have any questions, please don't hesitate to reach out to myself or Wildlife Diversity's Southern Region Supervising Biologist, Matt Flores ([mhflores@ndow.org](mailto:mhflores@ndow.org); 702-668-3936).

Sincerely,

A handwritten signature in blue ink that reads "Jennifer Newmark".

Jennifer Newmark  
Wildlife Diversity Division Administrator



# United States Department of the Interior



NATIONAL PARK SERVICE  
Great Basin National Park  
100 Great Basin National Park  
Baker, NV 89311

IN REPLY REFER TO:  
10.C. (GRBA)

Rob Vinson, Wildlife Refuge Manager  
Pahranagat and Moapa Valley NWRs  
PO BOX 510  
Alamo, NV 89001

Dear Mr. Vinson,

Great Basin National Park is pleased to provide a letter of support and commit to being a funded project partner on the U.S. Fish and Wildlife Service's Round 20 SNPLMA proposal, *Connectivity and Importance of Migration Stop-Over Habitats for Wetland and Riparian Birds in Southeastern Nevada*.

Most bats are insectivorous. Their predation on insects provides society with ~25 billion dollars in economic benefits each year. But for most bats in Nevada, we don't even know where they spend their winters. This project will look at the migration patterns in Mexican free tailed and hoary bats. Mexican free-tailed bats are one of the most abundant mammals on earth and provide most economic benefits to agriculture. Hoary bats are a large tree roosting species, threatened with extinction due to wind energy development. As part of this project, NPS will work with partners to install and maintain motus stations; conduct workshops, out reach, education and bat blitzes; and use the motus network to understand migration patterns in bats. This project build from SNLPLA conservation initiatives NP 83 *Can land managers prevent the "inevitable collapse" of bats in the western US?*

We estimate our in kind contribution to this project at \$75,000 (\$15,000 per year over 5 years). This contribution includes installing and maintaining motus towers, managing data, coordinating and training and workshops, and conducting public outreach.

The NPS fully supports this project and looks forward to working closely with the USFWS and other partners on this project.

Sincerely,

Bryan Hamilton, Acting Superintendent  
Great Basin National Park

INTERIOR REGION 8 • LOWER COLORADO BASIN\*  
INTERIOR REGION 9 • COLUMBIA—PACIFIC NORTHWEST\*  
INTERIOR REGION 10 • CALIFORNIA—GREAT BASIN  
INTERIOR REGION 12 • PACIFIC ISLANDS

---

AMERICAN SAMOA, ARIZONA\*, CALIFORNIA, GUAM, HAWAII, IDAHO, MONTANA\*,  
NEVADA, NORTHERN MARIANA ISLANDS, OREGON, WASHINGTON

\*PARTIAL

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**File Code:** 2020

**Date:** October 27, 2023

Kevin DesRoberts  
Project Leader, Desert National Wildlife Refuge Complex  
United States Fish and Wildlife Service  
U.S. Fish and Wildlife Service  
4701 North Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. DesRoberts,

I submit this letter in support of the Southern Nevada Public Land Management Act (SNPLMA) Conservation Initiative Round 20 project nomination "*Connectivity and Importance of Migration Stop-Over Habitats for Wetland and Riparian Birds in Southeastern Nevada*". This project, nominated by the U.S. Fish and Wildlife Service, Southern Nevada Fish and Wildlife Office, was developed collaboratively by biologists from different agencies with support from the Nevada Partners in Flight, a local of partner organizations in the west that focuses on bird conservation.

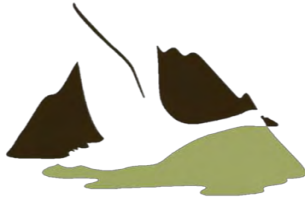
The Spring Mountains National Recreation Area, Humboldt-Toiyabe National Forest, continues to pursue collaborative efforts in data collection for migratory birds and projects that provide the opportunity for novel research on their stayover length in each protected area, their connectivity to other stopover sites, as well as in-depth habitat use studies.

I sincerely appreciate the U.S. Fish and Wildlife Service taking the lead on this project. This project will not only provide opportunities for new and important insights in conservation strategies for migratory species, but also strengthen partnerships with local communities, such as Tribal communities. This project is an outstanding example of interagency collaboration and coordination to address shared challenges and to improve data collection across agency boundaries for sensitive migratory bird species.

DEBORAH J. MACNEILL  
Area Manager







INTERMOUNTAIN WEST  
JOINT VENTURE

November 4, 2023

Bureau of Land Management  
Southern Nevada District Office  
SNPLMA Division  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

RE: SNPLMA Round 20 Proposal, Southern Nevada Agency Partnership proposal of a landscape level monitoring, outreach, and restoration project in southern Nevada.

To the SNAP grant review committee:

The Intermountain West Joint Venture (IWJV) supports the Southern Nevada Agency Partnership (SNAP) project proposal to implement landscape-level wetland and riparian monitoring, outreach, and restoration for migratory birds in southern Nevada. Conservation of these resources has long been overlooked in favor of priorities targeting high-density wetland landscapes due to the perception that arid lands hold little biological value to migratory waterbird species. Emerging research conducted by staff at the IWJV and U.S. Fish and Wildlife Service Migratory Bird Program is finding the opposite to be true, determining that isolated wetland features play a critical role in sustaining continental waterbird migration and breeding in arid landscapes.

Funding the SNAP project proposal would improve the understanding of migratory bird interactions with wetlands and riparian systems in Southern Nevada, providing land managers and private lands partners with the information needed to maintain, restore, and protect these important natural resources. Outcomes from this effort complement ongoing wetland and waterbird science investments made by the IWJV and our partners from the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program (Nevada) and the University of Montana. Deliverables from this project will be incorporated directly into our existing conservation science and habitat delivery network to amplify SNAP grant benefits. We encourage the selection committee to give strong consideration to this proposal.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Smith".

Dave Smith  
IWJV Coordinator



100 City Parkway, Suite 700 • Las Vegas, NV 89106  
MAILING ADDRESS: P.O. Box 99956 • Las Vegas, NV 89193-9956  
702-862-3400 • snwa.com

November 2, 2023

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Drive  
Las Vegas, Nevada 89130

Dear Mr. Wandel:

**SUBJECT: LETTER OF SUPPORT FOR SNPLMA R20 PROPOSAL TO EXPAND THE MOTUS NETWORK IN SOUTHERN NEVADA**

I am writing this letter of support on behalf of the Southern Nevada Water Authority (SNWA) for the project to expand the Motus network in southern Nevada. This project will add Motus receiver stations in the area and assist research projects related to sensitive migrant species, including the federally listed southwestern willow flycatcher.

SNWA has already supported Motus network expansion in southern Nevada by installing nodes on our Warm Springs Natural Area, which is adjacent to the Moapa Valley National Wildlife Refuge and its receiver stations. We also have a breeding population of the southwestern willow flycatcher on property so increased potential to monitor that species is welcome. In addition, the project proponents are working with the Bureau of Reclamation for approval to install receiving stations in the Las Vegas Wash and Big Bend Conservation areas. SNWA is the lead agency of the Las Vegas Wash Coordination Committee, overseeing stabilization, enhancement, and wildlife management along that channel, and SNWA owns the Big Bend Conservation Area and leases it to BOR for use in the Lower Colorado River Multi-Species Conservation Program (LCRMSCP). Receiving stations in these areas would provide useful information, helping to achieve management objectives of the Las Vegas Wash Wildlife Management Plan and LCRMSCP.

SNWA supports the application for this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Keiba Crear".

Keiba Crear  
Division Manager, Stewardship and Sustainability

KKC:JRE:DMV:nh

SNWA MEMBER AGENCIES

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Las Vegas Valley Water District

Basic Management, Inc.

Bureau of Reclamation

Citizen Members

City of Henderson

City of Las Vegas

City of North Las Vegas

Clark County Parks and Recreation

Clark County Regional Flood Control District

Clark County Water Quality

Clark County Water Reclamation District

Colorado River Commission

Conservation District of Southern Nevada

Desert Wetlands Conservancy

Lake Las Vegas Resort

Las Vegas Boat Harbor

National Park Service

Natural Resources Conservation Service

Nevada Department of Wildlife

Nevada Division of Environmental Protection

Nevada State Health Division

Southern Nevada Health District

Southern Nevada Water Authority

University of Nevada, Las Vegas

U.S. Army Corps of Engineers

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

U.S. Geological Survey



## LAS VEGAS WASH COORDINATION COMMITTEE

100 City Parkway, Suite 700 • Las Vegas, NV 89106  
702-822-3300 • FAX 702-822-3360 • [lvwash.org](http://lvwash.org)

November 2, 2023

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Drive  
Las Vegas, Nevada 89130

Dear Mr. Wandel:

**SUBJECT: LETTER OF SUPPORT FOR SNPLMA R20 PROPOSAL TO EXPAND THE MOTUS NETWORK IN SOUTHERN NEVADA**

I am writing this letter of support on behalf of the Las Vegas Wash Coordination Committee for the project to expand the Motus network in southern Nevada. This project will add Motus receiver stations in the area and assist research projects related to sensitive migrant species, including the federally listed southwestern willow flycatcher.

In 1998, the Las Vegas Wash Coordination Committee (LVWCC), a 28-member stakeholder group, was created to stabilize the Las Vegas Wash, restore its ecological function, and provide long-term management for the environmentally important waterway. The project proponents of this proposal are working with the Clark County Wetlands Park and Bureau of Reclamation for approval to install receiving stations on federal land in the Las Vegas Wash project area. As the lead agency of the LVWCC, the Southern Nevada Water Authority has restored more than 600 acres of habitat along the Las Vegas Wash. This project would provide valuable information on migration patterns and habitat use, helping to achieve management objectives of the Las Vegas Wash Wildlife Management Plan.

The LVWCC supports the application for this project.

Sincerely,

Keiba Crear  
Division Manager, Stewardship and Sustainability, Southern Nevada Water Authority

KKC:JRE:DMV:nh



Western Regional Office  
3074 Gold Canal Drive  
Rancho Cordova, CA 95670  
Ph: 916-852-2000, Fax: 916-852-2200  
www.ducks.org

November 3, 2023

U.S Fish and Wildlife Service

**Re: Support for Establishing a Landscape Scale Migration Monitoring Program in Southern Nevada Grant Application**

Dear selection committee:

Ducks Unlimited (DU) supports the U.S. Fish and Wildlife Service's (USFWS) grant application requesting funding to establish a landscape-scale migratory monitoring program in southern Nevada (NV).

Southern NV wetlands are unique oases that provide important stopover locations for migratory waterfowl, shorebirds, and waterbirds during both fall and spring migrations. The riparian areas are even more critical as they provide nesting habitat for songbird species such as the endangered Southwestern willow flycatcher. The proposed project will bring together a suite of partners and is focused on improving information gathering around migratory bird use in Southern NV. The focus will be primarily on improving the Motus Network and placing transmitters on select species to help inform habitat use to inform management actions. In addition, a specific focus of the project will be to develop a landscape-scale monitoring program for the endangered Southwestern willow flycatcher. As a science based organization, information that will be provided by this project will be invaluable to inform conservation priorities and management actions for the wetland and riparian habitats that support these species.

In Nevada, DU has worked in collaboration with private landowners, other non-governmental organizations, and state and federal agencies to help conserve wetlands through land protection, restoration, and enhancement projects. We look forward to continued collaborative efforts with USFWS and urge you to give this project your highest consideration.

Sincerely,

Jeffrey McCreary  
Director of Operations

Bureau of Land Management  
Southern Nevada District Office  
SNPLMA Division  
4701 N. Torrey Pines Dr.  
Las Vegas NV 89130

RE: SNPLMA Round 20 Proposal, Southern Nevada Agency Partnership proposal of a landscape level monitoring, outreach, and restoration project in southern Nevada.

To Whom It May Concern:

The Red Rock Audubon Society (RRAS) supports the SNAP project proposal to implement a landscape level monitoring, outreach, and restoration for migratory wildlife in southern Nevada.

Management of migratory wildlife, especially birds, can be very challenging. To effectively accomplish this feat, a greater knowledge migration corridors and habitat requirements are needed across time and large expanses of space. The project nomination provides land managers the ability to begin monitoring migratory birds and other migratory wildlife throughout a life span, which has historically been nearly impossible. The information gained will allow federal and state agencies a better understanding of historic migratory corridors and the habitats that is needed to continue to support a health population of migratory wildlife depend on the wetland habitats in southern Nevada.

The project proposal has restoration components that will start to address habitat improvement in southern Nevada's rare wetlands. Habitat improvements being complete on Pahrnatag NWR from what is learned from the monitoring phase of this nomination will allow Pahrnatag NWR to continue to provide and support migratory bird populations well into the future.

Red Rock Audubon Society, is a Southern Nevada chapter of the National Audubon Society with over a thousand members. We have a long history and productive relationship with the Pahrnatag National Wildlife Refuge. Our community outreach and community science programs include the annual Christmas Bird Count and field trips. Pahrnatag National Wildlife Refuge is a strategic and unique habitat for the protection and survival of migratory birds.

The successful achievement of this project goals will support the accomplishment of our chapter's mission.

Sincerely,



Zane Marshall, Interim President  
Red Rock Audubon Society  
Zane.Marshall@redrockaudubon.com  
P.O. Box 96691  
Las Vegas, NV 89193

# Prospectus - Motus Wildlife Tracking System Network for the West

Partners in Flight Western Working Group

Fall 2019

## Background and Need

After more than a century of research, our understanding of the movement ecology of migratory animals is still surprisingly rudimentary. Yet understanding how animals move across the landscape, shifting from hemisphere to hemisphere, is critical to their conservation. The development of extremely lightweight digital radio-telemetry systems is allowing researchers to track the movements of radio-tagged individuals across thousands of miles of distance, and months or years of time, with exceptional temporal precision.

The Motus Wildlife Tracking System (Motus, [motus-wts.org](http://motus-wts.org)) is an international collaborative research network of automated radio-telemetry receiving stations. Spearheaded by Bird Studies Canada (BSC), Motus facilitates landscape-scale research and education on the ecology and conservation of migratory animals. The current receiver station array comprises more than 500 sites from the Canadian Arctic to South America (Fig 1), operated by more than 600 collaborators. Since 2013, more than 20,000 individuals of more than 200 species have been monitored using the system. Motus has been successfully used to answer research questions such as identifying important stopover sites, migratory routes, and post-fledging dispersal, among others (Taylor et al. 2017). Data collected from these stations feed into BSC's master database where it is archived, visualized, and distributed to researchers and the general public.

Despite the successes of Motus research throughout the existing network, there are notable and significant gaps across the western portions of North and South America. The lack of Motus stations in the west further exacerbates the migration ecology knowledge gap between eastern and western populations of small birds (Carlisle et al. 2009, Bayly et al. 2018). This may lead some land managers to misapply information gained from eastern migration studies to western migrants. Western North and South America is topographically diverse, resulting in extreme contrasts among adjacent habitat types. Most western migrants (unlike their eastern counterparts), typically do not make large overwater flights, often navigate through drier and lightly vegetated terrain, and may face more anthropogenic and natural obstacles compared to eastern migrants. Obtaining western specific post-breeding movement and migration information, especially identifying important stopover sites, is critical to the conservation of these species. Here, we strategize the priorities for establishing a network across the west.

*Building on the success of the Motus Wildlife Tracking System Network in the east, we propose to expand the use of this technology to meet pressing information needs for western birds to inform conservation actions within the next decade.*



## The Western Motus Network

The geography of the western network will include western provinces and territories in Canada, eleven western states of the United States southward through the western states of Mexico, and the Pacific-slope regions of Central and South America. Because the network is made up of collaborators, the placement of stations will largely be determined by independent research goals. However, we also propose strategic placement of stations to address larger scale questions. Thus, collaborators can contribute to site-specific research needs, broad scale objectives, or both.



Figure 1. Motus stations (yellow dots) 2014-2017 in North, Central, and South America and proposed western network (blue line).

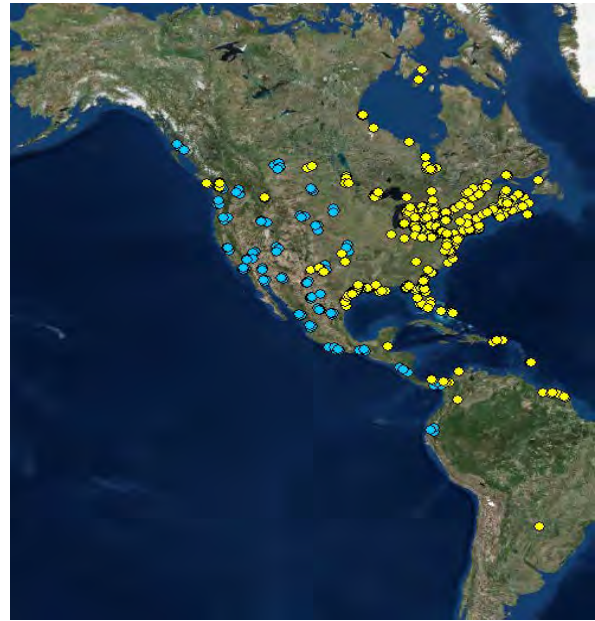


Figure 2. Projected Motus stations likely to be established by 2021 at the completion of Phase 1 (see below).

## Current Technology

The Motus Wildlife Tracking System is currently compatible with transmitters manufactured by Lotek Wireless and Cellular Tracking Technologies. Lotek Nanotags operate at 166.380 MHz and range in size from 0.15–3.0 grams. Cellular Tracking Technologies has two options for transmitters: PowerTags and LifeTags, each operating at 433 MHz with sizes 0.46 grams and up. Options for receivers include the Lotek SRX800-D, Sensorgnome, and CTT SensorStation. With these options, there is much flexibility in choosing the most appropriate system to accomplish your project goals. We recommend building hybrid (i.e. Motus/CTT) stations to maximize tracking abilities.

*The Partners in Flight Western Working Group is well positioned to build the western Motus network, with a proven track record of westwide collaborative projects and international collaboration.*





Photos © James Livaudais 2018

## Phase 1 (2019-2021)

### ***Begin to build the network and meet short-term landbird and shorebird objectives. Expand the partnership to include bats and other wildlife.***

The short-term objectives will fill critical information gaps for priority bird species and groups. Collaborators are currently considering integrating Motus technology into ongoing research programs for the following priority landbird and shorebird species: Bank Swallow, Common Nighthawk, McCown's Longspur, Chestnut-collared Longspur, Oregon Vesper Sparrow, Sagebrush Sparrow, Bell's Sparrow, Brewer's Sparrow, Tri-colored Blackbird, Sage Thrasher, Swainson's Thrush, Willow Flycatcher, Gray Flycatcher, western Warblers, Yellow-billed Cuckoo, Phalaropes, Western Sandpiper, Red Knot, Sanderling, Semipalmated Sandpiper, Semipalmated Plover, Dunlin, Short-billed Dowitcher, Snowy Plover, and Mountain Plover.

While specific research questions addressed by Motus will vary by species, the following six areas of study are needed for most landbirds and shorebirds:

1. Arrival and departure times on breeding grounds
2. Overwinter survival
3. Stopover duration
4. Regional and site level stopover and molt-migrant fidelity
5. Post-fledgling survival and dispersal
6. Breeding habitat use

In addition to erecting receiver stations to meet site-specific collaborator goals, the partnership will look for opportunities for establishing stations wherever possible in building the western network. For example, collaborators that manage land may be interested in establishing a station to contribute to the network and gather passive information about their site. Other collaborators may be interested in establishing a station for educational purposes.

We will explore funding strategies that are based on 1. Site-specific research goals, 2. Establishment of the network, and 3. Landowner objectives. This multi-faceted approach will allow us to achieve our short-term goals as well as provide the groundwork for the network.







Photos © James Livaudais 2018

## Phase 2 (2022-2027)

### ***Fill spatial gaps, ensure longevity of the network, and meet long-term objectives.***

Research needs at large spatial scales will require the network to be established. Following successful completion of Phase 1 (see Fig 2 for projected network map), we will expand the network to fill spatial gaps and focus on longevity to meet pressing research needs that are expansive either spatially or temporally. Research needs for seabirds, additional landbirds and shorebirds, and non-avian taxa will be developed in Phase 1 and included in Phase 2.

The following three areas of study have been identified as important for the conservation of migratory landbirds and shorebirds:

1. Migratory connectivity
2. Migratory timing and movements and how they relate to climate
3. Movements on wintering grounds

In addition to addressing current research objectives, we anticipate that the network will stimulate much needed migration research in the west. As has been demonstrated in the east, a collaborative network such as this can rapidly expand to efficiently achieve broad scale research that is imperative to reversing the declines of western birds.

### **How to get involved**

Please join us! You can help support one of the largest migratory animal conservation science and research initiatives in the world. We welcome all collaborators, whether you are a researcher, land manager, organization, educator, or private landowner. This is an opportunity for outreach, education, and collaboration with people throughout the Americas. Please visit <https://motus.org> and/or <https://www.partnersinflight.org/resources/motus-initiative/> for more information.

### **Who to contact**

Mary Whitfield: [mjwhitfield.ssrs@gmail.com](mailto:mjwhitfield.ssrs@gmail.com), (760) 378-3345  
Motus.org: [motus@birdscanada.org](mailto:motus@birdscanada.org)

### **Citations**

Bayly, N.J., K.V. Rosenberg, W.E. Easton, C. Gómez, J. Carlisle, D.N. Ewert, A. Drake and L. Goodrich. Major Stopover regions and migratory bottlenecks for Nearctic-Neotropical landbirds within the Neotropics: a review. *Bird Conservation International* 28:1-26.

Carlisle, J. D., Skagen, S. K., Kus, B. E., van Riper, C., Paxton, K. L. and Kelly, J. F. 2009. Landbird migration in the American West: Recent progress and future research directions. *Condor* 111: 211–225.

Taylor, P. D. et al. 2017. The Motus Wildlife Tracking System: a collaborative research network to enhance the understanding of wildlife movement. *Avian Conservation and Ecology* 12(1):8. <https://doi.org/10.5751/ACE-00953-120108>.





Instructions: Put project cost estimates in Tabs 1-8. The values from those tabs will roll-up to this summary worksheet. The Non-Federal Contribution can be entered in Tabs 1-8 as a whole amount, it does not need to be broken out by unit cost.

**PROJECT BUDGET**

<b>Project Name:</b>	\$5	<b>Date:</b>	11/4/2023
<b>Project Manager:</b>	James R Vinson	<b>Agency:</b>	USFWS
<b>Cost Categories</b>		<b>SNPLMA</b>	<b>Non-Federal Contribution</b>
1. Personnel (labor plus benefits)	\$	562,780.00	\$ 295,788.00
2. Travel	\$	-	\$ -
3. Training	\$	2,500.00	\$ -
4. Equipment	\$	555,300.00	\$ 126,000.00
5. Supplies/Materials	\$	369,910.00	\$ -
6. Contracts and/or Agreements	\$	3,945,364.00	\$ -
7. Vehicle Use	\$	-	\$ -
8. Other Necessary Expenses	\$	-	\$ -
<b>9. TOTAL PROJECT BUDGET</b>	<b>\$</b>	<b>5,435,854.00</b>	<b>\$ 421,788.00</b>

Notes:

### 1. PERSONNEL

Include labor costs for all aspects of project implementation where agency labor will perform the work, e.g. planning and environmental documentation, section 106 compliance, labor to perform implementation, project management, interdisciplinary team (ID team), engineering, etc. Labor expense documentation must correlate the individual labor expense with the deliverable, task, or subtask. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total labor costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Refuge Manager - COR, project monitoring, NEPA, planning, technical expertise, outreach, project close out. USFWS	2800	Hours	\$ 88	\$ 246,400	\$ -
Refuge Specialist - Project monitoring, planning, technical expertise, outreach, monitoring, restoration efforts. USFWS	3120	Hours	\$ 54	\$ 168,480	\$ -
Maintenance Mechanic - restoration efforts, planning, technical expertise. USFWS	600	Hours	\$ 48	\$ 28,800	\$ -
Archaeologist - Completing 106 compliance on tower sites NPS, BLM, FS, USFWS	300	Hours	\$ 60	\$ 18,000	\$ -
Visitor Services Specialist - Completing outreach and developing programming USFWS	1500	Hours	\$ 49	\$ 73,500	\$ -
Administrative Officer - Tracking expenses, budget, project administrative work USFWS	400	Hours	\$ 69	\$ 27,600	
Non-profit partners- GBBO supplying volunteer labor completing field work. USFWS	2634	Hours	\$ 32		\$ 84,288.00
NDOW - Technical expertise, and labor for Motus installation and deployment. Hours include planning, materials transport, and staff time installing seven towers.	2500	Hours	\$ 59		\$ 147,500.00
Refuge Volunteers with capture and installing transmitters, and processing migratory species. Also includes volunteer time with habitat restoration. USFWS	2000	Hours	\$ 32		\$ 64,000.00
		Hours		\$ -	\$ -
		Hours		\$ -	\$ -

<b>Total</b>	<b>\$ 562,780</b>	<b>\$ 295,788.00</b>
--------------	-------------------	----------------------

**2. TRAVEL**

Travel expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total travel costs.

Description of Travel and Purpose	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
	0	Trip	\$ -	\$ -	\$ -
	0	Trip	\$ -	\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
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		Trip		\$ -	\$ -
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		Trip		\$ -	\$ -
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		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -

<b>Total</b>	\$	-	\$	-
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### 3. TRAINING

Training expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Example, contracting officer representative or program officer/assistance agreement training, training for chainsaw use, training for pesticide application, visual resource management, etc. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total training costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Statical program R training USFWS	1	Each	\$ 2,500	\$ 2,500	\$ -
	0	Each	\$ -	\$ -	\$ -
		Each		\$ -	\$ -

<b>Total</b>	<b>\$ 2,500</b>	<b>\$ -</b>
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#### 4. EQUIPMENT

Purchase, lease, or rental of equipment (not included in a contract or agreement) for project implementation. Equipment must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). SNPLMA will only pay for the value of the equipment used during the project. The value of the equipment must be documented at the beginning and end of use to determine the amount SNPLMA will pay, if greater than \$5,000. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Motus towers to establish network in southern Nevada - NPS, BLM, FS	30	Each	\$ 18,000	\$ 540,000	\$ -
Motus Nodes for triangulation habitat use - USFWS	30	Each	\$ 350	\$ 10,500	
Adobe premiere software - over the course of the project - USFWS	1	project	\$ 4,800	\$ 4,800	\$ -
NDOW Motus towers install on non-federal lands	7	Each	\$ 18,000		\$ 126,000.00
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	<b>\$ 555,300</b>	<b>\$ 126,000</b>
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### 5. SUPPLIES AND MATERIALS

Supplies and materials necessary to complete the project. Supplies/materials must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Supplies/materials must be the minimum amount necessary to accomplish the project; purchasing extra supplies/materials to "stock the cache" for post project management activities is prohibited. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Neotropical Migrant Marking Supplies USFWS, NPS	1	Project	\$ 4,000	\$ 4,000	\$ -
Wetland bird marking Supplies USFWS	1	Project	\$ 4,000	\$ 4,000	\$ -
Bat Marking Supplies NPS	1	Project	\$ 4,000	\$ 4,000	\$ -
Motus Transmitters USFWS, NPS, FS	500	Unit	\$ 300	\$ 150,000	\$ -
Motus deployment registration fees NPS, BLM, FS, USFWS	5	annual	\$ 1,082	\$ 5,410	
GSM Transmitters USFWS	150	Unit	\$ 1,200	\$ 180,000	\$ -
Wetland restoration seed USFWS	100	lbs.	\$ 75	\$ 7,500	\$ -
Interpretive signage NPS, BLM, FS, USFWS	30	sign	\$ 500	\$ 15,000	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	<b>\$</b>	<b>369,910</b>	<b>\$</b>	<b>-</b>
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### 6. CONTRACTS AND AGREEMENTS

Contracts and/or agreements (grants, cooperative agreements, assistance agreements, stewardship agreements, interlocal or state agreements, etc.) necessary to implement the project's purpose and deliverables (including tasks and subtasks, as appropriate). Extra or more robust documentation may be necessary if the contract and/or agreement is for multiple projects (e.g. a Master Agreement or CESU agreement). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total grant and agreements used to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
Cooperative agreement for project management across agencies. USFWS	6	Years	\$ 135,356	\$ 812,136	\$ -
Cooperative agreement for GS-11 equivalent Wildlife Biologist for monitoring, tagging, habitat restoration, outreach, coordination. USFWS	5	Years	\$ 124,000	\$ 620,000	\$ -
Cooperative agreement for southwest willow flycatcher surveys. USFWS, BLM, NPS	5	Seasons	\$ 261,646	\$ 1,308,228	\$ -
Cooperative agreement for tribal coordinate and cultural compliance. NPS, USFWS, BLM, FS	1	Job	\$ 20,000	\$ 20,000	\$ -
Contracting for NEPA compliance. NPS, USFWS, BLM, FS	3	Job	\$ 45,000	\$ 135,000	\$ -
Contracting for training video editing and 508 compliance. USFWS	1	Job	\$ 120,000	\$ 120,000	\$ -
Cooperative agreement for CESU for Mexican free tailed bat migration project. NPS	1	Project	\$ 250,000	\$ 250,000	\$ -
Cooperative agreement for tree propagation. USFWS	1	Project	\$ 5,000	\$ 5,000	\$ -
Cooperative agreement for Refuge Operations Technician - Assist with developing and delivering educational outreach programs, tagging efforts, and coordination. USFWS, NPS	5	Years	\$ 55,000	\$ 275,000	\$ -
Cooperative agreement for migratory bird graduate position with Univeristy of Montana. USFWS	4	Years	\$ 100,000	\$ 400,000	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	<b>\$ 3,945,364</b>	<b>\$ -</b>
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**7. VEHICLE USE**

Use of an agency/entity vehicle, purchase of a new vehicle, rental of vehicle, or any other vehicle use not covered under Equipment. If possible, use the agency/entity fixed operation rate (FOR) multiplied by the unit (miles or hours) over the life of the project. The FOR includes depreciation and wear and tear on the vehicle tires, wiper blades, routine vehicle maintenance, etc. If special tires or replacement tires or other vehicle equipment is necessary, please show it under "Equipment." Vehicle expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total vehicle use to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
	0	Miles	\$ -	\$ -	\$ -
	0	Miles	\$ -	\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	\$	-	\$	-
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**8. OTHER NECESSARY EXPENSES**

Other Necessary Expenses are time and materials necessary for project implementation but are not specific to any one deliverable (including tasks and subtasks, as appropriate). If you included the labor, equipment, and/or supplies and materials in the other sheets, do not include them here. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total other necessary expenses to implement the project. This is not a complete list. Contact the SNPLMA Division for guidance on other necessary expenses.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
	0	Hours	\$ -	\$ -	\$ -
	0	Hours	\$ -	\$ -	\$ -
		Hours		\$ -	\$ -
		Hours		\$ -	\$ -
		Hours		\$ -	\$ -
		Hours		\$ -	\$ -
		each/month		\$ -	\$ -
		each		\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	\$	-	\$	-
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**SNPLMA Round 20  
Conservation Initiatives Project Addendum**

**Nomination:** Tab 3

**Entity:** National Park Service, Lake Mead National Recreation Area

**Project:** Managing Illegal Roads to Protect Recreation, Safety, and Resources, Phase I

**Remarks/Clarifications Needed:**

**Section A – Background Information:**

1. Developing Site-Specific Management Plans section.

“Implement a permitting system for camping (free or with a fee would be determined).”

**Is 'Implement' the right word? The Plan in this nomination can assess the feasibility of each of the two mentioned permitting/fee systems, however it is up to NPS’s regulations, authorities, and management on whether the fee system can be/will be implemented.**

2. Community Outreach, Engagement, and Education section.

a) Within the Park: “Develop a new site-specific backcountry ranger program.”

**Is a backcountry ranger and patrol ranger the same/duties? What defines 'backcountry' and separates the patrol locations?**

**Section C – Purpose Statement:**

1. Recommend rewriting purpose statement, it is difficult to tell what the focus of the project is, (i.e., “address illegal roads and recreation access” or “public protection needs and cultural and natural resource protection”).

**Section D – Project Deliverables: *Primary:***

1. Deliverable #2 Manage Roads

• Task a: “Block off access to approximately 25 illegal roads in the two Active Project Areas.

**Clarification Needed: Is it 25 miles in each Active area, or 25 miles in total between the two areas?**

• Task b: “Provide visual barriers and/or remediation of approximately 5 miles of illegal roads in the two Active Management Areas”.

**Clarification Needed: Is it 5 miles in each Active area or 5 miles total between the two areas? Also, what is the difference between Task a and b of ‘block off’ and ‘visual barriers’?**

• Task g: “Install approximately 20 signs in the two Project Areas.”

**Clarification Needed: There was no mention of a signage component in the Outreach description, what would these signs be for? Also, is it 20 signs in each Project Area or 20 signs total between the two areas?**

2. Deliverable #3 Community Outreach

• Task d and e: Attend community events.

**Recommend these two tasks be combined since they are combined in the Outreach description. Entity can then use verbiage like 'such as Hump N’ Bump, conferences, etc.' in the Deliverable rather than two separate tasks.**

- Task f: Develop a social media campaign.  
**Defining needed. What is a ‘campaign’ and what does it involve? Recommend combining Task g with this task, since a project website would be part of a social media campaign.**
- Task h and k: Develop outreach.  
**Recommend these two tasks be combined since they are both development of outreach, and using verbiage like 'such as brochures, school activities, etc.' in the Deliverable rather than two separate tasks.**
- Task i and j: Conduct outreach.  
**Recommend these two tasks be combined since they are both conducting outreach, and using verbiage like 'such as teacher workshops, school activities, etc.' in the Deliverable rather than two separate tasks.**
- Task l: Develop the Backcountry Ranger Program.  
**Clarification Needed: It is unclear what the 'program' is, the description paragraph for Backcountry Ranger in the Nomination only mentions patrolling.**
- Task n: “Identify potential locations and topics for educational kiosks/waysides in the Project Areas.”  
**There was no mention of a signage component in the Outreach description.**

### 3. Deliverable #4 Cultural/Natural Resources

- Task b and c: Identify cultural and natural resources being impacted.  
**Quantification Needed: Does entity plan on surveying the entire 53,720 acres to find any/all the impacts?**

### **Section D – Project Deliverables: Anticipated:**

1. Recommend Anticipated Deliverables be rewritten.
  - a. Many are just further extensions of the Primary Deliverables. Recommend changing the Primary Deliverables to verbiage such as 'up to 18 volunteer events, up to 19 Community Education Meetings/Events, etc. and removing them as Anticipated Deliverables.
  - b. Some Anticipated Deliverables are desired outcomes rather than tasks or are not tangible/measurable tasks.
  - c. Many Anticipated Deliverables have the project areas lumped together in one task.

### **Section F – Project Timeframe:**

1. Year 1, item #6. “...active management of the smaller sub-areas...”  
**Clarification Needed: Entity is claiming 'shovel-ready', specifically the sub-areas, why is work not starting until end of year 1 then?**
2. Year 1, item #7. “Begin implementing a backcountry park ranger general special uses program.”  
**This is different terminology than previously found in the nomination. The description of the Backcountry Ranger is for patrolling. The Plans in this nomination don’t give permission to implement fees, just to assess the feasibility of each of the two mentioned permitting/fee systems. Only NPS’s regulations and authorities can determine whether a fee system can be implemented.**
3. Year 1, item #10. “Develop new signage and identify locations to place signage.”  
**There is no mention of a signage component in the Outreach description in the nomination.**

### **Section K – Ranking Criteria:**

#### **Criteria 1; c: Environmental Health and Protection and/or Public Health and Safety.**

Entity Answer: “... implement a permitting system to allow tracking of vehicles and number of people in the backcountry”;” install signs to inform users of any new permitting requirements”;

identify locations within the two Project Areas that allow overnight use and areas that are day use only and install signs clearly identifying those areas.”

**Clarification Needed: This project only gives the possibility of a new fee system. The implementation decision will need to be made by NPS management not by this project. Also, there was no mention of a signage component in the Outreach description in the nomination.**

### **Section L – Orders and Priorities:**

1. Entity did not answer USDA Forest Service Priorities.

### **Letter of Support:**

1. BLM’s letter of support mentions “NPS plans to work directly with BLM to achieve both agencies’ goals to manage for appropriate motorized recreation, in particular managing those illegal roads and routes that cross BLM and NPS managed lands.”

**Clarification Needed: The nomination does not mention any instances of doing work on BLM lands.**

### **Budget - Excel Spreadsheet:**

#### **Travel Tab**

- \$9,000 for two new Patrol Rangers’ travel to attend trainings.  
**SNPLMA will not pay for new permanent NPS employees’ travel to training. If new employees will spend *some* time on the project, costs can be dispersed across all the projects/areas the employee works on, according to percentage of time at each project/area.**

#### **Training Tab**

- \$10,800 for 3 new employees to attend Law Enforcement training.  
**SNPLMA will not pay for new permanent NPS employees’ travel to training. If new employees will spend *some* time on the project, costs can be dispersed across all the projects/areas the employee works, according to percentage of time at each project/area.**

#### **Supplies and Materials Tab**

- \$5,000 for Signage and \$6,600 for Wayside Panels.  
**No mention of a signage component in the Outreach description in the nomination.**
- \$600 for post & cable fencing and \$7,500 for post and cable fencing.  
**These prices seem very low compared to other projects which have had to do fencing.**
- 30 boulders, 10 blockades, 3 steel gates.  
**This does not seem enough for over 53,000 acres.**
- \$20,000 for tazers/firearms, body armor, defensive equipment, uniforms, etc.  
**If the employee is a temporary or term employee being utilized full time just for this project, SNPLMA will pay these expenses. SNPLMA will not pay for outfitting new permanent NPS employees. If new employees (and vehicles) will spend *some* time on the project, costs can be dispersed across all the projects/areas the employee works at, according to percentage of time at each project/area.**

**Southern Nevada Public Land Management Act  
Conservation Initiatives  
Round 20**

National Park Service



Managing Illegal Roads to Protect Recreation, Safety, and Resources: Phase 1

Amount Requested: \$8,664,643

## A. BACKGROUND INFORMATION

The Lake Mead National Recreation Area (NRA) encompasses 1.5 million acres, 91% of which is land. With the ongoing reduction in water levels of the lake, “new” land becomes exposed and access to water is limited and more difficult to reach due to topographical changes and a lack of official roads to redirect visitors to the water or recreational areas of interest.

Although Lake Mead NRA has had previous challenges with the creation of illegal roads and off-road vehicle trails, in recent years the number of these types of roads/trails has increased significantly with the ongoing attempts of people trying to access the receding water (Maps 1 and 2, the red “disturbance lines” are illegal roads that have been surveyed by the Park). The extent of damage has compounded across culturally and biologically sensitive landscapes, as well as, made rescues and law enforcement patrols difficult (due to the inability to identify where a call is occurring within a web of illegal roads.)

In addition, due to the demands of managing other low water concerns across the park and the rapidly changing shoreline, Lake Mead NRA has been unable to identify and establish new, official (approved) access points to the water in order to support public recreation. This, in addition to a lack of clear signage and boundaries delineating approved roads, as well as communicating with visitors about the harms of creating illegal roads and the Park's expectations to use approved roads, may be contributing factors to the creation of illegal roads.

The goal of this project is to simultaneously address illegal roads and their impacts on protected resources at Lake Mead NRA, while finding ways to support and enhance recreational access. Because Lake Mead NRA is so large and encompasses a variety of terrain and protected resources, as well as supports a spectrum of recreational activities, public access and illegal roads are complex challenges. This proposal is Phase 1 of a multi-phase, multi-pronged approach to address these complex issues across the park using Site-Specific Management Plans informed by data and developed with community input and recreational access considerations.

In Phase 1, Lake Mead NRA proposes to: (1) Develop two Site-Specific Management Plans (Government Wash and Overton Arm) that will collect and use cultural and natural resource survey data, illegal road survey data, and public input, to create short-term and long-term travel and recreational management decisions uniquely tailored to each Area (shown as lime green in Maps 3 and 4); (2) Implement immediate, active-management strategies in specific sub-parts of the two Project Areas that have already gone through NEPA processes (referred to as Active Management Sub-Areas and depicted in tan in Maps 3 and 4); And, (3) Develop and implement creative and robust outreach, education, and engagement activities, to determine the public's recreation goals and needs for the Government Wash and Overton Aram Project Areas that involve backcountry roads, as well as, educate the public about the park's responsibility to protect cultural and natural resources and why. Details of each of these project elements are provided in dedicated descriptions following the initial background information below.

### **Background: Lake Mead National Recreation Area and the Impacts of Low Water and Illegal Roads**



Although Lake Mead NRA has had previous challenges with the creation of illegal roads and off-road vehicle trails, in recent years the number of these types of roads/trails has increased significantly with the ongoing attempts of people trying to access the water as it recedes.

Lake Mead's water levels were at their highest point in 1983 (at 1,225 feet). From that point forward, water levels have been continuously receding. As of November 2023, the lake level has dropped over 160 feet to a level of 1,065 feet. That means about 81,000 acres of "new" land has been exposed.

Lake Mead NRA currently has 169 approved paved and dirt roads extending across the park, constituting 942 miles of approved roads for recreating (240 asphalt miles, 195 graded dirt miles, and 507 dirt unimproved miles). Prior to the receding waterline, an approved road reached the lake shore on average every 10 miles, providing approximately 60 lake access points for vehicles. As of 2023, there are approximately 10 approved roads that reach the waters of Lake Mead, half of which are at Boulder Beach. Thus, approved backcountry access to Lake Mead has all but disappeared and needs to be thoughtfully addressed by the Park to support public access.

Considering that Lake Mead is a major attraction to the Recreation Area, visitors have taken it upon themselves to create paths to the water. This is done by continuing to drive over the landscape even though the official road has ended. Illegal roads have also been created between approved roads in attempts to reach isolated points along the water.

Many of the surveys of the park's illegal roads were done when the water was higher. There are currently 824 miles of documented illegal roads, however it is estimated that the number of miles of illegal roads is at least double, if not triple, what has been officially captured.

Even back in 1989 when the Park's Backcountry Management Plan was written it states, "Illegal off-road vehicle travel has caused some of the most significant detrimental impacts to the natural resources in the backcountry of Lake Mead National Recreation Area." Today that damage is significantly higher, impacting both natural and cultural resources.

Illegal roads and off-road-vehicle trails do both visible and invisible damage to natural and cultural resources. Visible damage includes creating ruts that can funnel heavy rains and accelerate erosion, as well as, crushing and destroying plants, animals, underground animal homes, and buried artifacts (breaking them and/or displacing them such that important contextual and locational information are forever lost). Invisible damage includes compression of buried archeological sites and demolishing chemically and biologically bonded surface crusts that can take hundreds, if not thousands of years to form and are required for multiple sensitive and endangered plant species to reproduce.

In addition to causing significant damage across culturally and biologically sensitive landscapes, illegal roads have made rescues and law enforcement patrols difficult, due to the inability to identify where a call is occurring within a web of illegal roads. Thus, the management of the illegal roads, including the activities that produce them, is of critical importance to the Lake Mead NRA.

While the park needs to manage illegal roads that either lead to “nowhere” (e.g. they stop because the terrain became unpassable and/or no longer leads to water) or are in close proximity to sensitive areas, the park also needs to identify and provide long-term access to the public to new water accessible points and/or to areas of recreational interest. Lake Mead NRA seeks to find the best way to responsibly offer and support recreation activities that require roads.

### **Developing Site-Specific Management Plans**

Lake Mead NRA’s Backcountry Management Plan was developed in 1989 and is broad, vague, and extremely outdated. This makes it difficult to make or enforce management decisions – including those related to illegal roads, what to do with approved roads that no longer reach the water, and other actions that would require public input (such as using permitting as a management tool). In addition, because Lake Mead NRA is so large, with distinctive areas that span two different states, a broad Backcountry Management Plan cannot adequately address the unique attributes of each area of the park.

In Phase 1 of this multi-phase effort, Lake Mead NRA proposes to develop Site-Specific Management Plans for two Project Areas (Government Wash and Overton Arm) that, using previously collected data and data collected via this project, carefully consider the unique potential and needs for public use, presence and distribution of cultural and natural resources, as well as each areas unique terrain features, to make informed management decisions.

Project Areas were chosen due to a combination of the most pressing needs and highest concentrations of illegal roads. The Government Wash Area has 172 miles of documented illegal roads (estimates are 2-3 times that number) and this area is one of the most popular backcountry camping areas in the park with a high number of vehicle recoveries (trapped in sand) and dispatch calls. The Overton Arm Area has 87 miles of documented illegal roads (again more undocumented roads exist), some of which are going through a highly significant cultural site and rare gypsum soil ecosystems with numerous endangered species.

Specific Project Area boundaries were chosen by including critical management areas (inclusion of cultural and natural resources that need immediate protection and areas with high recreational use) bound by official roads, natural land features (such as washes and the lake shoreline), and park boundaries. The extent of the area was chosen based upon what could also be accomplished in the 5-year project period.

The Government Wash Project Area is approximately 36 square miles (23,000 acres) and the Overton Arm Project Area is approximately 48 square miles (30,720 acres). The Active Management Sub-Areas (where the project will be able to implement immediate management actions like blocking off illegal roads and/or making new official roads - because NEPA/NHPA has been completed - is approximately 640 acres for Government Wash and approximately 3840 acres for Overton Arm.)

Because backcountry activities are initially accessed through dirt roads, each site-specific plan will directly address the following: existing illegal roads; activities that may create new illegal roads; defining park-supported access to the water and other backcountry activities; and

protecting each area's unique natural and cultural resources. Although the exact scope and details of each site-specific plan will be defined with input from multiple park divisions, public and tribal input, and an environmental assessment (EA), each site-specific plan will likely include the following:

- *Clearly delineate day- and overnight-use in each Area, as well as the accessibility of the use-areas by foot or vehicle.* Law enforcement rangers report that illegal roads are often littered with evidence of overnight camping (e.g. the presence large barren spots, fire pits, trash, and human feces.) Whether an illegal road was created to find a spot to camp or it already existed and was followed to find a spot to camp, the end result is still the same – destruction of the natural resource. The park's current 35-year-old Backcountry Management Plan does not clearly define where exactly backcountry camping is allowed in the park, nor does it define whether vehicle or foot access is acceptable for backcountry camping in a specific location. This lack of clarity makes it nearly impossible for park rangers to control the use of and access to specific areas. Site-specific plans would address this.
- *Clearly delineate zones of use within each area such as wild backcountry exploration, backcountry corridors, and high use/directed use.* Ideally these zones of use would be determined by a number of factors such as: How are areas currently being used by visitors? Are there cultural or natural resources that need to be protected? Are there features that would make a nice recreational destination? By identifying zones of use, it will enable the park to clearly identify human and other resource needs to manage a site.
- *Implement a permitting system for camping (free or with a fee would be determined).* The park does have limits on the number of nights people can camp in the backcountry, however, there is no real way to enforce those limits or tell how many people are staying overnight in the backcountry. A permitting system would place time, number of people, and location boundaries on backcountry use, enabling park rangers to connect cars and people with permits. A permitting system would also provide the park with usage data, which can inform decisions about whether the number and type (e.g. vehicular access) of backcountry camping areas need to be increased to meet public need. If fees will be collected, this permitting system would either use drop boxes or recreation.gov.
- *Define management/protection of cultural and natural resources in the backcountry, particularly as it relates to recreation.* Cultural and biological resources are not equally distributed across the park, some areas have higher concentrations of highly sensitive resources. Thus, having site-specific management plans will allow the park to address the unique attributes of each area, looking at how natural and cultural resources are being impacted (or have the potential to be impacted) by illegal roads, new official roads, and/or existing approved roads and their extension to the water.
- *Identify/allow for closures to official and unofficial roads that no longer lead to water, lead to dangerous areas (e.g. where vehicles frequently get stuck), and/or lead to environmentally or culturally sensitive areas being damaged by off-road activities.* Identify roads or tracks that safely lead to water and will likely do so for the next 5-10 years (in a location/manner that the park can reasonably maintain) to provide public access to the water and identify/allow for closure to official and unofficial roads that no longer lead to water, are dangerous, or lead to sensitive areas.

Phase 1 of this project proposes to take a unique management approach for the park by developing comprehensive Site-Specific Management Plans for two key areas (Government Wash and Overton Arm). These plans will be developed, approved and implemented during the five-year grant. The plans will be informed through critical new data collection (e.g. cultural surveys of sites revealed with the dropping of the water and currently being impacted by illegal roads, surveys of illegal roads that the park has not already captured, etc.) and public and tribal input, as well as careful evaluation of existing data, to determine the best courses of action to present in the plans.

Two sub-sections of each Area have already gone through the NEPA/NHPA process for some low water planning and are ready to take near-immediate action during this project cycle. These are referred to as Active Management Sub-Areas in the nomination.

### **Managing Illegal Roads in the Government Wash and Overton Arm**

Tackling illegal roads requires on-site action to either assess or actively manage actual or potential damage.

*Assessment activities* may include: (a) identifying and surveying cultural and natural resources being impacted or have the potential to be impacted by off-roading activity; (b) surveying illegal roads that have not yet been identified by the park; and (c) identifying and surveying potential new approved roads to provide access to the water and/or other recreational sites of interest.

*Active management activities* may include: (a) remediating and/or restricting/blocking existing illegal roads and/or closing currently approved roads that lead to nowhere and/or lead to highly sensitive cultural or natural resources that need protection; (b) turning an illegal road into an approved road; and (c) creating new approved roads and/or pull-off sites to support specific recreational activities, such as backcountry camping or new access points to the lake.

### **Why the Government Wash and Overton Arm Areas?**

Maps 1 and 2 show that illegal roads are prevalent across the park, which is why it is critical to address illegal roads park-wide (hence proposing a multi-phase project). But, since this would be the first time the park has attempted to directly address the problem of illegal roads, it would be best to focus on the two most critical areas and to develop and refine effective processes that can be duplicated and adapted across the Park, as well as permanently built into the Park's overall management structure.

The Areas targeted in this proposal have their own unique and immediate needs.

In **Government Wash** illegal roads form a spiderweb across the desert in a region that is very popular for backcountry camping and (previously) accessing the lake. Attempts continue to be made to access the lake, which is compounding the problem. Because of the large number of people that visit Government Wash and the immediate vicinity, there are

also a large number of calls for law enforcement, emergency assistance, and stuck vehicle recovery (Photo 1). Although there are known environmentally and culturally sensitive regions in the Government Wash Area which do need protection, the primary and immediate concern with respect to illegal roads in the Government Wash Area include the extensive damage to the general desert environment, the high frequency with which vehicles get stuck and recoveries occur, the maze of roads that can make fast emergency response difficult, and the lack of clearly designated backcountry camping sites/options.

In 2022 alone there were 272 events in the Government Wash Project Area, most of which were in the immediate Government Wash Road vicinity, but also included 8 Mile Road, Crawdad Cove, and Box Car Cove Road (labeled as 89, 90 and 91 respectively in Map 3 – Box Car Cove Road forms the eastern boundary of the project area). Events refer to actual calls that required either volunteers (such as Southern Nevada Off-road Recovery) and/or park law enforcement to intervene - including vehicle recoveries (stuck), citations, warnings, emergency calls, (human/life-saving) rescues, assists, and arrests.

Prior to the web of illegal roads (shown in red, dark grey dotted lines, and white dotted lines in Map 5), there were clear “spur” roads (dark grey dotted lines) for law enforcement, volunteer support, and medical support to know where to go and quickly reach an emergency call (the dark grey and white dotted lines are illegal roads that were mapped by law enforcement to help support their patrols and calls). (NOTE: Map 5 shows the park’s official roads in yellow. Government Wash Road is shown in solid black but is also an official approved road.) Today, because of the extreme web of illegal roads in the area, it is difficult for people to describe their location in a call. Even with the law enforcement “spur map,” they, along with volunteers, and medical support can easily go to the wrong area, losing precious time during an emergency call.

The **Overton Arm Area** (Map 4) shares some similar backcountry camping and public protection concerns as Government Wash, but to a much lesser degree. Stewart’s Point, which is part of the Active Management Sub-Area for this project, is a popular dispersed camping spot that no longer has access to the water. There are additional illegal roads in the Stewart’s Point Area that need to be surveyed, and decisions need to be made about the recreational opportunities in this area (versus other potential spots in the broader Project Area.) Although back country camping and recreation are important considerations for the Overton Arm Area, the primary concern is protecting highly significant/sensitive cultural and natural resources.

With respect to natural resources, over the past 10 years, biological surveys have been completed of the unique gypsum soil and other ecosystems in this Area that support several rare and endangered plant and animal species. However, follow-up surveys may be needed to be completed to assess proximity and damage from recent illegal roads to inform the Site-Specific Management Plan.

To document the damage to cultural resources, the project will conduct non-invasive/ minimally invasive baseline topographic mapping, targeted geophysical investigations (which may include magnetometry, ground penetrating radar, and/or thermal imagery), along with limited subsurface testing and some surface investigation along the length of the approved and illegal roads (to the outer boundary of the active management area defined by Map 4.) These investigations will help identify the locations and boundaries of cultural sites impacted by the road network and develop archeological modeling. The data will be critical in providing guidance for management decisions in and around cultural resources in partnership with Tribes. The project will also employ tribal interns (and other youth) to help collect survey data for the cultural resources site (and other cultural surveys as part of compliance activities).

The landscape of the Overton Arm Area has shifted significantly with the almost complete retreat of Lake Mead, leaving the Muddy and Virgin Rivers, and exposing other historic sites like St. Thomas. The park has pivoted and made access to St. Thomas available through roads and trails, as well as, placed educational kiosks and waysides about the area's history near the parking and along the trail. These types of recreational/educational actions (e.g. kiosks, waysides, etc.) will be considered as part of the Area's Site-Specific Management Plan with Tribal input.

### **Community Outreach, Engagement, and Education (COEE)**

Creating site-specific management plans and implementing management activities (like blocking off illegal roads or creating new roads) only partially addresses the challenges of illegal roads. There also needs to be mechanisms to connect with current and potential

creators/users of illegal roads to help prevent unwanted activities in the present and future, as well as listen to the public's recreation and access needs to determine how the park might be able to best support those needs. Community outreach, education, and engagement (COEE) is the important third leg of this project that must occur strategically for near-term and long-term effects.

The park has identified multiple COEE approaches to be implemented both within and outside of the park. At the start of the project Lake Mead NRA divisions will meet with community partners to develop a detailed COEE Implementation Plan that includes the following activities (within the park and outside of the park) along with details for when, who, and how each of the activities listed below will occur. The COEE Implementation Plan will also define specific and measurable COEE goals and outcomes, as well as techniques/methods for determining if the goals and outcomes are being met.

**Within the park:**

- (a) *Develop a new site-specific backcountry ranger program* that consists of general backcountry park rangers that would consistently roam key areas, interact with and educate visitors, and inquire/inform visitors about permits (if permits are approved as part of the Site-Specific Management Plan). The park currently does not have any general/backcountry park rangers – this would be a new and unique pilot program for the park, and, if successful, be incorporated into the park's operating budget at the end of phase 1 of this project. The backcountry ranger program would be piloted in the two management areas proposed for Phase 1 of this project.

Currently, all backcountry engagement with visitors is occurring through law enforcement (LE), which has not had the person-power to address the unique backcountry needs. In addition, LE roles and actions are different than that of a backcountry ranger. A backcountry ranger's role is primarily to engage, educate, and have consistent park presence in specific areas (proactive), while LE rangers' roles typically conduct search and rescue and engage in public protection and enforcement activities. LE rangers generally react when dispatch calls are made (this does not preclude LE rangers from engaging and educating.)

The new Backcountry Rangers would become intimately familiar with their backcountry assignments, the visitors utilizing those spaces, share observations and information to help leadership and law enforcement to make informed management decisions about the area, and interact and coordinate closely with law enforcement, as needed. Because of the large number of law enforcement related events that occur, particularly in the Government Wash area, this project would also increase LE presence in the project Areas for the duration of the project. Patrolling and actions would occur in the manner as current laws and the current (1989) Backcountry Management Plan allows and would be adjusted as the new Site-Specific Management Plans allow (once approved per the NEPA process).

- (b) It is important that the off-roading community have positive interactions and associations with the park and learn about relevant topics (such as "don't bust the crust," protecting

cultural and natural resources - including specific endangered plants and animals in the project Area, managing public lands, and differences between the types of public land) in an environment and context that is meaningful and relatable. This will be done in partnership with the general backcountry park ranger(s) described above via ***educational “rides” within the park***, led by volunteers who are leaders in the off-roading community and also advocate for protecting public resources. The COEE Implementation Plan will identify and plan locations for rides, who to target for rides, the number of rides annually, information to address in those rides, and any handouts to share.

- (c) The third in-park component of the COEE Implementation Plan is ***volunteer activities***. The park proposes to work with local organizations and the park’s volunteer program to bring the off-roading community and other park users and community members to support project activities such as data collection, installing fencing, blocking or hiding closed illegal roads, and/or revegetating areas that could support revegetation.

### **Outside of the Park:**

- (d) ***Conduct community engagement/input meetings***. Lake Mead NRA will partner with off-roading community experts who have respected and long-standing relationships in the off-roading community and actively advocate for natural and cultural resource protection within those communities. These meetings are envisioned being implemented as a series, building upon the information shared or gathered in previous meetings. The process will begin by: (1) letting people know about the project and concerns with illegal roads in the park; (2) asking and developing meaningful ways the off-roading community can help prevent or address the issue; (3) working with the community to identify popular routes and find out why they are popular; (4) inviting the public to provide input into planning; And, (5) developing maps and education about where to go or not to go and why.
- (e) Implement fun and informative ***community education meetings***. These would be special events (such as “Science Café-style events) done at a variety of venues of interest to the off-roading and outdoor community. The events would have guest presenters to share a spectrum of educational topics of potential interest to the target audience (such as “don’t bust the crust,” protecting cultural and natural resources, specific endangered plants and animals or cultural resources in the Project Area, managing public lands, and differences between the types of public land). Target audiences may include backcountry recreators (such as fishing, hunting, and 4-wheeling), high school and college students, and the general public.
- (f) Engage in ***informal education and outreach activities*** including attending and presenting the project at community group meetings (such as off-roading clubs, meet-up groups, etc.), hosting tables at off-roading events and fairs (e.g. Hump N Bump) or events and fairs with groups that also commonly off-road (such as the County Fair), presenting at or attending off-roading conferences, and/or developing a new Junior Ranger book that talks about recreation, off-roading, and protecting natural resources that can be handed out at these events.
- (g) Develop ***online and social media outreach campaigns*** in partnership with local and regional organizations to spread the word about the project, engage and educate the community, and share information and materials developed as part of the project.



(h) Develop *K-12 outreach activities and materials*. Outreach into K-12 education can be an important way to shape future stewards of the land, as well as reach audiences both directly and indirectly. For example, high school students who are finding independence through driving may go into the backcountry for their own fun and exploration (via cars, trucks, ATVs, and dirt bikes) but may not know the difference between an “approved” dirt road and an illegal road, or the destructive nature of going off approved roads. Outreach to high school students would be an important component of this project and is an example of direct reach to audiences that may contribute to illegal roads. Indirect reach would connect off-road, recreation, and resource protection information to younger students who do not drive but may go with their families on “off-roading” experiences. While they are in the backcountry, students may share what they learned with their families. Or the information might impact future behaviors when those students can drive. K-12 education information can be delivered in a variety of creative ways including: having college students go into high school classrooms and present information or activities (this educates both the college students and the high school students); partner with local organizations who already regularly deliver environmental/cultural/biological education in area schools and add in off-roading information to common resource protection messages; conduct teacher workshops; and/or assemble boxes or kits that have lessons and supplies that teachers can check out and deliver activities to their students independently.

**a. Describe Relationship to Prior Approved Projects and/or Phases Relevant to this Project (SNPLMA funded or not), and any anticipated Future Phases**

a. This is a new project and has no previous phases. Future phases are likely depending upon the greater implementation needs in other areas of the park (beyond the two management areas defined in this project) and the success of the approaches described in this proposal.

**b. Acknowledgement of Stand-Alone Project and no Guarantee of Funding for Future Phases**

This project is submitted as Phase 1 of a multi-phase project. However, it is recognized that funding this project does not guarantee funding of future phases. This is why we are prioritizing the two most critical areas for Phase 1.

## **B. EXECUTIVE COMMITTEE’S SNPLMA STRATEGIC PLAN VALUES**

Conservation Initiative projects have two goals identified in the Strategic Plan:

- Goal 1: Sustain the quality of the outdoor environment by conserving, preserving, and restoring natural and cultural resources.
- Goal 2: Improve the quality of life for all publics in urban and rural communities by enhancing recreational opportunities that connect people with the outdoor environment.

Nominated projects should meet these two goals by focusing on the three SNPLMA core values, connectivity, sustainability, and community. Every nomination must explain how the three values are promoted by the project.

- **Connectivity**

This project connects people with the outdoor environment in multiple ways: meetings with stakeholders to obtain input into the why and how they use and access the backcountry at Lake Mead, specifically with respect to the two project Areas (Government Wash and Overton Arm), and what their preferences and priorities are with respect to that use; opportunities for on-site educational “rides” sharing information about resource protection and identifying shared values and goals; volunteer events that take place in project Areas to help manage/remove/or block illegal roads; connect with locals via educational and social events to talk about the project, its goals, and why protecting natural and cultural resources is important; identifying ways the park can better meet the backcountry access goals and needs for a variety of audiences while protecting natural and cultural resources.

- **Sustainability**

The project promotes long-term sustainability by utilizing a multi-pronged, multi-phased approach to immediately address the areas of highest concern and to develop plans and infrastructures to manage short-term and long-term needs related to illegal roads across the park. The multipronged approach includes education and outreach activities both on park land and in surrounding communities (targeting off-road recreation groups and other key recreation groups identified during the project), developing Site-Specific Management Plans that address the park’s approach to managing illegal and approved roads as well as backcountry activities that may require or produce roads, protecting natural and cultural resources, and setting up a backcountry management/special uses program to manage the issues at the project Areas, within and beyond the 5-year project timeframe, and taking immediate action where Environmental Assessment activities have already occurred. These funds will allow the park time to build partnerships, address the most damaged areas, develop management capacity, and educate the public on the problems with illegal roads, as well as develop new policies to help curb the destructive behaviors and support responsible recreation and access. The project will also enable the park to identify long-term funding to support backcountry management, be it from new fees generated from permits and/or finding funds within the park’s budget.

- **Community**

This project promotes community within the park and outside of the park. Within the park the project coordinates nearly all of the divisions towards a shared goal and vision, each playing a key role: facilities, interpretation, law enforcement, public affairs, administration, volunteer program, and resource management. Outside of the park, the project engages the following communities (1) the park and other federal agencies whose land is adjacent to (BLM) or within (BOR) the Lake Mead National Recreation Area and they would have interest in or benefit from the activities associated with this project (refer to letters of support); (2) local non-profit and educational organizations whose missions are to educate and support the public in outdoor recreation and off-roading, as well as connecting all of these entities with target audiences including the off-roading community, the public that engages in other recreational activities that

utilize off-roading to participate in other forms of recreation (e.g. fishing, hunting, or backcountry camping), and K-12 audiences; and (3) Engaging with Tribal Nations who have an interest and stake in the data collected as part of this project (cultural resources in the project Areas) and management decisions made as a result of the data collected, public input, and other Environmental Assessment actions taken as part of developing the Site-Specific Management Plans. Community engagement occurs across a short-term and long-term timeline using a planned, multi-phased approach. What is developed and learned in Phase 1, will inform subsequent phases, to ultimately result in a pro-active, well thought-out long-term management plan for illegal roads and backcountry access and recreation at the Park.

## C. PURPOSE STATEMENT

The purpose of this project is to develop and implement Phase 1 of a multi-phase effort to holistically address illegal roads and recreation access at Lake Mead National Recreation Area. Phase 1 focuses on two high-impact regions of the park (Government Wash and Overton Arm) to address high-priority public protection needs and cultural and natural resource protection while expanding backcountry public access to Lake Mead since the waterline has receded.

## D. PROJECT DELIVERABLES

### Primary:

#### 1. Site-Specific Management Plans

- a) Develop a Site-Specific Management Plan for the Government Wash Project Area
- b) Develop a Site-Specific Management Plan for the Overton Arm Project Area

#### 2. Manage Illegal and Official Roads

- a) Block off access to approximately 25 illegal roads in the two Active Project Areas
- b) Provide visual barriers and/or remediation of approximately 5 miles of illegal roads in the two Active Management Areas
- c) Identify illegal roads (that have not already been surveyed) in the Government Wash Project Area
- d) Identify illegal roads (that have not already been surveyed) in the Overton Arm Project Area
- e) Identify current official roads for potential closure in the two Project Areas
- f) Identify potential routes for new official roads to reach the shoreline and/or potential recreational opportunities in the Government Wash Project Area and Overton Arm Project Area
- g) Install approximately 20 signs in the two Project Areas

#### 3. Community Outreach

- a) Implement approximately 8 educational “rides” within the Park
- b) Conduct approximately 14 community education meetings/events
- c) Conduct approximately 10 community engagement/input meetings

- d) Attend approximately 10 community events (e.g. Hump N' Bump) (informal education and outreach)
- e) Attend approximately 3 conferences related to off-roading and backcountry recreation
- f) Develop a social media campaign
- g) Develop a project website
- h) Develop approximately 3 K-12 outreach activities
- i) Conduct approximately 60 outreach activities into K-12 schools
- j) Conduct approximately 6 teacher workshops
- k) Develop approximately 3 new materials (e.g. brochures, handouts) related to key project educational topics
- l) Develop the Backcountry Ranger Program for the two Project Areas
- m) Patrolling of the two Project Areas by Law Enforcement and/or general ranger approximately twice per week
- n) Identify potential locations and topics for educational kiosks/waysides in the Project Areas
- o) Conduct approximately 10 volunteer events

#### **4. Cultural and Natural Resources**

- a) Conduct non-invasive and/or traditional surveys (Class II and Class III) on approximately 6280 acres
- b) Identify cultural and natural resources being impacted in the Government Wash Project Area (that have not already been surveyed and are needed to inform the Management Plan)
- c) Identify cultural and natural resources being impacted at the Overton Arm Project Area (that have not already been surveyed and are needed to inform the Management Plan)

#### Anticipated:

##### **1. Site-Specific Management Plans**

- a. Approve (via an EA process, as needed) a Site-Specific Management Plan for the Government Wash Project Area
- b. Approve (via an EA process, as needed) a Site-Specific Management Plan for the Overton Arm Project Area
- c. Begin implementation of a Site-Specific Management Plan for the Government Wash Project Area
- d. Begin implementation of a Site-Specific Management Plan for the Overton Arm Project Area
- e. Implement backcountry use permitting systems as defined in the Site-Specific Management Plans
- f. Identify future areas for Site-Specific Management Plans in anticipation of Phase 2 of the project.

##### **2. Manage Illegal and Official Roads**

- a. Provide visual barriers and/or remediation of an additional 10 miles of illegal roads in the two Active Management Areas

- b. Survey the illegal roads (that have not already been surveyed) in the two Project Areas
- c. Block off access to an additional 25 illegal roads in the two broader Project Areas, as resources allow
- d. Survey/conduct compliance activities for potential routes for new official roads to reach the shoreline and/or potential recreational opportunities in the Government Wash Project Area and Overton Arm Project Area
- e. Build and open a new official road in at least one of the Project Areas
- f. Close official roads in the two Project Areas as needed to support management decisions as outlined in the Site-Specific Management Plans (number will be determined by assessment and management plans)
- g. Create approximately 15 pull-off sites to support specific recreational activities, such as backcountry camping along approved roads in the two Project Areas.

### **3. Community Outreach**

- a. Implement an additional 8 educational “rides” within the Park
- b. Conduct an additional 5 community education meetings/events
- c. Conduct an additional 8 community engagement/input meetings
- d. Attend an additional 5 community events (e.g. Hump N’ Bump) (informal education and outreach)
- e. Conduct an official conference presentation for at least 1 of the attended conferences
- f. Develop an additional 2 K-12 outreach activities
- g. Conduct an additional 30 outreach activities into K-12 schools
- h. Conduct an additional 5 teacher workshops
- i. Develop an additional 2 new materials (e.g. brochures, handouts) related to key project educational topics
- j. Patrolling of the two Project Areas by Law Enforcement and/or general ranger an additional 2 times per week
- k. Install two new educational kiosks/waysides in the Project Areas
- l. Conduct an additional 8 volunteer events

### **4. Cultural and Natural Resources**

- a. Conduct an additional approximately Class II and Class III cultural resources surveys on approximately 6,000 acres.
- b. Conduct additional surveys/compliance actions on illegal roads, and/or for kiosks, signs, and potential new official roads as the Site-Specific Plans are developed.
- c. Implement backcountry camping permitting system in the Project Areas as the new Site-Specific Management Plans define.
- d. Conduct additional surveys or actions at cultural resources sites (stabilization/protection/inventoried/monitored) based upon the surveys completed as part of the primary deliverables.

Standard:

1. NEPA and SHPO
2. Environmental and cultural surveys as needed for road extensions or backcountry camping sites.
3. Pre-construction engineering and design, as needed
4. Public scoping for the Backcountry Management Plan, as needed
5. Requests for bids/proposals
6. Developing scopes of work for contracts and sub-awards/cooperative agreements
7. Submitting and obtaining management approval of project documents
8. SMART reporting
9. Project closeout

## E. PROJECT LOCATION

### Identify County in Nevada where Project will be carried out:

Clark

### Identify Congressional District(s):

NV District 1 & 4

### Latitude and Longitude:

36.1214000000 -114.8268200000

## F. PROJECT TIMEFRAME

- a. Year 1
  1. Initiate hiring NPS-positions in support of the project.
  2. Establish contracts, cooperative agreements, and interagency agreements.
  3. Initiate equipment purchases and leases.
  4. Develop drafts of the Site-Specific Management Plans for the Government Wash and Overton Arm Project Areas and identify and conduct public input and NEPA compliance requirements/Environmental Assessment (EA).
  5. Towards the end of Year 1, begin *active assessment* of the project Areas (defined by the sub-boundaries in Maps 3 and 4). *Active assessment* means assessing the extent of the illegal roads in each area, possible viable paths for new approved roads, and identifying sensitive cultural or natural resources that would impact road management decisions.
  6. Towards the end of Year 1, begin *active management* of the smaller sub-areas outlined within the larger project Areas (along Government Wash Road and at Stewart's Point). *Active management* refers to actively closing off illegal roads and/or extending existing/creating new approved roads to manage the area.
  7. Finish developing and begin implementing a backcountry park ranger general special uses program and increased law enforcement ranger patrolling in the project Areas (these would be actions or activities that do not require public input a part of the Backcountry management Plan EA).

8. Finalize the Community Outreach, Education, and Engagement (COEE) Plan and begin implementing a community outreach, education, and engagement activities.
  9. Continue tribal consultation.
  10. Develop new signage and identify locations to place signage that requires minimal NEPA compliance.
- b. Year 2
1. Finalize the new Site-Specific Management Plans and conduct public input and NEPA compliance requirements, as needed and not completed in Year 1.
  2. Continue *active assessment* of project Areas (defined by the larger boundaries in Map 2). *Active assessment* means assessing the extent of the illegal roads in each area, possible viable paths for new approved roads, and identifying sensitive cultural or natural resources that would impact road management decisions.
    - a. A major *active assessment* activity will be to conduct surveys of cultural sites within in Overton Arm Project Area.
  3. Continue *active management* of the sub-areas outlined in *within* the larger Government Wash and Overton Arm (along Government Wash Road and the Stewart's Point area). *Active management* refers to actively closing off illegal roads and/or extending existing/creating new approved roads to manage the area.
  4. Continue tribal consultations.
  5. Continue community outreach, education, and engagement as defined by the COEE Plan.
  6. Continue park ranger general and law enforcement patrols in the two project Areas.
- c. Years 3 and 4
1. Once the EA is complete and the Site-Specific Plans for the two project Areas are approved initiate *active management activities* to address illegal roads and public access to the water and other recreational areas of interest in the two project areas. Conduct NEPA compliance activities on a case-by-case basis as specific projects are defined and prioritized.
  2. Using the new Site-Specific Plans as a guide, continue *active management* (including mapping, cultural and biological surveys, and road management activities) within the project Areas. Obtain NEPA compliance approvals as needed.
    - a. In year 4 identify additional management activities and areas to prioritize across the park (beyond the two active management areas defined in this project) for Phase 2 of the project.
  3. Continue tribal consultations.
  4. Continue community outreach, education, and engagement as defined by the COEE Plan.
  5. Continue park ranger general and law enforcement patrols in the two project Areas, prepare to transition park ranger general and law enforcement patrols for the Areas into the park's operational budget.
- d. Year 5
1. Complete any elements of the project not yet completed.
  2. Continue community and educational outreach.

## 3. Project close-out.

**G. LEVEL OF PROJECT READINESS FOR IMPLEMENTATION**

Is this a shovel-ready project?  Yes  No

Elements of this project are shovel-ready. Maps 3 and 4 show the Project Areas (green boundary) and the Active Management areas (tan polygon). The active management areas have already gone through a previous NEPA EA process and work can begin right away in those areas to manage illegal roads, restore damaged areas, and determine if any new approved roads and/or formal backcountry camping sites will be developed in those regions.

**H. FUTURE OPERATING AND MAINTENANCE**

As part of this process the park will consider long term funding mechanisms such as permitting with fees as part of a funding strategy for managing the backcountry. The Park anticipates incorporating multiple of the new positions being brought in via this project. That includes the new Backcountry Ranger position and two new Patrol Ranger positions. Other new positions (listed as Term in the budget) may be considered being made permanent depending on the success of this project and plans to address illegal roads in other areas of the Park.

**I. PROJECT BUDGET**

Complete the project budget using the provided Excel spreadsheet template and upload as a separate document to the “Submissions” tab in the Nomination Portal. Do not embed the project budget in this document.

Partnership and/or Contributed Funds

Volunteers will help survey, build barriers, hide, and/or revegetate illegal roads in the two Project Areas. Volunteers (18 events x 3 hours = 54 hours x 10 people per event = 540 hours; surveying of illegal roads 1080 hours) Total 1620 hours x \$31/hr = \$50,220

**J. KEY CONTACTS**

Authorized Officer: Mike Gauthier, Superintendent  
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 Phone Number: 760-252-6103

Project Manager: Stefani Dawn, Partnerships and Grants Management Specialist  
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 Phone Number: 702-280-0388



Budget Officer: Scott Briggs, Supervisory Financial Administration and Program Analyst  
 Email: scott\_briggs@nps.gov  
 Phone Number: (702) 293-8687

## K. RANKING CRITERIA

The Ranking Criteria are used to evaluate the nomination against the goals for the Conservation Initiatives category. Nominating entities are not to include either the total point value or the point values by criteria in their responses. Nominations will be reviewed and scored by the Conservation Initiatives subgroup. Explain how the project meets each applicable criterion.

**1. The nomination supports habitat enhancement, cultural resources, environmental health and protection, and/or public health and safety through connectivity and sustainability.** Include as many project subtypes as applicable to your nomination. Points for this criterion will be awarded on how well the nomination addresses the concepts within the factors, and the quality/quantity of results the project provides. The examples identified are not an all-inclusive list.

A. Habitat Enhancement. *The following are examples of project subtypes for habitat enhancement goals, objectives, or actions: Enhances or connects habitats, migratory corridors, or protected areas; Protects endangered species; Proactive steps to prevent listing; Invasive species treatment and/or control (plant and/or animal); Restoration of habitat for sensitive species at the watershed and/or landscape level; Project addresses climate change; Water quality and quantity monitoring; Cave management; Restoration of springs/streams/rivers; Road decommissioning and rehabilitation/restoration; Reintroduction or augmentation of species to restore overall ecosystem; Mitigates impacts of drought.*

Answer: This project protects endangered species by: (a) closing illegal roads crossing into sensitive habitats; (b) closing approved roads that no longer lead to water or areas of recreational value AND encourage illegal offroad activities on or near sensitive habitats; (c) rehabilitation or restoration of damaged areas as resources allow; (d) creating new approved roads that support recreational access and are not located near sensitive habitats that support endangered species.

B. Cultural Resources. *The following are examples of project subtypes for cultural resources goals, objectives, or actions: surveys; National Register (eligible or currently approved); Protection/site stewards; Restoration/stabilization; and tribal involvement in the planning, design and/or implementation.*

Answer: The nomination supports protecting cultural resources through compliance surveying prior to any soil is moved/work is done to close off illegal roads and/or establish new recreational roads. The most extensive and significant cultural work for this project is surveying – using a variety of very specialized non-destructive survey

techniques alongside more traditional techniques.

Surveying the cultural sites will protect the resource by identifying the extent of the site, especially relative to illegal roads that have been/are being established and used in the area and then working with tribes to determine potential management actions such as making official designated roads as needed in the vicinity and keeping recreators from driving over the structures.

Tribal involvement will occur in all aspects of the project, but there will be in-depth involvement in the surveying through tribal interns, invitations to share input into preferred management options and invitations to provide input into outreach and education messaging for the project.

C. Environmental Health and Protection and/or Public Health and Safety. *The following are examples of project subtypes for public health and safety goals, objectives, or action: Illegal litter/dumping cleanup; Information kiosks and signs; Addresses and mitigates adverse impacts to resources caused by the volume of people using the resource; Resolving trespass/encroachment/illegal use of public lands (i.e. homeless encampments, marijuana grow sites)/boundary surveys; Abandoned mine land (AML) with habitat restoration component; Improve the sustainability of the landscape health and ecosystem function; Remove the threat of catastrophic fire loss of the ecosystem; Improve water quality and/or mitigate the threat of soil erosion.*

Answer: This project will close illegal roads and/or create new official roads in heavily visited backcountry areas (per the Project Areas defined boundaries) to allow law enforcement, emergency personnel, and vehicle recovery support to more easily locate distress calls; install signs marking closed roads and discouraging the use and creation of illegal roads and clearly marking open, official roads; implement a permitting system to allow tracking of vehicles and number of people in the backcountry; close illegal roads or create new official roads to enable safe access to recreation and the lake (e.g. close roads that may have a high frequency of vehicle recovery); install signs to inform users of any new permitting requirements; identify locations within the two Project Areas that allow overnight use and areas that are day use only, and install signs clearly identifying those areas.

**2. The nomination promotes sustainability by providing benefits in the near and long term by implementing actions to conserve and sustain healthy and resilient landscapes and providing durability, and relevancy.**

A. Conserves resources to ensure availability to current and/or future generations through management of natural and/or cultural resources for public benefit and sustainable social and economic utilization.

Answer: This project conserves both natural and cultural resources in two Project Areas (Government Wash and Overton Arm) while also considering a variety of elements for public benefit, including reclamation/restoration of damaged land, protection of cultural resources and undamaged land, education about cultural resources and protecting natural and cultural resources, and providing clear/labeled official access to recreational activities that illegal roads sought to access (e.g. the lake shoreline for social activities, fishing, etc.)

B. Will remain relevant and continue to provide a benefit beyond the existence of SNPLMA.

Answer: There are numerous ways the results of the project will provide benefit beyond the existence of SNPLMA. (1) Education and outreach activities will provide benefit for the lifetime of those who participate in the activities. They also have the potential to extend beyond the direct participants through person-to-person sharing. (2) The project will produce Site-Specific Management Plans for the two Project Areas, that will guide the park's management actions for those areas for years to come. The park also plans to incorporate successful actions/components from the project into budgets. (3) The illegal roads that are closed will have barriers that will maximize the long-term closure/blockage (preventing the creation of new illegal roads around the barriers). (4) The new official roads that are identified and created as part of this project will be maintained by the park and be available to visitors for many years to come.

C. Conserves or restores the functionality, resilience, and integrity of biological communities.

Answer: This project conserves both natural resources in two Project Areas (Government Wash and Overton Arm). These areas were identified for Phase 1 of this multi-phase project because of the high concentration of illegal roads and the high priority impacts to natural resources, especially highly sensitive biological communities like desert tortoise habitat and gypsum-soil habitats that support multiple endangered species. The project takes a multi-pronged approach to manage the issue with the intent of long-term sustainability (by creating Site-Specific Management Plans and incorporating successful actions/components from the project into the Park's budgets and management approaches). The project's activities will help to protect sensitive cultural resources from further damage, as well as, create circumstances (through physical barriers, education, and restoration, where possible) to allow the landscapes to heal and protect natural resources that have not yet been damaged but have the potential for damage from the creation of new illegal roads.

D. Conserves or restores cultural resources through prudent management and prevention of damage, injury, decay, waste, or loss.

Answer: This project has a very significant cultural resource conservation and management component that will have long-lasting impacts beyond SNPLMA. Not only

will it help identify and survey cultural resources in the two project areas being impacted by illegal roads (or potentially impacted in the future by illegal roads getting close to the resource), it will enable the park to make management decisions (in consultation with tribes) about whether/how to develop future official roads in the vicinity of these cultural resources, whether/how to educate the public about these resources, and whether/how to close off illegal roads damaging these resources.

**3. The nomination promotes community, connecting humans to engage in the protection and the integrity of biological communities or cultural sites. Encourages people to connect with habitats, migratory corridors, protected areas, etc., and to appreciate and care for the environment.**

A. Encourages people to meaningfully connect with their natural environment and helps them appreciate and be a steward for the environment. Provides information and resources to educate and engage people in understanding their role in protection and maintenance of the natural environment by providing opportunities for them to connect to the natural resources directly or virtually, or provides education of the environment.

Answer: This project has a robust Community Outreach, Engagement, and Education component that includes in-park and out-of-park components and activities that educate people about responsible off-roading, differences in public land designations and uses, as well as how and why to protect natural and cultural resources.

Within the park we will develop a site-specific management program with backcountry rangers that engage with and educate people recreating in the project areas, including those partaking in or interested in participating in off-road activities, co-conducting educational rides within the park with community partners, and volunteer activities to support the project goals.

Outside of the park, NPS will partner with community experts (cultural resource and natural resource experts, as well as community outreach and off-roading experts) to conduct community engagement/input meetings (to inform park planning to close off illegal roads and create new official roads to meet recreational needs), informal and formal education events and outreach, social media and online campaigns, and K-12 outreach activities and materials on the target topics.

B. The nomination clearly defines and includes a stewardship component (federal or non-federal) to broaden support and reduce long-term costs by minimizing the human impact on the environment through an education plan with clear curricula and achievable goals and objectives.

Answer: The stewardship components of this project focus on the stewardship of both cultural and natural resources in the park. The project will develop formal and informal educational events, as well as formal and informal materials for distribution to schools and the public at targeted outreach events, as well as shared with visitors of the park. Stewardship will also be advanced through volunteer events to close off illegal roads, restore damaged areas, survey illegal roads, and where possible, and install signage and educational kiosks.

- C. Preserves the past (cultural or historic sites) for present or future generations.

Answer: This project will preserve cultural and historic sites by identifying and surveying illegal roads that have been created since the last surveys conducted by the park, determining their proximity to cultural resources, and developing a management plan for two targets areas (Overton Arm and Government Wash). There is a very substantial cultural resource component of the project. As part of the site management plan process, the park will use the data collected as well as engage with tribes to determine next-step management decisions to preserve this large cultural site.

**4. The nomination enhances partnerships to promote cooperation, collaboration, and stewardship. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project.**

- A. The nomination promotes partnerships to promote collaboration which addresses and meets the needs of more than one agency (federal or state).

Answer: Although the project takes place within the boundaries of NPS land (Lake Mead NRA), the park is adjacent to BLM land, through which many of the off-road vehicles enter. The park has met with BLM managers about this project and will partner and consult with them regularly as the project progresses. The BLM has shared the following documents with NPS and has provided a letter of support. These documents outline BLM plans for managing illegal roads on the lands relevant to this project:

- Las Vegas Field Office Resource Management Plan 1998 (includes lands BLM manages in Clark County)
- Travel Management Plan/Route Designations (2008)
- Muddy Mountains Travel Management Plan (Ongoing Process), including scoping meeting materials, recordings of public meeting, and map data.

- B. The nomination involves non-Federal, public partners, citizen groups or organizations in the development or accomplishment of resource management goals and other activities to prevent waste, damage, or neglect.

Answer: The nomination has the support of numerous non-Federal organizations and individuals (see letters of support) who are invested in cultural and natural resource protection, outdoor recreation (including off-roading and backcountry activities that require off-roading to access), and community outreach and education about recreating responsibly and protecting cultural and natural resources in southern Nevada. These partners, among others, will provide project guidance and support in a spectrum of activities and roles relative to their specialization and audience.

C. Project has support for the planning, design, and/or implementation from non-profit, local, or state government, academia, tribal, or youth initiatives.

Answer: The NPS works with 18 different tribes who have ancestral connections with the land and water in the Lake Mead NRA. Although tribes will be engaged through project activities that require compliance, the largest tribal engagement will occur through the surveying activities and subsequent Overton Arm area site management decision-making. Tribal youth, along with other youth, will be hired to support the surveying and outreach and education activities. The surveying will be done in partnership with NPS staff and academic/scientific professionals well-versed in advanced non-disruptive cultural resource survey techniques. Academic professionals, in partnership with community experts, will also help create and/or review specialized educational materials for the project (see letters of support).

D. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project, (i.e., volunteer labor valuation to be computed at the rate used by the Department of the Interior, non-federal employees' actual hourly rate plus the value of any fringe benefits received, actual costs for material, equipment, and supplies. ***Overhead costs may not be included in determining in-kind contributions.***

Answer: In-kind contributions include volunteers to help build barriers to block illegal roads, visually block and/or revegetate illegal roads, and collect survey data of illegal roads (18 events x 3 hours = 54 hours x 10 people per event = 540 hours; surveying of illegal roads 1080 hours) Total 1620 hours x \$31 = \$50,220

## L. ORDERS AND PRIORITIES

Respond to the Executive Orders, Secretarial Orders, Department of the Interior Priorities, and USDA Forest Service Priorities as they apply to the purpose of the nomination.

A. Executive Orders (EO):

- ***EO No. 13855: Promoting Active Management of America's Forests, Range Lands to Improve Conditions and Reduce Wildfire Risk***

Offroad vehicles travelling on illegal roads are a wildfire risk. Illegal roads typically have dry plant matter that can come in contact with a hot vehicle and ignite a fire. In addition, illegal road use can encourage visitors to camp or recreate (including partaking in activities like cooking or smoking) in areas that are not properly cleared for or designated for that type of use, all of which increase fire risk. Stopping illegal road creation and use, creating new official roads to meet recreational needs, and managing backcountry camping through designated areas (potentially with permitting), all help reduce wildland fire risk.

- ***EO No. 14004: Ensuring the Future is Made in All of America by All of America's Workers***

Supplies, materials, and contracting for the illegal roads and building of any new roads will meet this order.

- ***EO No. 14063: Use of Project Labor Agreements for Federal Construction Projects (applicable to projects estimated at \$35 million or more)***

Not applicable.

- ***EO No. 14072: Strengthening the Nation's Forests, Communities, and Local Economies***

Subawards for this project will go to local non-profit, local academic institutions, and local businesses.

- ***EO No. 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All***

Not applicable.

## B. Secretarial Orders

- ***SO No. 3347: Conservation Stewardship and Outdoor Recreation.***

This project meets the secretarial order for conservation stewardship and outdoor recreation in multiple ways:

- It provides multiple community outreach, engagement, and education activities related to preventing the use and creation of illegal roads to protect cultural and natural resources.

- It connects with the community to identify their goals for backcountry recreation that require “off-road” use in the two project areas (Government Wash and Overton Arm) and determining where the park can create new official backcountry roads to help meet those community recreational needs.
  - It allows the park to assess and develop a plan for where backcountry camping and other backcountry recreational opportunities can occur in the two project areas to meet community recreational needs while protecting natural and cultural resources.
  - The project will provide volunteer/stewardship activities to help close/block off illegal roads, as well as restore land, where possible.
- ***SO No. 3356: Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories.***

Answer: The Site-Specific Managements Plans that will be produced as part of the project will consider hunting, fishing, and wildlife conservation opportunities in the Overton Arm and Government Wash. The plans will be part of an Environmental Assessment process that includes input from all stakeholders.

- ***SO No. 3362: Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors.***

Blocking off and removing illegal roads, as well as educating people about not creating illegal roads, will help protect and restore habitat valuable as migration corridors.

- ***SO No. 3366: Increasing Recreational Opportunities on Lands and Waters Managed by the U.S. Department of the Interior***

Answer: One of the reasons many illegal roads are being established in Lake Mead NRA is because of the public’s desire and attempts to reach the lake after the water levels have dropped. Because of the terrain, some areas are more accessible than others, which spurs more illegal roads in an attempt to find a path that “goes.” This project will enable the park to collect the data and information it needs to determine the best paths to access the new lake shoreline (paths that avoid culturally and biologically sensitive areas, as well as things like deep sand that can require rescue) and the best locations and processes to use for backcountry camping, access, and recreation options in the two project areas. The project will also connect with the off-roading community to learn more about their recreational goals and needs, which will be considered in the site management plans created as part of this project.



- ***SO No. 3370: Conservation Stewardship and Increasing Public Access to Urban National Wildlife Refuges.***

*Not applicable*

- ***SO No. 3372: Reducing Wildfire Risks on Department of the Interior Land Through Active Management.***

Offroad vehicles travelling on illegal roads are a wildfire risk. Illegal roads typically have dry plant matter that can come in contact with a hot vehicle and ignite a fire. In addition, illegal road use can encourage visitors to camp or recreate (including partaking in activities like cooking or smoking) in areas that are not properly cleared for or designated for that type of use, all of which increase fire risk. The active management components of this project that will reduce wildfire risk include: blocking off access to illegal roads; identifying and, where possible, creating new official backcountry road access, where brush is cleared; identifying, and, where possible, creating official backcountry camping designations that have reduced wildfire risk and management activities; and educating the public about wildfire risk from off-roading activities.

- ***SO No. 3373: Evaluating Public Access in Bureau of Land Management Public Land Disposal and Exchanges (focus is on Sec. 4.b.(3) Potential increased public recreational access to existing public lands resulting from the proposed land acquired through an exchange (acquisition).***

*Not applicable*

- ***SO No. 3376: Increasing Recreational Opportunities through the use of Electric Bikes.***

*Not directly applicable – the use of electric bikes on back country roads that have been identified and potentially created as part of this project, could be a recreational opportunity.*

C. Department of the Interior Priorities:

- ***Identifying steps to accelerate responsible development of renewable energy on public lands and waters. We are investing in climate research and environmental innovation to incentivize the rapid deployment of clean energy solutions, while reviewing existing programs to restore balance on America's public lands and waters to benefit current and future generations.***

*Not applicable.*

- ***Strengthening the government-to-government relationship with sovereign Tribal Nations.*** *We understand that tribal sovereignty and self-governance, as well as honoring the federal trust responsibility to Tribal Nations, must be the cornerstones of federal Indian policy.*

Answer: The NPS works with 18 different tribes who have ancestral connections with the land and water in the Lake Mead NRA. Although the tribes will be engaged through project activities that require compliance, the largest tribal engagement will occur through the survey activities. Tribal youth will be hired to support the surveying and outreach and education activities for the project. Once the survey data are collected, including the illegal and official road data in the vicinity, tribal nations will take part in/ provide input into the next-step decision-making to manage this area of the park.

- ***Making investments to support the Administration's goal of creating millions of family-supporting and union jobs.*** *This includes establishing a new Climate Conservation Corps Initiative to put a new generation of Americans to work conserving and restoring public lands and waters, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate.*

Answer: This project has multiple conservation components that will require both volunteers and youth hiring/conservation corps hiring including activities like closing off illegal road access through building fences and blockades, creating other natural physical and visual barriers to hide the road from view, conducting surveys of illegal roads and natural and cultural resources for compliance and data for decision-making, and restoring natural habitats, when possible.

- ***Working to conserve at least 30% each of our lands and waters by the year 2030.*** *We will work to protect biodiversity, slow extinction rates, and help leverage natural climate solutions by conserving 30% of America's lands and waters by 2030. This relies on support for local, state, private, and tribally led conservation and restoration efforts that are underway across America.*

With over 200 miles of illegal roads creating a web across the two project areas targeted in this nomination, this project will enable NPS to assess the extent of damage, especially relative to sensitive natural (and cultural) resource areas. By identifying recreation goals and the best paths to reach the new lake shoreline, the park can meet recreational needs while closing down access to illegal roads and allowing the damaged land to be restored (either naturally and/or with volunteer support). These actions will contribute to the goal of land conservation.

- ***Centering equity and environmental justice.*** *The impacts of the multiple crises in the United States are not evenly distributed in our society. Communities of color, low-income families, and rural and indigenous communities have long suffered disproportionate and cumulative harm from air pollution, water pollution, and toxic sites. At every step of the way, Interior will engage diverse stakeholders across the country, as well as conduct formal consultation with Tribes in recognition of the U.S. government's trust responsibilities.*

Not applicable.

#### D. USDA Forest Service Priorities:

- ***Controlling the COVID-19 pandemic***

Click or tap here to enter text.

- ***Providing economic relief***

Click or tap here to enter text.

- ***Tackling climate change***

Click or tap here to enter text.

- ***Advancing racial equity***

Click or tap here to enter text.

- ***Improving our workforce and work environment***

Click or tap here to enter text.

#### **M. MAPS**

Maximum of six maps, labeled with a description. Insert here and upload maps as JPEG in the Nomination Portal.

#### **N. PHOTOS**

Maximum of six photos, up to 20mg each or less. Provide descriptions. Insert here and upload photos as JPEG in the Nomination Portal.

## SNPLMA ROUND 19 NOMINATION Conservation Initiatives

### Performance Measures

**NPS, Lake Mead National Recreation Area  
Managing Illegal Roads to Protect Recreation, Visitors, and Resources**

<b>SNPLMA STRATEGIC PLAN GOAL 1: Sustain the Quality of the Outdoor Environment by Conserving, Preserving, and Restoring Natural and Cultural Resources</b>		
<b>Performance Measures for Habitat Enhancement</b>	<b>Definition of Performance Measure</b>	<b>Quantity</b>
H1 - Acres of Land Identified for Withdrawal from Multiple Use	Report the number of acres of land identified for withdrawal or withdrawn from multiple use management (e.g., as the result of a cultural or biological survey, etc.). Report the number of acres of specially designated areas such as a wilderness area, national recreation or conservation area that are automatically withdrawn from multiple use or where use is limited as a consequence of acquisition using SNPLMA funds. Land acquired in an ACEC is not automatically withdrawn from multiple use and should be reported under L1 only. Report to the nearest whole acre.	0
H2 - Miles of Riparian Stream or Shoreline Habitat Treated, Enhanced, or Restored	Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the miles have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as those should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as those should be reported under either the F1 or F2 performance measures. Report to the nearest whole mile.	0
H3 - Miles of Riparian Stream or Shoreline Habitat Surveyed, Inventoried, or Monitored	Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat surveyed, inventoried, or monitored. Report to the nearest whole mile.	2
H4 - Acres of Upland Habitat Treated, Enhanced, or Restored	Report the number of acres of upland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project.	3000

	<p>Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	
H5 - Acres of Upland Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of upland vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole acre.</p>	50,000
H6 - Acres of Wetland / Riparian Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of wetland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	0
H7 - Acres of Wetland / Riparian Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of wetland vegetation and/or wildlife habitats inventoried or monitored.</p> <p>Report to the nearest whole acre.</p>	1200
H8 - Number of Water Developments Constructed or Improved for Wildlife	<p>Report the number of water developments for use by wildlife constructed or improved/repared within all habitat types. Existing projects may be counted under this performance measure if functional improvements/repairs are made as defined in the project nomination.</p> <p>Report each development constructed or improved as one unit (e.g., one project may have three water developments).</p>	0
H9 - Acres of Invasive Plant Species Treated or Restored	<p>Report the number of acres of weed infestation treated with chemical, mechanical, physical, or biological control agents for the purpose of weed control. Include acres treated by fire when fire is used as a physical control agent for weed control rather than as a hazardous fuels treatment. Each acre treated is counted only once during the life of the project, no matter how many re-treatments occurred during the project.</p> <p>Report to the nearest whole acre.</p>	0
H10 - Acres of Invasive Plant Species Surveyed, Inventoried, or Monitored	<p>Report the number of acres of weed infestation inventoried or monitored. Include monitoring of weed treatment projects reported under performance measure H9.</p> <p>Report to the nearest whole acre.</p>	0

H12 - Acres of Herd Management Areas Surveyed, Inventoried, or Monitored	Report the number of acres of wild horse and burro herd management areas or herd areas surveyed, inventoried, or monitored. Report to the nearest whole acre.	0
H13 - Number of Conservation or Protection Actions Taken within a Herd Management Area	Report the number of actions taken within a wild horse and burro herd management area to conserve or protect the area for the benefit of the herd (e.g., fences, water developments, vegetative treatments). Report each action as one unit.	0
H14 - Number of Threatened and Endangered Species Recovery Actions Implemented	Report the number of individual recovery actions performed for threatened or endangered species recovery as identified in recovery plans, conservation management plans, or land use planning documents. Include surveys, inventories, and monitoring as recovery actions. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same recovery action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	4
H15- Number of Conservation Actions Implemented for Non-Listed Species	Report the number of individual conservation actions for species not listed under the Endangered Species Act. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same conservation action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	4
H16 - Miles of Roads or Trails Decommissioned and/or Rehabilitated	Report the number of miles of roads and/or trails decommissioned and/or rehabilitated within all habitats (urban, upland, riparian, stream, trails in caves, etc.). Closure may include designation, signing, blockage by physical means, obliteration, etc. Report to the nearest whole mile.	50
H17 – Miles of Roads or Trails Surveyed, Inventoried, or Monitored	Report the number of miles of roads and/or trails inventoried or monitored. Report to the nearest whole mile or linear foot. Report to the nearest whole mile.	200

Performance Measures for Wildland Fire Management	Definition of Performance Measure	Quantity
F1 - Acres of Hazardous Fuels Treated – Non-Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency outside the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	0
F2 - Acres of Hazardous Fuels Treated – Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency within the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	0

Performance Measures for Cultural / Paleontological Resources	Definition of Performance Measures	Quantity
C1 - Number of Cultural or Historic Sites or Structures Stabilized or Protected	Report the number (one unit for each site or each structure) where work is completed to protect, stabilize, restore, excavate, and/or manage cultural features. For sites receiving multiple treatments, count each site only once, but if multiple structures are on a site, count each structure separately. For example, an archeological dig site would be counted as one although multiple excavations may take place on the site, whereas a site having remnants of three separate dwellings would be counted as three. Report installation of interpretive signs and structures (e.g., kiosk displays) under O6. Report administrative actions such as mineral withdrawals, closures, or special designations under H1. Report each site or structure as one unit.	1
C2 - Number of Cultural or Paleontological Artifacts Protected	Report the number of cultural and/or paleontological artifacts protected, stabilized, or catalogued. Report one unit for each repatriation or transfer of custody of Native American human remains, funerary objects, sacred objects, and/or objects of cultural patrimony (cultural items) held in collections, pursuant to Title 43 CFR Part 10.10.; each instance in which all requirements of Title 43 CFR Part 10.10 have been met but where actual repatriation has not been completed because of decisions made by lineal descendants or Indian tribes or lack of a valid claim; and reburial of repatriated cultural items on BLM public lands. Report the number of accessions cataloged, inventoried, rehoused and/or otherwise	0

	<p>upgraded. Materials from several sites or localities that are accessioned and cataloged under a single accession number should be considered one unit. An accession for which any one or more of the tasks of cataloging, inventorying, or upgrading has been completed should be reported as one unit.</p> <p>Report each artifact as one unit.</p>	
C3 - Acres of Cultural / Paleontological Resources Surveyed, Inventoried or Monitored	<p>Report the number of acres of land surveyed, inventoried, or monitored for cultural and/or paleontological resources. Include acres surveyed using Class I study of existing information inventory, Class II probabilistic field survey, or Class III intensive field survey and resultant inventory as required by Section 14 of the Archaeological Resources Protection Act (ARPA) or Section 110 of the National Historic Preservation Act (NHPA).</p> <p>Report to the nearest whole acre.</p>	6280

<b>SNPLMA STRATEGIC PLAN: Other Performance Measures that Also Support the Three Values for SNPLMA Implementation of Sustainability, Connectivity, and Community</b>		
<b>Other Performance Measures</b>	<b>Definition of Performance Measures</b>	<b>Quantity</b>
O1 - Number of Hazardous Sites Remediated	<p>Report the number of hazardous sites where remediation actions are completed. Actions to be included are: removal of safety hazards, clean-up operations, restoration actions, and water quality remediation actions. Do not report temporary remediation measures.</p> <p>Report each site as one unit. When applicable, also report total weight of trash removed during clean-up operations.</p>	0
O3 - Number of Law Enforcement Patrols, Incident Reports, Investigations	<p>Report the number of law enforcement patrol actions, incident reports taken, and investigations conducted.</p> <p>Report each item as one unit.</p>	1
O4 - Number of Scientific / Technical Reports Produced	<p>Report the number of scientific technical reports produced.</p> <p>Report each report as one unit.</p>	1
O5 - Number of Outreach Contacts Made	<p>Report the number of education and outreach contacts made through interpretation and environmental education, such as number of teachers trained, number of participants in workshops, etc.</p> <p>Report each participant as one unit.</p>	1600
O6 - Number of New Interpretive or Education Publications/Signs/ Kiosks/Displays/etc. Produced	<p>Report the number of new interpretive or education publications produced, signs produced and installed, public informational websites or other electronic media presentations designed and implemented, and</p>	6



	informational or interpretive kiosk displays produced and installed. Report each item produced as one unit.	
O7 - Number of Interpretive or Education Presentations Given and/or Community Events Participated in or hosted	Report the number of interpretive or educational presentations given. Report each presentation as one unit.	90
O9 – Number of GIS Databases Generated and/or Map Layers Produced	Report the number of GIS databases created and/or the number of map layers produced to identify the location of natural resources within the environment and provide mapping for use in educational programs. Report each database or map layer as one unit.	2
O10 – Number of Volunteers Used	Report the number of volunteers used in educational or interpretive programs and for surveying, monitoring, or restoration activities. Report each volunteer as one unit.	100
O11 – Number of Databases, Reports, and Other Electronic Means of Documenting Activities	Report the number of new databases, electronic reporting tools, mathematical/statistical models, websites, or reports developed and implemented to document project and/or program work. Report each electronic document or method developed as one unit.	2
O12 – Number of Management Plans/Handbooks/Manuals/Guides for Activity on Public Lands Completed (formerly under H11, F3, C4, and R1)	Report the number of new or revised ecosystem restoration, hazardous fuels reduction, recreation, cultural, resource management, or other activity plans when the decision document for the plan is signed. Revisions include modification of a significant portion of the decisions in the activity plan. Do not report minor amendments or changes in these plans. Report each plan as one unit.	2

### **Glossary**

**Accession** – One or more objects and/or specimens acquired in the same manner from one source at one time for the museum property collection. Accessioning is the process of formally accepting and establishing permanent legal title (ownership) and/or custody for an object or specimen or group of objects and/or specimens. An accession can consist of materials and associated archives from a single site or fossil locality, or materials from several sites or fossil localities.

**Biological Treatments** – Treatment of vegetation using domestic animals, insects, etc.

**Chemical Treatments** – Treatment of vegetation with herbicides, etc.

**Inventory** – Collection and analysis of baseline information; counting number of a given species, cultural feature, etc.

**Mechanical Treatments** – Treatments using hand or motorized tools for mowing, chaining, ripping, thinning, seeding, etc.

**Monitoring** – Establishment of current status and/or trends in environmental variables

**Riparian Habitat** – Riparian habitat includes the interface between upland habitat and a river, stream, or lake, regardless of whether it is intermittent or perennial. Riparian habitats are characterized by vegetation adapted to growing in water or saturated soils. Includes riparian woodlands, forests, buffer zones, or strips.

**Survey** – Observing an area to determine if a species or resource exists after which an inventory may or may not be performed.

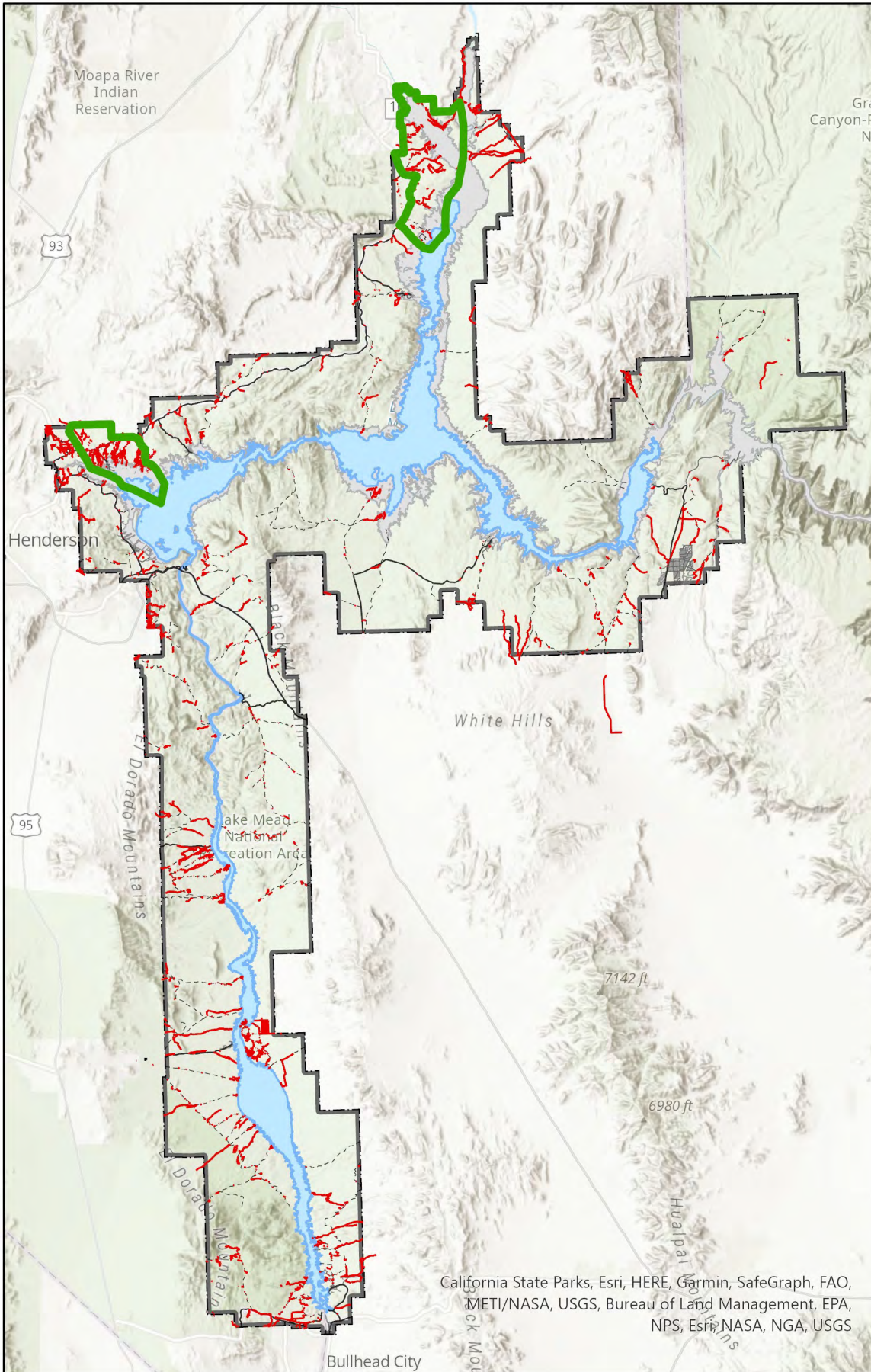
**Upland Habitat** – Upland habitats include Mojave Desert, grassland, shrub lands, pinyon juniper forests, and woodland sites.

**Wetland Habitat** – Wetlands are saturated areas, either permanently or seasonally, with characteristic vegetation adapted to its unique soil conditions.

# Illegal Roads Across the Park (Large Overview)

SNPLMA - Round 20 Proposal - Managing Illegal Roads to  
Protect Recreation, Safety, and Resources: Phase 1

Lake Mead National Recreation Area  
Arizona/Nevada  
National Park Service  
U.S. Department of the Interior



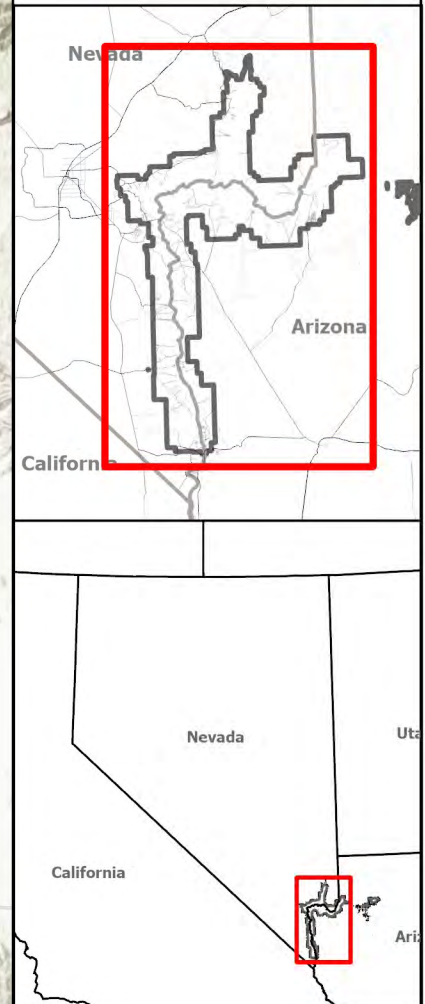
- Disturbance Line
- ▭ Project Area
- ▭ Lake Mohave and Mead (~1050')
- ▭ Lake Mead (Full pool)
- ▭ Lake Mead NRA Boundary



0 5 10 Miles

0 20 Kilometers

10/31/2023  
By LAKE, GIS Office

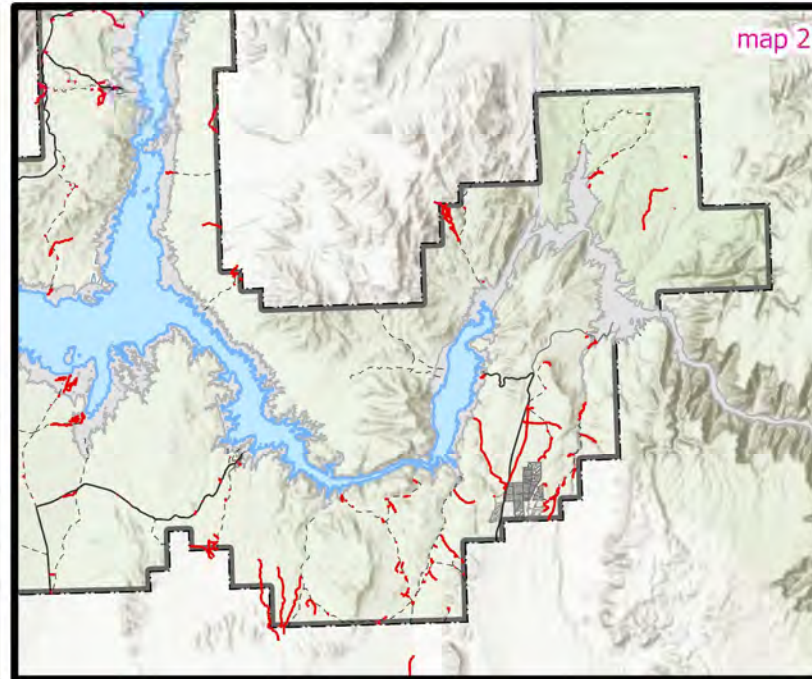
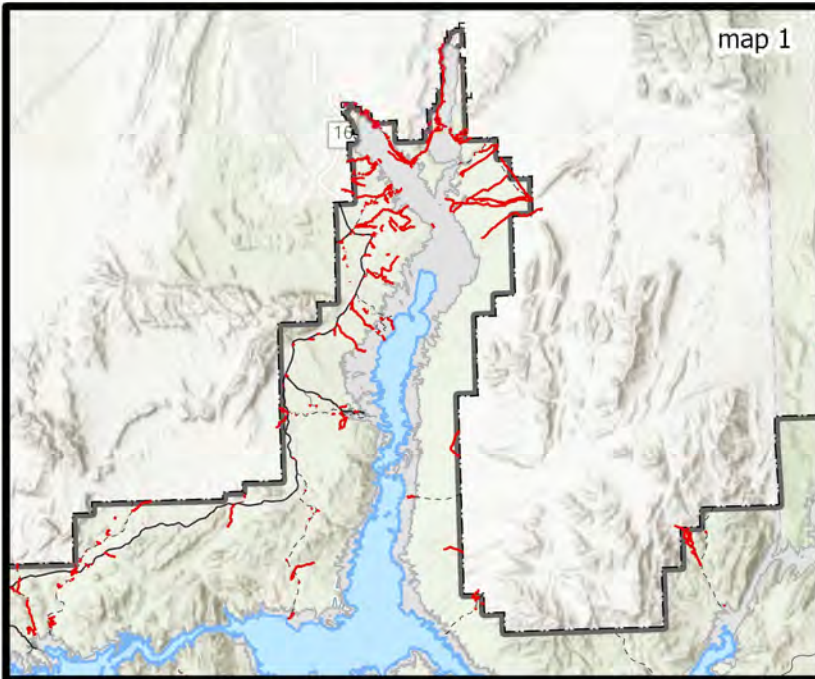


California State Parks, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, Esri, NASA, NGA, USGS

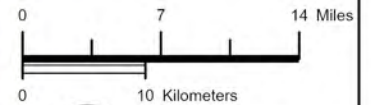
# Illegal Roads Across the Park (Close Up)

SNPLMA - Round 20 Proposal - Managing Illegal Roads to Protect Recreation, Safety, and Resources: Phase 1

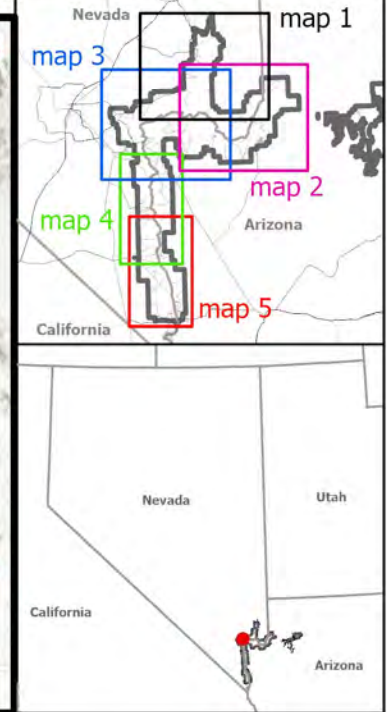
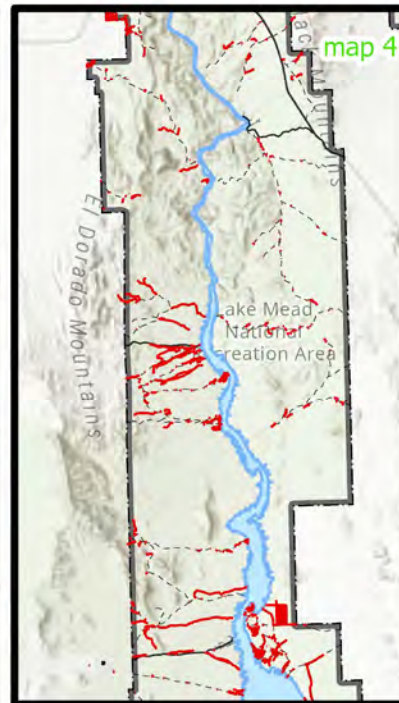
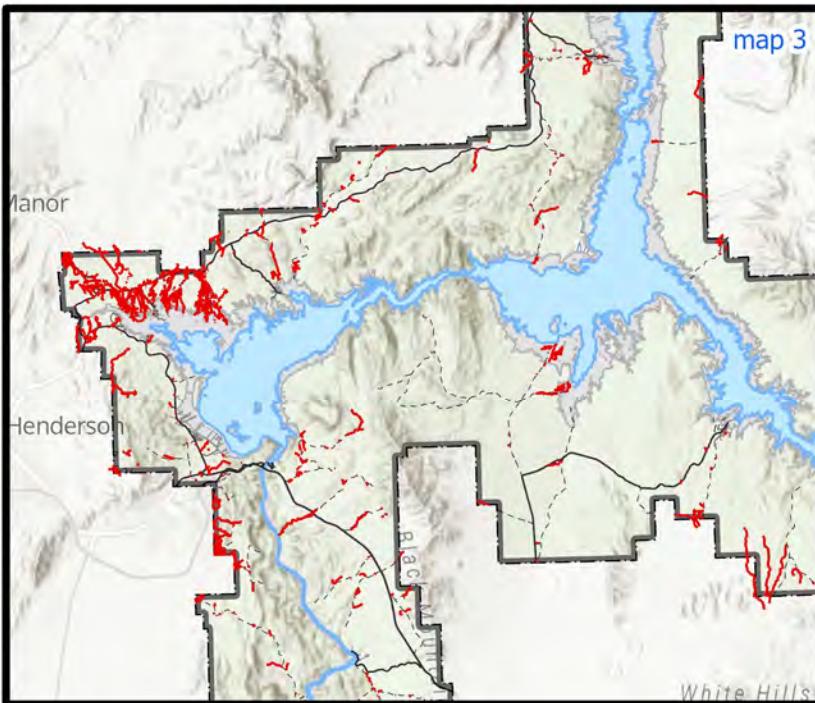
Lake Mead National Recreation Area  
Arizona/Nevada  
National Park Service  
U.S. Department of the Interior



- Disturbance Line
- Lake Mohave and Mead (~1050')
- Lake Mead (Full pool)
- Highway
- Major Road
- Local Road
- - - Approved Backcountry Road
- Other Unpaved Road
- ▭ Lake Mead NRA Boundary



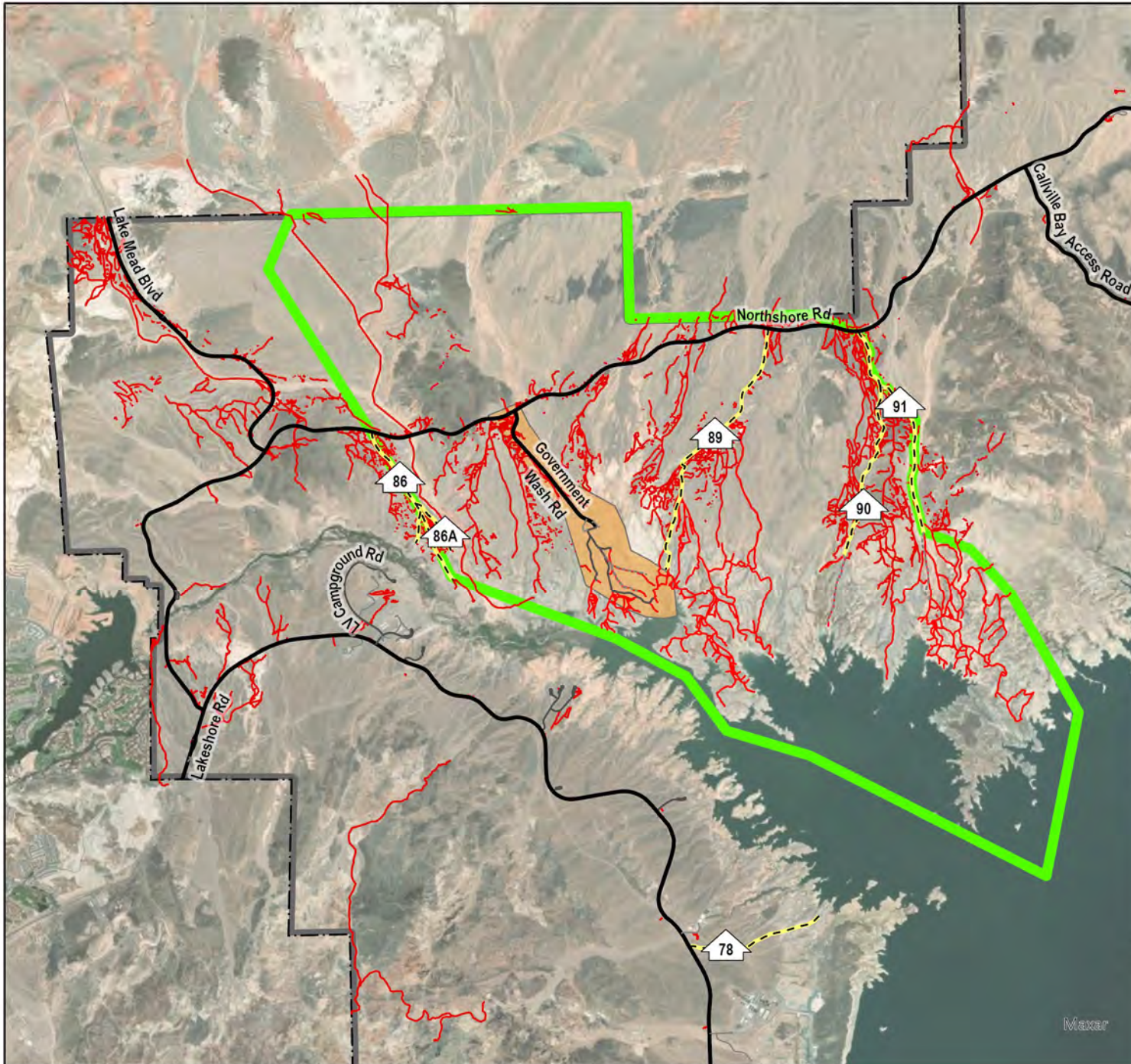
10/31/2023  
By LAKE, GIS Office



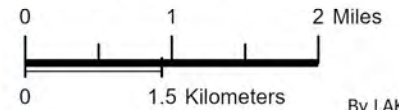
# Illegal Roads at Government Wash Project and Active Mgmt Areas

SNPLMA - Round 20 Proposal - Managing Illegal Roads to Protect Recreation, Safety, and Resources: Phase 1

Lake Mead National Recreation Area  
Arizona/Nevada  
National Park Service  
U.S. Department of the Interior



- Project Area
- Active Mgmt Area
- Disturbance\_Line
- Lake Mead NRA Boundary
- Highway
- Major Road
- Local Road
- Approved Backcountry Road
- Other Unpaved Road



10/31/2023  
By LAKE, GIS Office

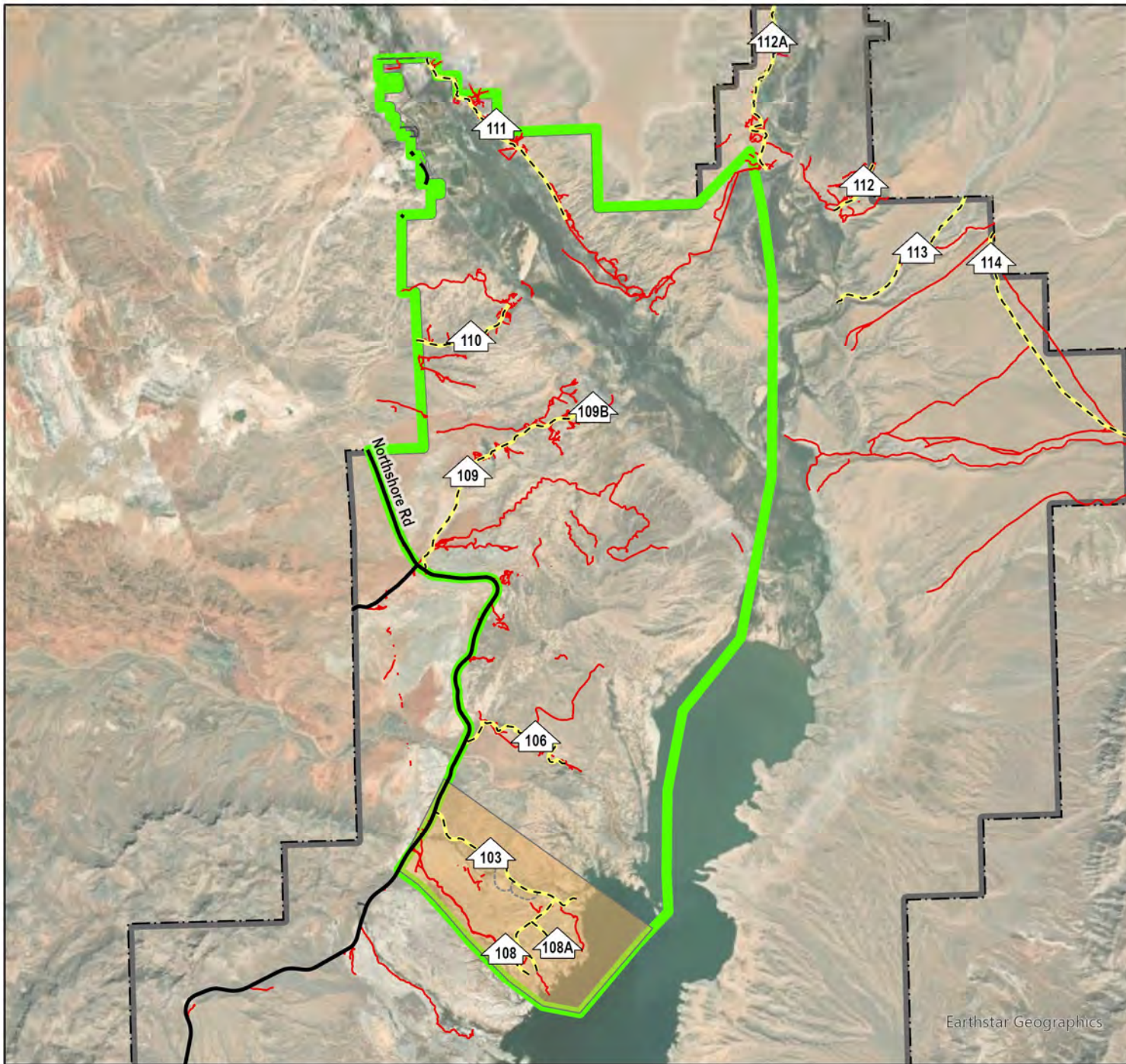


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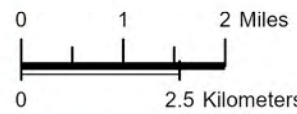
# Illegal Roads at Overton Arm Project and Active Mgmt Areas

SNPLMA - Round 20 Proposal - Managing Illegal Roads to Protect Recreation, Safety, and Resources: Phase 1

Lake Mead National Recreation Area  
Arizona/Nevada  
National Park Service  
U.S. Department of the Interior



- Project Area
- Active Mgmt Area
- Disturbance\_Line
- Lake Mead NRA Boundary
- Highway
- Major Road
- Local Road
- Approved Backcountry Road
- Other Unpaved Road



10/31/2023  
By LAKE, GIS Office

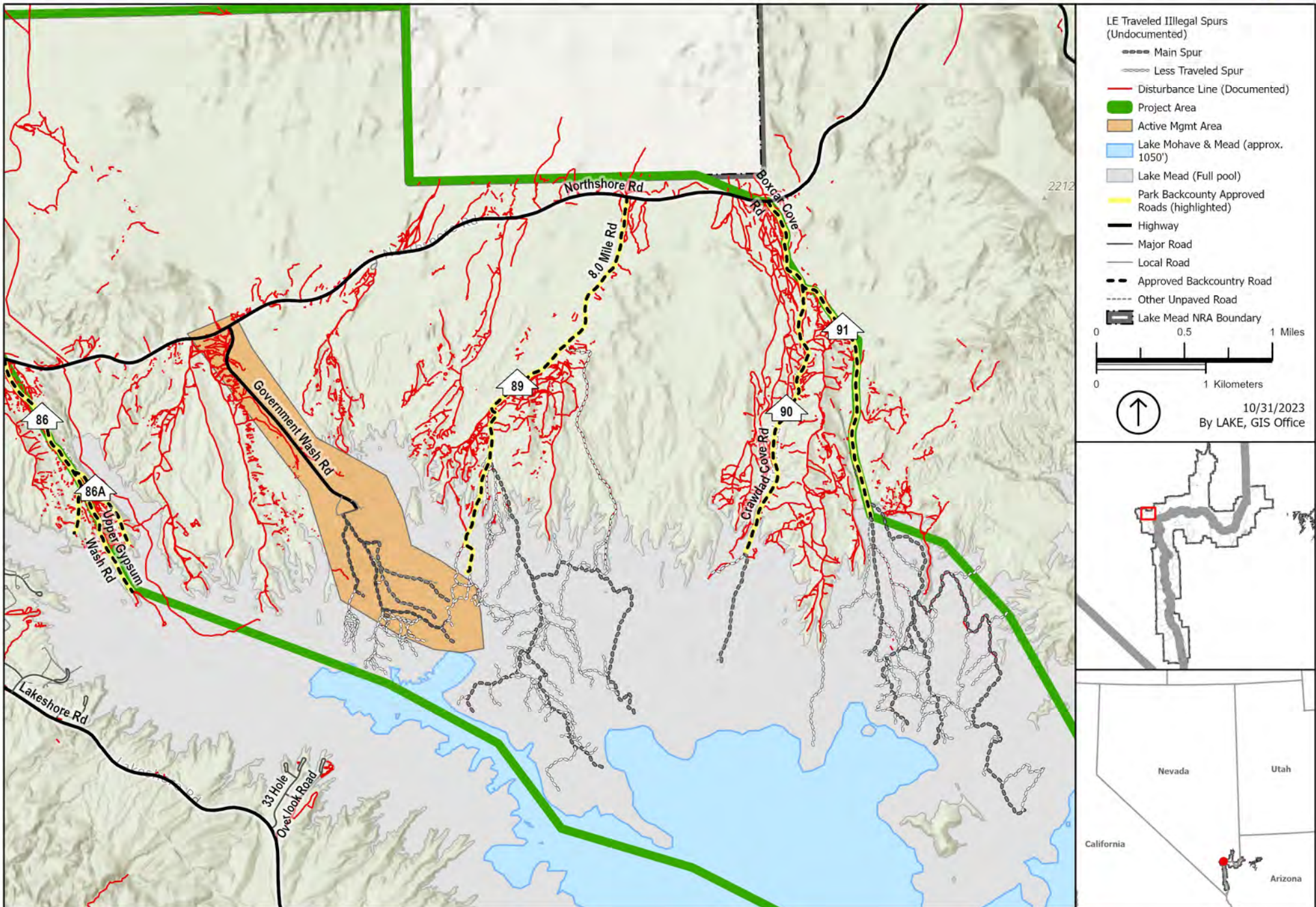


Earthstar Geographics

# Illegal Roads - Government Wash Area - Documented vs LE Traveled

SNPLMA - Round 20 Proposal - Managing Illegal Roads to Protect Recreation, Safety, and Resources: Phase 1

Lake Mead National Recreation Area  
Arizona/Nevada  
National Park Service  
U.S. Department of the Interior









# United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
Southern Nevada District Office  
Las Vegas Field Office  
4701 N. Torrey Pines Drive  
Las Vegas, Nevada 89130  
<http://www.blm.gov/nevada>

In Reply Refer To:  
6840 (NVS01000)

Stefani Dawn  
Partnership and Grants / Project Manager  
National Park Service  
Lake Mead National Recreation Area

Dear Ms. Dawn:

I am pleased to provide this letter on behalf of the Bureau of Land Management (BLM) Las Vegas Field Office to express our support for the National Park Service (NPS) Round 20 nomination of the Managing Illegal Roads to Protect Recreation, Safety, and Resources: Phase 1 project under the Conservation Initiatives category of the Southern Nevada Public Land Management Act (SNPLMA). The NPS has met and discussed this project with the BLM Las Vegas Field Office, and the BLM has shared our management plans and route designations for adjacent BLM managed lands.

Should this project receive funding, we understand that the NPS plans to work directly with BLM to achieve both agencies' goals to manage for appropriate motorized recreation, in particular managing those illegal roads and routes that cross BLM and NPS managed lands. This project will also complement the ongoing education efforts, outreach, and engagement that BLM conducts in surrounding communities regarding responsible motorized recreation opportunities.

Please feel free to contact me at 702-515-5054, or [sleslie@blm.gov](mailto:sleslie@blm.gov), should you have questions regarding the BLM's support for this project.

Sincerely,

Stephen Leslie  
Assistant Field Manager / Division of Resources  
Las Vegas Field Office

INTERIOR REGION 8 • LOWER COLORADO BASIN

ARIZONA, CALIFORNIA\*, NEVADA\*

\* PARTIAL



August 28, 2023

Dr. Stefani Dawn  
Lake Mead National Recreation Area  
Re: SNPLMA Grant

Dear Dr. Dawn,

Get Outdoors Nevada (GON) is a 501c3 nonprofit organization whose mission is to connect people of all backgrounds and ages to the outdoors. We do this by providing opportunities to experience, learn about, and care for our shared natural and urban outdoor spaces. For nearly 25 years, GON has prioritized community engagement in all that we do, whether it be teaching youth about the desert around us, sharing stewardship opportunities at local parks and trails, or meeting with community members at various events throughout Southern Nevada. We are committed to preserving Nevada's public lands, urban trails, and community parks.

It is because of our commitment to Nevada's public lands that we are writing in support of the SNPLMA proposal to address motorized vehicle threats to cultural and natural resources at Lake Mead National Recreation Area (LMNRA). We are honored to have been consulted in the preparation of this proposal and we look forward to opportunities to further support this work.

We recognize and share the passion that motorized vehicle users have for exploring and enjoying the outdoors. We also understand that many outdoor enthusiasts are not aware of the negative impact their actions may have on the resources in areas where they recreate and operate their vehicles. We believe that by engaging in an authentic and sincere process to gain a better understanding of the needs, attitudes, beliefs and behaviors of the off-roading community, we can address both the underlying reasons and the impacts of these activities.

At GON, we know that partnership is key to meeting our mission. We are proud of our long track record in partnering with a wide-range of local, state and federal public land management agencies. In addition, we work closely with Clark County School District and other education partners, as well as with an array of non-profit and community-serving organizations. These diverse partnerships allow us, annually, to reach more than 10,000 students and teachers through our formal and informal education programs, and more than 5,000 youth and adult volunteers through our stewardship programs.

As a trusted leader in outdoor recreation and community engagement, GON is committed to the success of the proposed project. We look forward to supporting the National Park Service and other partners in implementing this plan to protect and preserve our natural and cultural resources, while providing recreational opportunities for visitors within the Lake Mead National Recreation Area.

Sincerely,

A handwritten signature in black ink that reads 'Rachel Bergren'. The signature is written in a cursive, flowing style.

Rachel Bergren  
Executive Director



Impactful science, inspiring solutions.

September 7, 2023

To Whom It May Concern,

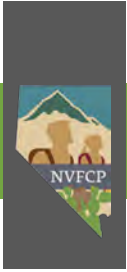
*The Managing Illegal Roads to Protect Public Recreation, Safety, Cultural Resources and Endangered Species: Phase 1 (Government Wash and Overton Arm)* project proposed by the National Park Service, Lake Mead National Recreation Area is an important opportunity to conserve our Nation's significant cultural resources. Prior to settlement by Euro-American populations, the Colorado River system, including the Virgin and Muddy Rivers in the northern part of Lake Mead, were important focal points for American Indian populations who built flourishing settlements, practiced agriculture, and created artwork in a place that is now listed on the National Register of Historic Places as Pueblo Grande de Nevada. These people and the remnants of their society preserved in the archaeological record are the westernmost examples of Ancestral Puebloan culture in North America. Before and after their time, the area likely was of major importance to American Indian populations of different cultural affiliations. Many of these places were lost beneath the waters of Lake Mead after it was filled in the late 1930s. However, as the shores of Lake Mead recede, these important places are re-emerging and are now subject to additional human-caused impacts leading to their loss and destruction. Therefore, this project is a major step towards protecting these resources for the public benefit, and I am pleased to provide this letter of support.

The Desert Research Institute (DRI) is the nonprofit research campus of the Nevada System of Higher Education. From our home in Nevada, approximately 450 research faculty and support staff conduct \$40 million in environmental research each year, improving people's lives throughout Nevada and the world. DRI's contributions to science and society stem from a unique culture that blends the intellectual rigor of academia and the creative, pragmatic, focus of the private sector. DRI's archaeological research program is uniquely situated to tackle the ongoing challenges related to Lake Mead archaeology and has a long track record of conducting advanced and high-quality archaeological research across the Far West for a diverse range of sponsors including the Department of Energy, Department of Defense, Department of the Interior, and the National Park Service. DRI's faculty includes several full-time archaeologists who specialize in applied research to meet agency needs and maintain laboratories that support this research including an archaeology lab, a curation facility, a geophysics lab, a sediment core lab, a soils lab, a luminescence lab, and an unmanned aircraft systems lab. In addition to these research capabilities, our STEM Education Program enables DRI researchers to improve the lives of our communities by providing educational opportunities for K-College age students and community members.

DRI strongly supports the National Park Service's efforts to protect these important cultural resources through the illegal roads management project.

Sincerely,

JD Lancaster  
Geoarchaeologist  
Desert Research Institute



# NEVADANS FOR CULTURAL PRESERVATION

*Preservation Through Education*

*Rayette Martin*

EXPLORE  
REPORT  
PROTECT



Impactful science, inspiring solutions.

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September 7, 2023

To Whom It May Concern,

I am pleased to provide a letter of support on behalf of the National Park Service (NPS), Lake Mead National Recreation Area's *Managing Illegal Roads to Protect Public Recreation, Safety, Cultural Resources and Endangered Species: Phase 1 (Government Wash and Overton Arm)* project. The Desert Research Institute (DRI) is a recognized world leader in basic and applied environmental research. Serving as the non-profit research arm of the Nevada System of Higher Education, DRI's research has advanced scientific knowledge on topics ranging from humans' impact on the environment to the environment's impact on humans. This research informs the work of DRI's STEM Education Program, allowing this program to translate cutting edge research into educational materials, trainings, and resources, support Nevada's K-12 systems. In addition, DRI's STEM Education Program conducts undergraduate education internship and immersion programs, providing opportunities for in-depth STEM engagement and learning across the education spectrum. The DRI STEM Education Program is pleased to provide input, guidance, or support for the education and engagement components of this project, in whatever capacity our specialized expertise can provide.

The proposed work aiming to address illegal roads and recreation access at the Lake Mead National Recreation Area will fulfill an essential need for Southern Nevada. Protecting cultural resources and better understanding behaviors around accessing archaeological sites is essential to protecting these resources for generations to come. Providing educational engagement opportunities on this topic across the K-College age spectrum will help create informed citizens with stakes in the protection of our natural resources and public lands. By providing a spectrum of outreach and education opportunities, this project will help create resilient and informed youth, who will better understand how their behavior impacts the world around them and ways to engage in responsible recreation. The DRI STEM Education Program strongly believes that by educating the next generation, we can begin to impact positive behavioral change on not only youth, but the adults they engage with as well.

We are in full support of the National Park Service's commitment to protecting National Public Lands and providing learning resources to Southern Nevada's communities, especially as they apply to this critical need to manage illegal roads.

Sincerely,

Emily McDonald-Williams  
STEM Education Program Manager  
Desert Research Institute

Instructions: Put project cost estimates in Tabs 1-8. The values from those tabs will roll-up to this summary worksheet. The Non-Federal Contribution can be entered in Tabs 1-8 as a whole amount, it does not need to be broken out by unit cost.

**PROJECT BUDGET**

<b>Project Name:</b>	Managing Illegal Roads to Protect Recreation, P	<b>Date: 11-05-23</b>	
<b>Project Manager:</b>	Stefani Dawn	<b>Agency: NPS</b>	
<b>Cost Categories</b>		<b>SNPLMA</b>	<b>Non-Federal Contribution</b>
1. Personnel (labor plus benefits)		\$ 3,469,594.00	\$ 50,220.00
2. Travel		\$ 17,320.00	\$ -
3. Training		\$ 11,800.00	\$ -
4. Equipment		\$ 109,200.00	\$ -
5. Supplies/Materials		\$ 121,400.00	\$ -
6. Contracts and/or Agreements		\$ 4,779,579.00	\$ -
7. Vehicle Use		\$ 90,990.00	\$ -
8. Other Necessary Expenses		\$ 64,760.00	\$ -
<b>9. TOTAL PROJECT BUDGET</b>		<b>\$ 8,664,643.00</b>	<b>\$ 50,220.00</b>

Notes:

## 1. PERSONNEL

Include labor costs for all aspects of project implementation where agency labor will perform the work, e.g. planning and environmental documentation, section 106 compliance, labor to perform implementation, project management, interdisciplinary team (ID team), engineering, etc. Labor expense documentation must correlate the individual labor expense with the deliverable, task, or subtask. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total labor costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Stefani Dawn - Overall grant management, reporting, & subawards oversight, Partnerships development and management, active involvement with the community outreach, education, and engagement components of the project - GS-12 (30% fringe, 5% annual increase) - 30% FTE for 5 years (1040 hours/yr x 5 years = 5200)	3120	Hours	\$ 48	\$ 149,760	\$ -
Wyatt Medley - Environmental Protection Specialist - Oversee NEPA compliance activities for Areas 1 and 2 - active management sub-areas (Gov't Wash Rd & Stewart's Point) and active assessment activities for future work in Areas 1 & 2, supervise GS-11 position under planning described below, review and provide input into Site-Specific Management Plans, reviewing and submitting consultation letters, updating PEPC.	516	Hours	\$ 48	\$ 24,768	\$ -
Anna San - Cartographic and Lands Technician - GS-7 - 160 hours per year for 4 years	640	Hours	\$ 31	\$ 19,840	\$ -
New Term Position - Planner - GS-11 - Coordinates efforts for and creation of two Site Management Plans (one for Area 1 and One for Area 2), coordinates assessment and active management activities for Areas 1 and 2 (e.g. coordinating surveying, closing/blocking illegal roads, restoration, extending/creating new officia roads) (full time, 30% fringe, 5% increase per year, 4 years)	8320	Hours	\$ 41	\$ 341,120	\$ -
Carrie Norman - Biologist - GS-11 - Vegetation Branch Manager - Manages natural resource compliance, provide input into and review Site Management Plans for Areas 1 and 2, manages (80 hours/year x 5 years)	400	Hours	\$ 45	\$ 18,000	\$ -
Kelly Wallance - Biologist - GS-9 - Manager SongDog Nursery - oversees all revegetation activities (160 hours/year x 5 years)	800	Hours	\$ 40	\$ 32,000	\$ -
Matt D'Ambrosi - Biologist - GS-7- oversees surveys for natural resource compliance (80 hours/year x 5 years)	400	Hours	\$ 28	\$ 11,200	\$ -
New Position - Backcountry Ranger - GS-05 - This position will roam Areas 1 and 2, interacting with park visitors, support/engage with the Community Outreach, Education and Engagement elements of the project (e.g. co-lead in-park "rides", go out into the community), note and report areas of concern, provide input into the Site-Management Plans based upon ground-truthing (full time, 4 years - 6 months to hire and less 6 month to close out)	8320	Hours	\$ 24	\$ 199,680	\$ -

Branch Chief of Operations and Maintenance, GS-11 - Provide input into the Site Management Plans for Areas 1 & 2 including assessing the most effective way to close off an illegal road or create or extend an official road per the terrain, cost, and other factors; Oversee all work that involves facilities/heavy equipment (e.g. closing off illegal roads with gates, boulders, berms, fencing; extending dirt roads to reach the water, etc.); supervise construction manager (10% FTE, 5 years)	1040	Hours	\$ 45	\$ 46,800	\$ -
New Term Position- Construction Manager -GS-11 - Oversees/manages all construction activities and contracts needed for the project (1 FTE, 4 years - 6 months to hire and less 6 months for closeout)	8320	Hours	\$ 45	\$ 374,400	\$ -
Engineer - GS-12 - (15% FTE, 4.5 years) - Oversees engineering components of the project (e.g. engineering needed for road extensions/ new official road creation	1404	Hours	\$ 65	\$ 91,260	\$ -
- Cultural Resource Manager - GS-11- Oversees cultural compliance/SHPO and Tribal consultations and partnerships, provides input into the Site-Specific Management Plans for Areas 1 and 2, oversees sub-award for survey/data collection, (160 hours per year x 5 years)	800	Hours	\$ 45	\$ 36,000	\$ -
Archeologist - GS-10- Interacts with and helps oversee subaward surveys, supervises new term Archeologist position for the project, (10% FTE/year x 4.5 years)	936	Hours	\$ 41	\$ 38,376	\$ -
New Term Position - Archeologist - GS-7 - On-site/support for subaward surveying and all cultural compliance work for Areas 1 and 2 as part of the Site-Specific Management Plans for the two areas and active management components throughout the project, assist with data management and limited field support throughout the entire 4-year project. The project is anticipated to generate large amounts of data that need to be incorporated into NPS and Lake Mead cultural databases and other systems. Data would also need to be pulled from these systems to support this project (4 years, 6 months to hire and less 6 month closeout)	8320	Hours	\$ 31	\$ 257,920	\$ -
Two New Positions - Patrol Rangers - GL-9 - Dedicated, increased patrolling in Areas 1 and 2, works in partnership with the new Backcountry Ranger (full time, 4 years, 6 months to hire, less 6 months close-out period, includes overtime and premium pay for evenings and weekends)	16640	Hours	\$ 58	\$ 965,120	\$ -
Supervising Ranger (current staff) - GS-11 - hires and supervises the new GL-9 patrol rangers and other law enforcement rangers who will provide additional support as needed to these areas. (10% FTE, 4 years)	832	Hours	\$ 45	\$ 37,440	
Interpretive Ranger - GS-9 - Provides support with the community outreach, education, and engagement program for the project (50% FTE, 4 years)	4160	Hours	\$ 40	\$ 166,400	
- Visual Information Specialist - GS-9 - Provides support with social media, website, video, graphic design for signs and materials (10% FTE, 5 years)	1040	Hours	\$ 40	\$ 41,600	
- Volunteer Program Manager (30 hours per year x 4.5 years)	180	Hours	\$ 52	\$ 9,360	
- Volunteer Coordinator (50 hours per year x 4.5 years)	225	Hours	\$ 38	\$ 8,550	



Volunteers (18 events x 3 hours = 54 hours x 10 people per event = 540 hours; surveying of illegal roads 1080 hours) Total 1620 hours	1620	Hours	\$ 31		\$ 50,220
National Park Service Denver Services Center for coordination and implementation of 2 Environmental Assessment processes, including public input, to develop Site-Specific Management Plans for Area 1: Government Wash and Area 2: Overton Arm	2	Job	\$ 300,000	\$ 600,000	\$ -

Total	\$ 3,469,594	\$ 50,220.00
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**2. TRAVEL**

Travel expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total travel costs.

Description of Travel and Purpose	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
NPS Staff - Overnight Travel - 16 nights, 20 days, 2 staff - Lodging: \$1,920 (16 nights x \$120/night lodging allowance for Overton) M&IE: \$1,242 (\$51.75 for first and last days of travel [4x\$51.75]; \$69/day of full travel. [8 x \$51.75] + [12 x \$69] Travel voucher fee: \$59 [\$14.74 x 4 vouchers]	20	Trip	\$ 161	\$ 3,220	\$ -
Two new Patrol Rangers to attend the (Trainings average 5 days each, located in various parts of the U.S. x 2 staff x 3 training trips includes flights and rentals) (\$1500 per trip)	6	Trip	\$ 1,500	\$ 9,000	\$ -
Travel expenses for training for the new GS-7 Archeologist position (\$1500 per trip)	1	Trip	\$ 1,500.00	\$ 1,500	\$ -
Travel to three conferences related to off-road and related recreation (\$1200 per trip)	3	Trip	\$ 1,200.00	\$ 3,600	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
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		Trip		\$ -	\$ -
		Trip		\$ -	\$ -

<b>Total</b>	\$	17,320	\$	-
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### 3. TRAINING

Training expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Example, contracting officer representative or program officer/assistance agreement training, training for chainsaw use, training for pesticide application, visual resource management, etc. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total training costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Federal Law Enforcement Training Center trainings (training new recruits in a variety of necessary trainings such as Archeological Resource Protection Training, Backcountry Tactical Training, Critical Communication Skills in Officer/Citizen Encounters, etc.) (3 trainings per new patrol ranger - \$2000 per training)	6	Each	\$ 1,800	\$ 10,800	\$ -
Registration for GS-7 Archologist training - \$1000	1	Each	\$ 1,000	\$ 1,000	\$ -
		Each		\$ -	\$ -
		Each		\$ -	\$ -
		Each		\$ -	\$ -
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		Each		\$ -	\$ -

<b>Total</b>	\$	11,800	\$	-
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### 5. SUPPLIES AND MATERIALS

Supplies and materials necessary to complete the project. Supplies/materials must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Supplies/materials must be the minimum amount necessary to accomplish the project; purchasing extra supplies/materials to "stock the cache" for post project management activities is prohibited. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Signs - small signs with posts (e.g. stay on road, restoration area, etc.) \$50/each	100	Each	\$ 50	\$ 5,000	\$ -
Wayside Panels - single panel, aluminum, painted, 42" x 28" with legs that are buried in the ground. \$1100/each	6	Each	\$ 1,100	\$ 6,600	\$ -
Printing - New Backcountry Junior Ranger Books created for this project (10 pages per booklet, 1000 per year x 4.5 years)	4500	Each	\$ 2	\$ 9,000	\$ -
Printing - Materials to hand out at outreach events (3000/year x 4.5 years)	13500	Copies	\$ 0	\$ 2,700	\$ -
Post and cable for fencing to block illegal roads (\$6/linear foot installed via volunteers)	100	Feet	\$ 6	\$ 600	\$ -
Post and cable for fencing to block illegal roads (\$20/linear foot installed via facilities using mechanized equipment) - selection of type of blockade to use is dependent on the terrain and access	500	Feet	\$ 15	\$ 7,500	
Large boulders to block illegal roads (\$1000 per foot, includes delivery to remote areas and placement) - selection of type of blockade to use is dependent on the terrain and access	30	Feet	\$ 1,000	\$ 30,000	\$ -
Concrete blockades (\$3000/blockade) - selection of type of blockade to use is dependent on the terrain and access	10	Each	\$ 3,000	\$ 30,000	
Steel gate with internal locking mechanism to block illegal roads - selection of type of blockade to use is dependent on the terrain and access	3	Each	\$ 10,000	\$ 30,000	\$ -
tazers/firearms, body armor, defensive equipment, uniforms for 2 new patrol rangers, and outfitting for two the new resource protection patrol vehicles (listed under equipment vehicle lease)			\$ 20,000	\$ -	\$ -
				\$ -	\$ -
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				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	<b>\$ 121,400</b>	<b>\$ -</b>
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**6. CONTRACTS AND AGREEMENTS**

Contracts and/or agreements (grants, cooperative agreements, assistance agreements, stewardship agreements, interlocal or state agreements, etc.) necessary to implement the project's purpose and deliverables (including tasks and subtasks, as appropriate). Extra or more robust documentation may be necessary if the contract and/or agreement is for multiple projects (e.g. a Master Agreement or CESU agreement). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total grant and agreements used to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
Agreement for specialized geoarchaeological and geophysical exploration, pedestrian surveys/surface archaeological investigations, and limited subsurface testing of the primary area of interest, a large (approximately 5-mile-long) cultural site - (Area 2) and support for cultural and biological surveying for compliance. Includes Tribal interns for research, and archology/surveying interns for compliance surveying	1	Job	\$ 2,523,512	\$ 2,523,512	\$ -
Agreement for K-12 education outreach to develop educational materials related to local cultural resources, protecting cultural and natural resources from off-road activities, caring for the backcountry/recreation in the backcountry	1	Job	\$ 608,149	\$ 608,149	\$ -
Agreement for outreach to the offroading community including attending events, coordinating input meetings/listening sessions, attending and/or presenting at off-road and outdoor recreation conferences, educational rides and events, coordinating volunteer events (as described in the COEE section)	1	Job	\$ 647,918	\$ 647,918	\$ -
Road repair, closure, and creation	1	Job	\$ 1,000,000	\$ 1,000,000	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	\$	4,779,579	\$	-
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**8. OTHER NECESSARY EXPENSES**

Other Necessary Expenses are time and materials necessary for project implementation but are not specific to any one deliverable (including tasks and subtasks, as appropriate). If you included the labor, equipment, and/or supplies and materials in the other sheets, do not include them here. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total other necessary expenses to implement the project. This is not a complete list. Contact the SNPLMA Division for guidance on other necessary expenses.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
Portable office for jobsite and staff up in the Overton Arm Area (1 building, \$12,000/year x 4 years)	1	Building	\$ 48,000	\$ 48,000	\$ -
Cell phones for new dedicated project staff (\$200 for phone + \$60/month x 12 months x 4.5 years)	4	Each	\$ 3,440	\$ 13,760	\$ -
Furniture and fixtures for SNPLMA-funded employee workspace	2	Each	\$ 1,500	\$ 3,000	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	\$	64,760	\$	-
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**SNPLMA Round 20  
Conservation Initiatives Project Addendum**

**Nomination:** Tab 4

**Entity:** US Fish & Wildlife Service (SNAP Project with BLM, FS, NPS, and BOR)

**Project:** Promoting Native Plants for Restoration, Landscaping, and Water Conservation

**Remarks/Clarifications Needed:**

**Section D - Project Deliverables-Primary:**

1. Bullet #2 “Seed Cleaning”.

**Quantification Needed – Appx how many bushels of seeds per year, etc.)**

2. Bullet #3 “Seed Production. We will establish partnerships with non-federal entities (rural landowners, tribes, counties, or cities) for small-scale native plant grow outs to increase native plant seeds available for use on public lands. We will establish at least three partnerships for native seed-increase.”

**Clarification Needed – This needs further defining as it relates to the product, such as appx 2,000 grow-outs per year, 50 acres of grow-outs, etc.**

**Section D - Project Deliverables-Standard:**

1. Bullet #3 “Survey and documentation of seed collection locations, including documentation of non-native, invasive plants, and disturbed areas.

**Clarification Needed - How extensive will the surveys/documentations be? Should this be listed as a Primary Deliverable?**

**Section I – Project Budget**

1. Volunteer labor will be utilized to carry out four weed removal and native planting events, for an in-kind labor value of \$15,900.

**Clarification Needed – Primary Deliverable bullet #7 states ‘...at least 2’ events. While ‘at least 2’ is technically less than 4, one of these statements should be revised so they match.**

2. “USBR will contribute (match) up to \$25,000 for printing”.

**Clarification Needed – There is no letter of support from BOR agreeing to this contribution, and there is no mention in the Excel budget spreadsheet indicating a contribution.**

**Section K – Ranking Criteria**

**Criteria #4; D**

1. Answer: “Volunteer labor will be utilized to carry out 4 weed removal and native planting or seeding events...”

**Clarification Needed – Primary Deliverable bullet #7 states ‘...at least 2’ events. While ‘at least 2’ is technically less than 4, one of these statements should be revised so they match.**

2. Answer: “The USBR will contribute (match) up to \$25,000 for printing.”  
**Clarification Needed – There is no letter of support from BOR agreeing to this contribution, and there is no mention in the Excel budget spreadsheet indicating a contribution.**

### **Section L – Orders and Priorities**

#### **Secretarial Orders**

1. *SO No. 3347: Conservation Stewardship and Outdoor Recreation.*  
Answer: “... through planting native plants, volunteering at government nurseries, and participation in non-native, invasive plant removal events.  
**Clarification Needed – There is no identification of volunteering at government nurseries in the nomination project description or deliverables.**

### **Section Q – Letters of Support:**

1. **There is no Letter of Support or Letter of Contribution from SNAP Partner Bureau of Reclamation.**

### **Performance Measures:**

1. Performance Measure O6 “Number of New Interpretive or Education Publications/ Signs/ Kiosks/ Displays/etc. produced.”  
**Clarification Needed – There is no mention of a signage/kiosk component in the nomination description or deliverables.**

### **Budget Excel Spreadsheet:**

1. **Personnel Tab** - Should BOR staff be listed here, either as SNPLMA funded or as staff time contribution?
2. **Training Tab** – \$6,000 for 6 training for Project Manager or other members of the team.  
Clarification needed on what the 6 trainings are.
3. **Equipment Tab** - Should BOR printing be listed here, either as SNPLMA funded or equipment contribution?
4. **Supplies and Materials Tab** - \$25,000 for “Design of outreach materials - graphic design.”  
**Wasn’t this to be BOR’s contribution?**

# **Southern Nevada Public Land Management Act Conservation Initiatives Round 20**

U.S. Fish and Wildlife Service (lead)



**Promoting Native Plants for Restoration, Landscaping, and Water Conservation**

Amount Requested: \$5,111,240.00

## A. BACKGROUND INFORMATION

### Need for the Project

Ecological restoration of degraded Mojave Desert ecosystems has been an elusive goal despite an ever-increasing need and high prioritization by federal land management agencies. Efforts are hindered by the lack of native plant material. A new national assessment of native plant availability outlines the problem:

*A relatively small segment of the nation's commercial seed industry produces seeds of native plant species for ecological restoration, in an enterprise that demands considerable specialized knowledge and equipment, and that requires several years of lead time to produce a specified batch of seeds. Public agencies and other users of native seed acquire most of their supply from these private growers, using requests for bids, production agreements, and off-the-shelf purchases. Currently, however, users describe the supply of native seeds on the market as severely insufficient. Suppliers describe the buyers' unpredictable levels of demand and excessively short planning horizons as significant obstacles to being able to meet their needs.* - National Academies of Sciences, Engineering, and Medicine. 2023, p. 2.

Federal agency efforts to address this problem have been underway in the region for more than 30 years with the establishment of the National Park Service (NPS) Native Plant Nursery in 1993 at Lake Mead National Recreation Area (Photo 1). In 2001, the Bureau of Land Management (BLM) initiated the Seeds of Success (SOS) program to collect and preserve seed in non-federal seed banks. In 2015, twelve federal agencies and 300 non-federal partners developed the National Seed Strategy for Rehabilitation and Restoration (USDA, 2015). The Nevada Native Seed Strategy (Nevada Native Seed Partnership 2020), a local stepdown plan of this national strategy, articulated specific actions to address 'bottlenecks' in the regional native seed system.

Local efforts are making progress but converging threats and changes to public lands have far outpaced the capacity to restore them. A central threat, along with climate change and rapid population growth, is the introduction and spread of non-native, invasive plants, which can carry wildfire in the Mojave Desert (Figure 1, Photo 2). On public land managed by the Department of Interior (DOI), less than one percent of the area infested by non-native, invasive plants is currently under control, and the rate of new species introductions is rising (DOI 2019). The urban environment and frequently disturbed sites, including roadsides, harbor invasive species that spread into neighboring public lands (Padayachee et al. 2017). A key strategy for confronting the daunting task of managing non-native, invasive plants is re-establishing native ones in disturbed areas. This helps increase an ecosystem's resistance to future infestations (DOI 2021). The bottleneck in the supply of native plant materials currently limits the re-establishment of native plants in disturbed areas.

### Project Objectives

A more urgent, unified approach is needed (National Academies 2023), and it must include a focus on the availability of native plant materials to decrease threats, including the spread of non-native, invasive species, and other rapid ecological changes (USDA 2015). We propose using

SNPLMA funding to develop key partnerships within the Mojave Desert region to increase and stabilize the native plant supply, and to help offset the effects of non-native, invasive plants.

Our specific objectives are to:

- Build native plant production capacity within the local agricultural community for restoration of public land ecosystems, especially threatened and endangered species habitat, and habitat for other sensitive species (Figure 2).
- Increase the demand for native species, and offset the impact of non-native species, by promoting and supporting the use of native plants by local municipalities, federal agencies, state agencies, tribes, the horticultural industry, and the public.

### **Building Native Plant Production Capacity**

Transforming a segment of the local agriculture industry is a long-term prospect, but we believe significant improvements can be made by focusing on a few key activities. Previous assessments have shown that prospective growers lack starter seeds and technical information on priority species and hard-to-grow plants. Above all, they lack the certainty of regular purchases because they rely on government contracts for intermittent emergencies or restoration projects. We will address each of these shortfalls with:

1. **Seed Collection:** Field crews will collect wild seed in several seed zones during the first three years of the project (Figure 3, Photo 3). Collection focus will be federally managed public land where seed collection is permitted, but agreements with state, local, tribal, or private lands will be pursued if needed. Seeds will support Seed Production and Native Plant Production (below) and may also be used for direct seeding.
2. **Seed Cleaning and Storage:** Currently, public or federal agency facilities supply these services. These include the U.S. Forest Service's (USFS) Bend, Oregon Seed Extractory and the University of Nevada at Reno's Seed Cleaning and Storage Facility. We will pursue agreements with one or more of these facilities to provide cleaning and storage of wild-collected seeds for the project's contracted private growers.
3. **Seed Production:** Partnerships will be developed with non-federal entities (rural landowners, tribes, counties, or cities) for native plant grow outs which will yield a larger, easier to collect seed source (Photo 4). This seed increase project will focus on annual species, perennial forbs and grasses, and some fast-growing perennial shrubs. Potential species include those that are important for restoration of desert tortoise habitat and post-fire landscapes, and as alternatives to non-native plants in urban landscaping (Photo 5).
4. **Container Plant Production:** We intend to increase the availability of native plant seedlings in containers through partnerships with private, non-profit, and agency nurseries. The focus will be on a small selection of tree, shrub, forb and grass species with well-known and successful greenhouse propagation techniques, and promising characteristics for a broad range of uses. Agencies may also give some of the plants to the public for educational and outreach purposes.

5. **Stakeholder Connections:** The National Seed Strategy, Nevada Native Seed Partnership, the BLM's Mojave Desert Native Plant Program, and experts throughout the region have identified a gap we can help fill: facilitating information exchange among stakeholders to incorporate native species into horticultural production and supply processes. BLM has identified a need for a grower liaison in each ecoregion. This project will support a grower liaison position that facilitates communication among Clark County growers, federal agencies, and other stakeholders.

### **Improving Public Demand for Native species**

The use of native plants, especially as a more environmentally friendly alternative or a competitor to non-native, invasive species, is slowly taking root in southern Nevada. Local conservation efforts are promoting low water-use or wildfire-resistant landscaping, gardens to sustain monarch butterflies or other important pollinators, or trees to mitigate the urban heat island effect in Las Vegas. In our discussions with prospective partners, we tentatively identified fertile ground for collaborating to incorporate or increase native plants into efforts like these. For example, the water shortage in southern Nevada has led to policies that create demand for drought-tolerant plants. These plants are now familiar to growers and landscapers, widely available at commercial nurseries, incorporated into municipal landscaping and promoted in public outreach campaigns. They are also almost exclusively non-native species. Substituting just one of these non-native plants with an equally attractive (and equally drought-tolerant) native species for use in urban landscaping could help stabilize the availability of that plant for future public land restoration efforts (Photo 4).

A handful of species native to the Mojave Desert are sold by area nurseries, but they are usually unfamiliar to the public, have an unknown source (and therefore not suitable for use in federal land restoration), or lack planting guidelines. We propose the following sequence of actions to increase the use and the demand for native plants by local municipalities, agencies, the horticultural industry, and the public:

1. **Outreach and Education Plan:** We will gather and compile information on outreach and education programs, materials, and tools being used in existing conservation programs. We will use this information to identify opportunities for incorporating native plants into existing and new programs. With SNPLMA funding, we will develop a comprehensive outreach and education action plan. We will implement actions outlined in the plan including, but not limited to the following: incorporate native plant content into existing programs, develop new educational content and outreach materials, support partner outreach efforts, deliver presentations, and support existing pollinator gardens (Photo 6).
2. **New Pollinator Gardens on federal land:** In addition to support for existing garden efforts, we are aware of interest to establish new pollinator gardens on federal land near existing visitor centers. We will engage with local Native American tribes to pursue joint stewardship, if desired.

3. **Non-native, invasive plant replacement events:** We will organize, promote, and support non-native, invasive plant replacement events for volunteer groups on federal land. We will organize events to engage the public in learning how native plants can be used to compete with non-native invasive plants that degrade recreational value, are costly to control, and spread into wildlands where they can increase wildfire risk and destroy wildlife habitat.

The four federal land management agencies participating in this interagency proposal have approved plans that require the use of native plants to restore degraded endangered species habitat, riparian areas, rare plant habitat, and other areas (BLM 1998, NPS 2005, U.S. Fish and Wildlife Service [USFWS] 2009, USFS 1996). The U.S. Bureau of Reclamation (USBR) will be participating in the production of educational materials since they are not a traditional land management agency.

### **The Implementation Process**

Members of SNRT from each agency have identified leads for this project, and while each person brings a unique set of skills and expertise, there is significant redundancy within and among each agency to see the project through to completion. Implementation will begin with the development of agency work plans that track the deliverables outlined in this proposal. Tasks to achieve these deliverables have been allocated among the agencies, beginning with adding specialized skills and additional capacity to the team through agreements, contracts, or hiring. Although specific agencies will be responsible for positions as outlined below, SNRT will provide oversight and regularly coordinate with project personnel listed below.

- *Project manager* – BLM. The project manager will provide oversight to the project. They will coordinate duties of the Education and Outreach Coordinator, Grower Liaison, Seed Collection Crew, and partners. They will facilitate project reporting.
- *Education and Outreach Coordinator* – USFWS. The education and outreach coordinator will be responsible for assessing current commercial and private demands for native plants, current education and outreach activities highlighting native plants, and opportunities to include native plants in future programs or development. They will be responsible for creating an Outreach and Education plan and for presenting, tabling, and disseminating information about native plants and the project. They will engage with SNAP's Education, Interpretation, and Outreach Team, seeking advice and identifying possible collaborative actions.
- *Grower Liaison* – USFWS. The grower liaison oversees information exchange and technical assistance with growers and native plant stakeholders. They will work with the BLM's Mojave Desert Native Plant Coordinator to coordinate with seed needs for this ecoregion.

When contracts, agreements or hiring for the key positions/roles is underway, we will also formalize partnerships, as follows:

- *Seed extraction/cleaning* – USFS. Seed produced from small-scale grow outs will need to be cleaned and stored throughout the life of the project.

- *Private growers* – USFWS. The USFWS has experience with agreements for private growers, non-profits, tribes, and city and county governments through the Partners for Fish and Wildlife Program. Private growers will be responsible for increase of seed from wildland collections. They will be responsible for making sure seeds produced are weed free. They will collaborate with the grower liaison to increase seed, develop growing strategies, and share information with other interested stakeholders in the region. Seeds produced will go to the federal agencies.
- *Private, non-profit, and agency nurseries* – USFWS. Nurseries will be responsible for growing container stock for species selected by the project team. Nurseries will use source identified seed to ensure that appropriately adapted seed is used at project sites.
- *Seed Collection Crew* – BLM. This crew will be responsible for scouting and making wildland seed collections. They will be responsible for collecting seed from genetically unique populations throughout southern Nevada.
- *Printing Educational Materials* – USBR. The USBR has the experience and technical capacity to advise us in the development of educational material. USBR will also provide up to \$25,000 of matching funds for printing.

SNRT personnel involved with this project include Certified Contract Officer's Representatives (CORs) and Program Officers (POs) who will work with agency Contract Officers and Project Inspectors (PIs) to ensure contracts and agreements are implemented as intended. COR, PO, and PI training for new staff will be prioritized.

### **Determining Project Completion**

This project will be complete when the primary, standard, and, if agreed upon with SNPLMA, the anticipated deliverables, are complete. Deliverables associated with building native plant production capacity and increasing public demand for native plants have established timeframes; particularly seed collection, container stock production, seed increase grow outs, the establishment of new pollinator gardens, creation of the Outreach and Education Plan, development of new educational materials, implementation of volunteer events, and delivery of presentations.

### **Methods/Techniques for Disseminating Results of the Project**

During the life of the project, the project manager, grower liaison, and outreach and education coordinator will all work on disseminating the results of the project to partners and stakeholders. Information learned during the project will be given informally during field trips to seed grow-out sites and shared during periodic Mojave Desert Native Plant Program meetings and Nevada Native Seed Strategy meetings. The Outreach and Education plan will be shared electronically with partners and stakeholders upon completion.

During the final year of the project as final reports are prepared, these reports will be shared with project partners and stakeholders. A formal project partner and stakeholder meeting will be held at project completion to discuss project accomplishments, lessons learned, and how to continue the native plant initiative after the project. After the project is completed, the SNRT team will



carry on disseminating the results of the project through periodic work group, interagency, and agency meetings.

**a. Relationship to Prior Approved Projects and/or Phases Relevant to this Project (SNPLMA funded or not), and any anticipated Future Phases**

Past efforts by federal agencies to address native plant material availability for restoration resulted in the creation of the NPS's Song Dog Native Plant Nursery, the BLM's Seed Warehouses and the USFS's nurseries and seed extractories. The Nevada Division of Forestry's Las Vegas Tree Nursery and other regional efforts to address drought-tolerant native plant availability have gained some traction in southern Nevada.

Future phases of SNPLMA funding are not anticipated. Connections between stakeholders and project partners that were developed and strengthened during this project will hopefully continue.

**b. Acknowledgement of Stand-Alone Project and no Guarantee of Funding for Future Phases**

Yes

## **B. EXECUTIVE COMMITTEE'S SNPLMA STRATEGIC PLAN VALUES**

Conservation Initiative projects have two goals identified in the Strategic Plan:

- Goal 1: Sustain the quality of the outdoor environment by conserving, preserving, and restoring natural and cultural resources.
- Goal 2: Improve the quality of life for all publics in urban and rural communities by enhancing recreational opportunities that connect people with the outdoor environment.

Nominated projects should meet these two goals by focusing on the three SNPLMA core values, connectivity, sustainability, and community. Every nomination must explain how the three values are promoted by the project.

- **Connectivity** –By supporting the local agriculture community's ability to produce native plants for use in public land restoration, we will be connecting farmers to the natural landscape in a new way. Educational materials will reinforce experiential learning at pollinator gardens and volunteer events to pull non-native, invasive plants and replace them with native plants. Watching a monarch butterfly feed on the nectar of a native milkweed flower in downtown Las Vegas or seeing a bird land on roadside shrub that you planted can leave long-lasting impressions. Even seeing labels touting *Mojave Desert Native* on a potted plant at the local nursery could challenge the perception of the urban environment as a place that is completely disconnected from nature.

- **Sustainability** – By nearly any measure, the public lands we manage are becoming less functional, less productive, more prone to disturbance, and less resilient to change because of human impact on the environment (Comer et al. 2013). Reversing these trends is a daunting task. The hurdles are many and growing higher. What is clear is that conservation and restoration activities need to be scaled up rapidly if we are to achieve some level of sustainability for the natural environment of our public lands. Some of the top national and regional scientists and policymakers have concluded that our number one constraint to ramping up restoration in the Mojave Desert ecoregion is the supply of suitable native plant materials and we agree. There are other actions that can help address the issue of sustainability in our corner of the world, but stabilizing the supply of native plants is the top priority. Equally important is that we have a national and regional seed strategy to use as a blueprint, and we have many potential partners who are ready to step up and support this effort.
- **Community** – There is increasing interest in the connection between nature and human health (Nejade et al. 2022). In urban settings, gardening and green exercise (exercise in nature) are correlated with increased physical and mental health measures (Gladwell et al 2013). Native vegetation attracts native wildlife, increasing viewing opportunities for humans. In wildland settings, southern Nevada’s intact, natural ecosystems are less likely to burn in catastrophic wildfires that threaten lives and livelihoods. Areas heavily infested with non-native, invasive plants are increasingly at risk from these catastrophes.

Our project aims to create an enduring foothold for native plants in settings that could contribute to these human health and safety improvements. Incorporating native plants in our communities’ farms, roadsides, backyards, municipal buildings, stormwater canals, school grounds, wildland-urban interface areas, and restoration projects on public lands will take a sustained effort. Our project supports farmers in areas where rural economic development is needed. Providing seeds and expertise to existing pollinator gardens, some of which are in urban areas, helps reach underserved populations, enriching communities visually, economically, and inspirationally. With this project, we hope to develop and strengthen partnerships within the native plant production community and the community that needs plants such as landscapers, local governments, and the public. If the project is successful, these partnerships will continue assisting in the local economy.

## C. PURPOSE STATEMENT

The purpose of this project is to address a key bottleneck in our ability to restore public lands in southern Nevada by building native plant production capacity and by incorporating native plants into water conservation, urban landscaping, pollinator gardens, and other partnering organization programs (Figure 4). Increasing the use of native plants will reduce the need for removal of non-native, invasive species that spread into public lands, and it will create market demand within our communities that will help stabilize the supply of native plants for public land restoration.

## D. PROJECT DELIVERABLES

Primary:

- *Seed Collection:* Field crews will collect wild seed in several seed transfer zones during the first three years of the project. At least 30 collections (collection = at least 3,000 seeds) will be made.
- *Seed Cleaning:* We will use existing seed processing facilities to clean the wild seed for growers. Agency staff or partners may clean small collections by hand.
- *Seed Production:* We will establish partnerships with non-federal entities (rural landowners, tribes, counties or cities) for small-scale native plant grow outs to increase native plant seeds available for use on public lands. We will establish at least three partnerships for native seed-increase.
- *Container Plant Production:* We will increase the availability of native plant seedlings in containers through partnerships with private, non-profit, and agency nurseries. Initiate at least one partnership to produce container stock, at least 2,000 containers per year.
- *Stakeholder Connections:* We will develop and improve connections for information exchange and business relationships among native plant growers and other stakeholders. Create a contact list for potential producer partners and new growers for support, emerging questions, and fostering partnerships. We will conduct one workshop at an existing native seed grow out operation and conduct four site field visits to share growing ideas and techniques.
- *Outreach and Education Plan:* We will gather and compile information on outreach and education programs, materials and tools being used in existing conservation programs, and we identify opportunities for incorporating native plants. Based on this opportunities assessment, we will develop a plan that articulates actions to take advantage of opportunities, prioritizes these activities, and identifies which partnerships we should pursue. Some examples include:
  - *Incorporate native plant content into existing programs:* Content, and supporting expertise, will be used to revise or update existing media, including brochures, mailers, advertisements, websites, social media, etc. We will develop collaborations to incorporate native plants into the existing programs of at least 5 organizations.
  - *Develop new educational content and outreach materials:* Using information gaps and outreach opportunities identified in meetings with a broad range of partners, we will develop additional materials to increase awareness of the benefits of native plants in municipal and residential landscaping, infrastructure projects, and pollinator gardens. We will develop and produce at least 10 informational packets, which could include brochures, flyers, or other media.
  - *Deliver Presentations:* Present native plant information at planning meetings, training events, conferences, community events, radio/social media channels, and field trips. We will present information on native plant benefits, use, and commercialization at meetings, conferences, and public venues. Table at a minimum of two events per year. We will give at least 15 presentations total over the life of the project.
- *Non-native, Invasive Plant Replacement Events:* Organize, advertise, and support planting/seeding/weed replacement events for volunteer groups. We will organize events to generate participation, and to demonstrate how native plants can be used to compete with non-native, invasive plants that degrade recreational value, are costly to control, and

spread into wildlands where they can increase wildfire risk and destroy wildlife habitat. We will conduct at least two volunteer weed pull and native seed planting events per year.

- *New Pollinator Gardens:* We are aware of interest to establish new, educational, native plant gardens, often simply referred to as pollinator gardens, within the greater Las Vegas area on federal lands. These gardens may include educational components on pollinators, water conservation, ethnobotany, or any of the beneficial uses of native plants. We will install at least three pollinator gardens adjacent to agency visitor centers.

#### Anticipated:

- *Support Partner Outreach Efforts:* We will increase stakeholder and public access to existing and new native plant educational and outreach content by assisting partners with reprinting or reproducing revised materials like posters, brochures, or other publications. We will identify five existing native plant educational materials to reproduce and promote.
- *Pollinator Garden Support:* We will organize visits to local pollinator gardens to discuss how native plants provide habitat for wildlife including important pollinators, monarch butterflies, migratory birds, and the threatened Mojave Desert tortoise. We will meet with at least five pollinator garden owners or managers to promote the use of native plants and to offer support.

#### Standard:

- Environmental and Cultural Compliance for rural seed grow out areas and pollinator gardens, if applicable. The following documents may be needed: NEPA Compliance, Section 106 Compliance, and Section 7 consultation.
- Writing and implementing agreements with partners.
- Survey and documentation of seed collection locations, including documentation of non-native, invasive plants, and disturbed areas.
- Developing scopes of work for contracts.

## **E. PROJECT LOCATION**

Will include all Southern Nevada Agency Partnership agency lands in Clark County (Figures 5 and 6).

#### **Identify County in Nevada where Project will be carried out:**

Clark County

**Identify Congressional District(s):** 1, 3, and 4.

#### **Latitude and Longitude:**

36.0796° N, 115.0940° W

## **F. PROJECT TIMEFRAME**

Year 1

- Assemble project team.
- Establish contract/agreement/hire employees for seed collection team and begin seed collection.
- Establish agreements for seed cleaning and storage.
- Meet with non-federal entities (rural landowners, tribes, counties, or cities) interested in small-scale native plant grow outs and establish agreements.
- Begin research for Outreach and Education Plan.

#### Year 2

- Continue adding to team.
- Continue seed collection.
- Establish agreements with growers to begin container stock production.
- Year 1 of seed production in partner grow outs.
- Continue regular stakeholder meetings.
- Develop Outreach and Education Plan.
- Begin implementing outreach and education actions.
- Conduct weed replacement events using existing container stock.

#### Year 3

- Continue seed production in partner grow outs.
- Continue seed collection.
- Continue container plant production.
- Continue regular stakeholder meetings.
- Continue outreach and education actions.
- Provide support for pollinator gardens.
- Establish new pollinator gardens.
- Continue weed replacement events with newly produced container stock.

#### Year 4

- Continue seed collection.
- Continue seed production in partner grow outs.
- Continue container plant production.
- Continue regular stakeholder meetings.
- Continue outreach and education actions.
- Continue pollinator garden support.
- Continue weed replacement events with container stock.

#### Year 5

- Finalize plantings.
- Finalize regular stakeholder meetings.
- Finalize outreach and education actions.
- Overall project close-out.

### **G. LEVEL OF PROJECT READINESS FOR IMPLEMENTATION**

Is this a shovel-ready project?  Yes  No

Implementation for most actions requires no NEPA planning or clearances, except for small-scale grow outs and pollinator gardens that would likely be categorical exclusions. Pollinator gardens on public lands will be installed in previously disturbed areas associated with existing buildings or in areas currently being planned for landscaping by other projects.

## **H. FUTURE OPERATING AND MAINTENANCE**

All project funded seed collections, seed grow-out operations, and container stock production will be out-planted by the end of this project. Connections between stakeholders and project partners that were developed and strengthened during this project will ideally continue. If this project is successful, these activities will continue funded by partners and stakeholders who see a financial benefit to the production of native seeds. Pollinator gardens established at federal agency visitor centers will be maintained by agency staff or volunteers. Project funded outreach and educational activities will have no operation or maintenance needs.

## **I. PROJECT BUDGET**

Complete the project budget using the provided Excel spreadsheet template and upload as a separate document to the “Submissions” tab in the Nomination Portal. Do not embed the project budget in this document.

### Partnership and/or Contributed Funds

Volunteer labor will be utilized to carry out four weed removal and native planting events, for an in-kind labor value of \$15,900.

USBR will contribute (match) up to \$25,000 for printing.

## **J. KEY CONTACTS**

Authorized Officer: Kevin DesRoberts, Desert National Wildlife Refuge (NWR) Complex  
 Email: kevin\_desroberts@fws.gov  
 Phone Number: 702-515-5451

Project Manager: Vance Imhoff, Southern Nevada Fish and Wildlife Office  
 Email: Vance\_Imhoff@fws.gov  
 Phone Number: 702-515-5253

Budget Officer: Leanne Abel, Project Officer, Desert NWR Complex  
 Email: Leanne\_Abel@fws.gov  
 Phone Number: 702-515-5463

BLM Representative: Jonathan (JJ) Smith  
 Email: jpsmith@blm.gov  
 Phone Number: 702-515-5070

NPS Representative: Carrie Norman  
 Email: carrie\_norman@nps.gov  
 Phone Number: 702-293-8734

USFS Representative: Juliet Wallis  
 Email: juliet.wallis@usda.gov  
 Phone Number: 702-858-0904

USBR Representative: Andrew Trouette  
 Email: atrouette@usbr.gov  
 Phone Number: 702-293-8085

## K. RANKING CRITERIA

The Ranking Criteria are used to evaluate the nomination against the goals for the Conservation Initiatives category. Nominating entities are not to include either the total point value or the point values by criteria in their responses. Nominations will be reviewed and scored by the Conservation Initiatives subgroup. Explain how the project meets each applicable criterion.

**1. The nomination supports habitat enhancement, cultural resources, environmental health and protection, and/or public health and safety through connectivity and sustainability.** Include as many project subtypes as applicable to your nomination. Points for this criterion will be awarded on how well the nomination addresses the concepts within the factors, and the quality/quantity of results the project provides. The examples identified are not an all-inclusive list.

A. Habitat Enhancement. *The following are examples of project subtypes for habitat enhancement goals, objectives, or actions: Enhances or connects habitats, migratory corridors, or protected areas; Protects endangered species; Proactive steps to prevent listing; Invasive species treatment and/or control (plant and/or animal); Restoration of habitat for sensitive species at the watershed and/or landscape level; Project addresses climate change; Water quality and quantity monitoring; Cave management; Restoration of springs/streams/rivers; Road decommissioning and rehabilitation/restoration; Reintroduction or augmentation of species to restore overall ecosystem; Mitigates impacts of drought.*

Answer: This project includes the development of native seeds and container plants for use in public land restoration projects, including in endangered species habitat (Mojave Desert tortoise, Mount Charleston blue butterfly, southwestern willow flycatcher, and western distinct population segment (DPS) of yellow-billed cuckoo). It includes volunteer events for non-native, invasive plant removal and reintroduction of native plants, and it supports native plant use in areas where non-native, invasive plants could

spread into public lands. Using the native plant materials produced in this project for habitat restoration projects on BLM land, may benefit up to 18 BLM sensitive species, including the monarch butterfly which is currently a federal candidate for listing. The other sensitive species include relict leopard frog, western burrowing owl, crissal thrasher, LeConte's thrasher, loggerhead shrike, phainopepla, bighorn sheep, banded Gila monster, common chuckwalla, desert glossy snake, desert horned lizard, desert iguana, desert rosy boa, Great Basin collard lizard, long-nosed leopard lizard, McNeil sooty wing skipper, northern Mojave blue, and screwbean mesquite.

B. Cultural Resources. *The following are examples of project subtypes for cultural resources goals, objectives, or actions: surveys; National Register (eligible or currently approved); Protection/site stewards; Restoration/stabilization; and tribal involvement in the planning, design and/or implementation.*

Answer: At least two aspects of this project contribute to the preservation of cultural resources: (1) Stabilizing the production of native plant materials creates an available supply of seeds and container plants for cultural resource projects including restoration of native species in traditional cultural properties. Native plants contribute significantly to traditions, beliefs, practices, lifeways, and arts and crafts of Native American tribes in southern Nevada. (2) In some cases, native plants can provide a visual or physical barrier to hide cultural resources in high use areas, or they can replace more flammable non-native species to reduce the wildfire risk to sensitive cultural resources.

C. Environmental Health and Protection and/or Public Health and Safety. *The following are examples of project subtypes for public health and safety goals, objectives, or action: Illegal litter/dumping cleanup; Information kiosks and signs; Addresses and mitigates adverse impacts to resources caused by the volume of people using the resource; Resolving trespass/encroachment/illegal use of public lands (i.e. homeless encampments, marijuana grow sites)/boundary surveys; Abandoned mine land (AML) with habitat restoration component; Improve the sustainability of the landscape health and ecosystem function; Remove the threat of catastrophic fire loss of the ecosystem; Improve water quality and/or mitigate the threat of soil erosion.*

Answer: This project addresses limitations in the ability of land managers to improve the sustainability of the landscape health and ecosystem function. It helps stabilize the supply of native plant materials that can be used to reduce the threat of catastrophic fire, reduce erosion, and protect aquatic and riparian resources. The education and outreach components provide opportunities for people to interact with nature in a positive way that contributes to their health and well-being.

**2. The nomination promotes sustainability by providing benefits in the near and long term by implementing actions to conserve and sustain healthy and resilient landscapes and providing durability, and relevancy.**



A. Conserves resources to ensure availability to current and/or future generations through management of natural and/or cultural resources for public benefit and sustainable social and economic utilization.

Answer: The near-term benefits of this project include some small, on-the-ground improvements to severely degraded areas through volunteer events, increased availability of native plant materials for restoration projects, and a decrease in collection pressure on wild native plants for their seeds. More importantly, the project addresses one of the chief challenges to restoring sustainable landscapes over the long-term and at a landscape-scale, the availability of locally sourced plant materials.

B. Will remain relevant and continue to provide a benefit beyond the existence of SNPLMA.

Answer: The primary goal of this project is to stabilize the supply of native plant materials indefinitely in the Mojave Desert. This is an ambitious goal, but the groundwork has been laid through research and pioneering efforts. For this proposal, we have identified a range of opportunities for incorporating plants into established long-term efforts including landscaping for water conservation, pollinator gardens, and roadside re-vegetation. There are also growers who are willing to produce native plants, and there is already a nascent, native plant supply chain, with nurseries selling a few native plant species to a small number of people who understand and value these species for their many benefits. If this project is successful, native plant production will continue beyond the life of this project, funded by partners and stakeholders who see a benefit to the production of native seeds and plants.

C. Conserves or restores the functionality, resilience, and integrity of biological communities.

Answer: The National Seed Assessment (Academies 2023) identifies the lack of a commercial native seed supply as a primary challenge to overcome if we are to address function, resilience, and other ecosystem characteristics. This project takes on that challenge using education, outreach, and partnerships with a broad range of stakeholders.

D. Conserves or restores cultural resources through prudent management and prevention of damage, injury, decay, waste, or loss.

Answer: Although this project does not address cultural resources directly, these resources will benefit from the removal of non-native, invasive plants, or by the planting of native plants nearby especially where habitat is disturbed, and resources are more visible and less protected. Native plants could be considered a cultural resource to Native American Tribes, and we will engage with tribes as to which plant species to propagate.

**3. The nomination promotes community, connecting humans to engage in the protection and the integrity of biological communities or cultural sites. Encourages**

**people to connect with habitats, migratory corridors, protected areas, etc., and to appreciate and care for the environment.**

A. Encourages people to meaningfully connect with their natural environment and helps them appreciate and be a steward for the environment. Provides information and resources to educate and engage people in understanding their role in protection and maintenance of the natural environment by providing opportunities for them to connect to the natural resources directly or virtually or provides education of the environment.

Answer: This project connects people with the natural environment in several ways, including organized volunteer events for hands-on restoration of areas degraded by non-native, invasive plants, opportunities to learn about native plants while landscaping or gardening, and providing brochures and flyers with information on native plants. The project also helps rural growers and industry professionals make the connections between the economic and environmental well-being of the southern Nevada landscape.

B. The nomination clearly defines and includes a stewardship component (federal or non-federal) to broaden support and reduce long-term costs by minimizing the human impact on the environment through an education plan with clear curricula and achievable goals and objectives.

Answer: This project includes the development of an Education and Outreach Plan that will identify and assess opportunities to incorporate native plant components into existing and new conservation efforts. When we incorporate native plant content into existing water conservation media outreach, for example, that messaging continues beyond the life of this project. Similarly, the pollinator gardens we establish at visitor centers will continue to provide environmental interpretation opportunities. Actions from the Plan, such as these, with the highest potential for achieving stewardship benefits will be prioritized for implementation.

C. Preserves the past (cultural or historic sites) for or future generations.

Answer: Although this is not a focus of the project, incorporating native plants into landscapes, especially in the wildland-urban interface, can indirectly support this goal through reducing wildfire risk and protecting sensitive cultural and historic areas by using native plants as barriers. Additionally, the project may help preserve the traditional lifestyle of rural communities by giving agricultural producers more sustainable options since growing native seeds requires less water than conventional crops. Historically, many rural communities in Nevada were located near water sources and were based on agricultural practices that required much more water than native plants.

**4. The nomination enhances partnerships to promote cooperation, collaboration, and stewardship. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project.**

A. The nomination promotes partnerships to promote collaboration which addresses and meets the needs of more than one agency (federal or state).

Answer: This is a SNRT Team project in which five federal agencies, BLM, USFWS, NPS, USFS, and USBR will work together to increase plant materials available for restoration. A major component of this project is identifying and leveraging the efforts of state, municipal, non-profit, private partners, and the public to incorporate native plants into their activities.

B. The nomination involves non-federal, public partners, citizen groups or organizations in the development or accomplishment of resource management goals and other activities to prevent waste, damage, or neglect.

Answer: A major component of this project is identifying and leveraging the efforts of municipal, non-profit, and private partners to incorporate native plants into their activities.

C. Project has support for the planning, design, and/or implementation from non-profit, local, or state government, academia, tribal, or youth initiatives.

Answer: Many state, local, and non-profit organizations have expressed their support and willingness to collaborate on the implementation of this project. Many of those organizations have stated that their activities will benefit from the project. We have coordinated with local tribes to develop plant materials they value.

D. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project, (i.e., volunteer labor valuation to be computed at the rate used by the Department of the Interior, non-federal employees' actual hourly rate plus the value of any fringe benefits received, actual costs for material, equipment, and supplies. ***Overhead costs may not be included in determining in-kind contributions.***

Answer: Volunteer labor will be utilized to carry out 4 weed removal and native planting or seeding events, for an in-kind labor value of \$15,900. The USBR will contribute (match) up to \$25,000 for printing.

## L. ORDERS AND PRIORITIES

Respond to the Executive Orders, Secretarial Orders, Department of the Interior Priorities, and USDA Forest Service Priorities as they apply to the purpose of the nomination.

A. Executive Orders (EO):

- ***EO No. 13855: Promoting Active Management of America's Forests, Range Lands to Improve Conditions and Reduce Wildfire Risk***

This project will help give federal land managers better tools to restore range lands in the Mojave Desert. Increasing the supply of native seeds from the appropriate seed transfer zone and with seed grow out in the Mojave Desert, will give these seeds advantages over other seeds that are commercially available. This will increase the success of future restoration efforts, making these range lands more resilient and resistant to wildfire.

- ***EO No. 14004: Ensuring the Future is Made in All of America by All of America's Workers***

In this project, we will hire up to three positions and we will develop agreements and contracts to carry out project tasks. We will hire American citizens and work with American companies so that Americans take part in increasing native plant materials in the Mojave Desert.

- ***EO No. 14063: Use of Project Labor Agreements for Federal Construction Projects (applicable to projects estimated at \$35 million or more)***

This EO is not applicable to this project as our budget is below \$35 million.

- ***EO No. 14072: Strengthening the Nation's Forests, Communities, and Local Economies***

Although this is not the primary purpose of this project, the project will indirectly strengthen local communities and economies through increasing the amount of native plant materials. We will work with rural growers to develop grow outs of native seeds, introducing these growers to another income stream outside of traditional agricultural products which require more water. The public and local governments will learn about planting native plants and how this benefits water conservation, pollinators, human health, health of the planet, and reduces maintenance costs.

- ***EO No. 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All***

Although this is not the primary purpose of this project, the project will indirectly benefit low-income areas through outreach and education on native plants. Some of our Project partners focus on working with underserved communities, and partnerships strengthened and developed through this project will make the development of pollinator gardens, and native plantings in local parks easier. Having native plants in these areas, will benefit water conservation, pollinators, human health, health of the planet, and save on maintenance costs.

## B. Secretarial Orders

- ***SO No. 3347: Conservation Stewardship and Outdoor Recreation.***

This project will provide opportunities for the public to be involved in conservation stewardship, through planting native plants, volunteering at government nurseries, and participation in non-native, invasive plant removal events.

- ***SO No. 3356: Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories.***

This project will increase the supply of native plants which will benefit wildlife habitat in southern Nevada, making habitat restoration projects more successful. This will indirectly benefit hunting and fishing opportunities. Nevada Division of Forestry is a project partner, and we will be working closely with them and the Las Vegas Tree Nursery which they operate.

- ***SO No. 3362: Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors.***

This project will increase the supply of native plants for restoration which will benefit wildlife habitat in southern Nevada, including habitat for bighorn sheep and mule deer winter range.

- ***SO No. 3366: Increasing Recreational Opportunities on Lands and Waters Managed by the U.S. Department of the Interior***

Although this is not the primary purpose of this project, the project will indirectly benefit recreational opportunities on DOI managed lands. This project will increase the amount of native plant materials available for habitat restoration on public lands. Restored public lands can provide enhanced recreational opportunities.

- ***SO No. 3370: Conservation Stewardship and Increasing Public Access to Urban National Wildlife Refuges.***

Although this is not the primary purpose of this project, project partners will promote conservation stewardship and may increase public access to Desert National Wildlife Refuge (NWR), which has been designated as an Urban NWR, for outreach events promoting native plants.

- ***SO No. 3372: Reducing Wildfire Risks on Department of the Interior Land Through Active Management.***

This project will help give federal land managers better tools for habitat restoration on federal lands in the Mojave Desert. Increasing the supply of native seeds from the appropriate seed transfer zone and with seed grow out in the Mojave Desert, will give these seeds advantages over other seeds that are commercially available. This will

increase the success of future restoration efforts, making these public lands more resilient and resistant to wildfire

- ***SO No. 3373: Evaluating Public Access in Bureau of Land Management Public Land Disposal and Exchanges (focus is on Sec. 4.b.(3) Potential increased public recreational access to existing public lands resulting from the proposed land acquired through an exchange (acquisition).***

This SO is not applicable to this project since it is a habitat restoration and education project and not a land acquisition project.

- ***SO No. 3376: Increasing Recreational Opportunities through the use of Electric Bikes.***

This SO is not applicable to this project since it is a habitat restoration and education project and not a trail or recreation project.

C. Department of the Interior Priorities:

- ***Identifying steps to accelerate responsible development of renewable energy on public lands and waters. We are investing in climate research and environmental innovation to incentivize the rapid deployment of clean energy solutions, while reviewing existing programs to restore balance on America's public lands and waters to benefit current and future generations.***

This project will make it easier to conduct habitat restoration around renewable energy sites on public land, through increasing the supply of native seeds from the appropriate seed transfer zone and with seed grow out in the Mojave Desert. These seeds may have advantages over other seeds that are commercially available. This will help increase the success of restoration projects.

- ***Strengthening the government-to-government relationship with sovereign Tribal Nations. We understand that tribal sovereignty and self-governance, as well as honoring the federal trust responsibility to Tribal Nations, must be the cornerstones of federal Indian policy.***

We are talking to two local Tribal Nations about how they would like to be a partner in this project. Native plants are very important to each Tribe's history and culture.

- ***Making investments to support the Administration's goal of creating millions of family-supporting and union jobs. This includes establishing a new Climate Conservation Corps Initiative to put a new generation of Americans to work conserving and restoring public lands and waters, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate.***

Through educating the public about native plants, this project may help inspire the next generation to become involved in restoring public lands. Working with our partners, we will develop multiple stewardship and volunteer opportunities for pulling non-native, invasive plants, planting native plants, or helping produce native plants. We will work with rural growers to develop grow outs of native seeds, introducing these growers to another income stream outside of traditional agricultural products which require more water. This in turn may help their communities retain a rural lifestyle.

- ***Working to conserve at least 30% each of our lands and waters by the year 2030.*** *We will work to protect biodiversity, slow extinction rates, and help leverage natural climate solutions by conserving 30% of America's lands and waters by 2030. This relies on support for local, state, private, and tribally led conservation and restoration efforts that are underway across America.*

This project will help give federal land managers better tools to restore public lands in the Mojave Desert. Increasing the supply of native seeds from the appropriate seed transfer zone and with seed grow out in the Mojave Desert, will give these seeds advantages over other seeds that are commercially available. This will increase the success of future restoration efforts, making these public lands more resilient to climate change. Project partners include local, state, and private entities, and this project will strengthen and develop partnerships to increase the native plant supply and to educate and share resources on native plants.

- ***Centering equity and environmental justice.*** *The impacts of the multiple crises in the United States are not evenly distributed in our society. Communities of color, low-income families, and rural and indigenous communities have long suffered disproportionate and cumulative harm from air pollution, water pollution, and toxic sites. At every step of the way, Interior will engage diverse stakeholders across the country, as well as conduct formal consultation with Tribes in recognition of the U.S. government's trust responsibilities.*

Although this is not the primary purpose of this project, the project will indirectly benefit low-income areas through outreach and education on native plants. Some of our project partners focus on working with underserved communities, and partnerships strengthen and developed through this project will make the development of pollinator gardens in local parks easier. We will work with rural growers to develop grow outs of native seeds, introducing these growers to another income stream outside of traditional agricultural products which require more water. This in turn may help their communities retain a rural lifestyle.

#### D. USDA Forest Service Priorities:

- ***Controlling the COVID-19 pandemic***

This priority is not applicable to our project since it is a habitat restoration and education project and not a public health project. However, many project activities will occur outside which will help reduce the spread of COVID-19.

- ***Providing economic relief***

Although this is not the primary purpose of this project, the project will indirectly provide some economic relief. In this project, we will hire three positions and we will develop agreements and contracts to carry out project tasks. We will hire American citizens and work with American companies so that Americans take part in increasing native plant materials in the Mojave Desert. In addition, we will work with rural growers to develop grow outs of native seeds, introducing these growers to another income stream outside of traditional agricultural products which require more water. This in turn may help their communities retain a rural lifestyle.

- ***Tackling climate change***

This project will help give federal land managers better tools to restore public lands in the Mojave Desert. Increasing the supply of native seeds from the appropriate seed transfer zone and with seed grow out in the Mojave Desert will give these seeds advantages over other seeds that are commercially available. This will increase the success of future restoration efforts, making these public lands more resilient to climate change.

- ***Advancing racial equity***

Although this priority is not the primary purpose of this project, the project may indirectly advance racial equity. Some of our project partners focus on working with underserved communities, and partnerships strengthened and developed through this project will make planting native plants for these communities easier. The public and local governments will learn about the benefits of planting native plants, such as water conservation, pollinator habitat, savings on maintenance costs, and health benefits to people and the planet.

- ***Improving our workforce and work environment***

Through educating the public about native plants, this project may help inspire the next generation to become involved in restoring public lands. Working with our partners, we will develop multiple stewardship and volunteer opportunities for pulling non-native invasive plants, planting native plants, or helping produce native plants.

## **M. MAPS**

Figures 1 to 6 uploaded to the Nomination Portal.



## **N. PHOTOS**

Photos 1 to 6 uploaded to the Nomination Portal.

## **O. PERFORMANCE MEASURES**

Upload completed table to the “Submissions” tab in the Nomination Portal.

## **P. COMMITMENT LETTERS**

Upload Commitment Letters for in-kind contributions and/or matching funds as a single PDF file to the “Submissions” tab in the Nomination Portal.

## **Q. LETTERS OF SUPPORT**

Upload letters of support, as a single PDF file to the “Submissions” tab in the Nomination Portal.

### Internal

1. BLM
2. USFS
3. NPS

### External

1. Las Vegas Wash Coordination Committee
2. Mr. Guy Seeklus, potential grower along the Virgin River
3. Nevada Division of Forestry
4. Southern Nevada Cooperative Weed Management Area
5. Southern Nevada Water Authority
6. The Nature Conservancy
7. University of Nevada Cooperative Extension
8. Virgin River Coalition
9. Get Outdoors Nevada, Executive Director
10. Get Outdoors Nevada, Director of Programs
11. Desert Conservation Program

## **R. LITERATURE CITED**

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- U.S. Fish and Wildlife Service (USFWS). 2023. Recovery Plan for Mount Charleston blue butterfly (*Icaricia shasta charlestonensis*). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. iv + 6pp.

**SNPLMA ROUND 19 NOMINATION  
Conservation Initiatives**

**Performance Measures**

SNPLMA STRATEGIC PLAN GOAL 1: Sustain the Quality of the Outdoor Environment by Conserving, Preserving, and Restoring Natural and Cultural Resources		
Performance Measures for Habitat Enhancement	Definition of Performance Measure	Quantity
H1 - Acres of Land Identified for Withdrawal from Multiple Use	<p>Report the number of acres of land identified for withdrawal or withdrawn from multiple use management (e.g., as the result of a cultural or biological survey, etc.).</p> <p>Report the number of acres of specially designated areas such as a wilderness area, national recreation or conservation area that are automatically withdrawn from multiple use or where use is limited as a consequence of acquisition using SNPLMA funds. Land acquired in an ACEC is not automatically withdrawn from multiple use and should be reported under L1 only.</p> <p>Report to the nearest whole acre.</p>	
H2 - Miles of Riparian Stream or Shoreline Habitat Treated, Enhanced, or Restored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the miles have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as those should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as those should be reported under either the F1 or F2 performance measures.</p>	<p>Up to 1 mile of Riparian habitat enhanced during volunteer events with non-native, invasive plant removal and native species planting or seeding.</p>

	Report to the nearest whole mile.	
H3 - Miles of Riparian Stream or Shoreline Habitat Surveyed, Inventoried, or Monitored	Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat surveyed, inventoried, or monitored. Report to the nearest whole mile.	Up to 1 mile of Riparian habitat surveyed in preparation for volunteer event.
H4 - Acres of Upland Habitat Treated, Enhanced, or Restored	Report the number of acres of upland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures. Report to the nearest whole acre.	5 acres total.  Up to 2 acres of upland habitat restored during volunteer events with non-native, invasive plant removal and native species planting or seeding.  Up to 3 acres of upland habitat enhanced during the creation of 3 pollinator gardens at federal visitor centers. These gardens will be open to the public and will be places where people can learn about native plants and pollinators.
H5 - Acres of Upland Habitat Surveyed, Inventoried, or Monitored	Report the number of acres of upland vegetation and/or wildlife habitat surveyed, inventoried, or monitored. Report to the nearest whole acre.	Up to 1,000 acres. During reconnaissance visits for seed collections, the seed crew will survey at least 1,000 acres of upland habitat, taking notes on species composition, disturbance, phenology, and location of non-native, invasive plants.
H6 - Acres of Wetland / Riparian Habitat Treated, Enhanced, or Restored	Report the number of acres of wetland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels	Up to 2 acres of riparian habitat restored during volunteer events with non-native, invasive plant removal and native species planting or seeding.

	reduction projects, as these should be reported under either the F1 or F2 performance measures. Report to the nearest whole acre.	
H7 - Acres of Wetland / Riparian Habitat Surveyed, Inventoried, or Monitored	Report the number of acres of wetland vegetation and/or wildlife habitats inventoried or monitored. Report to the nearest whole acre.	Up to 500 acres. During reconnaissance visits for seed collections, the seed crew will survey at least 500 acres of riparian habitat, taking notes on species composition, disturbance, phenology, and location of non-native, invasive plants.
H8 - Number of Water Developments Constructed or Improved for Wildlife	Report the number of water developments for use by wildlife constructed or improved/repared within all habitat types. Existing projects may be counted under this performance measure if functional improvements/repairs are made as defined in the project nomination. Report each development constructed or improved as one unit (e.g., one project may have three water developments).	
H9 - Acres of Invasive Plant Species Treated or Restored	Report the number of acres of weed infestation treated with chemical, mechanical, physical, or biological control agents for the purpose of weed control. Include acres treated by fire when fire is used as a physical control agent for weed control rather than as a hazardous fuels treatment. Each acre treated is counted only once during the life of the project, no matter how many re-treatments occurred during the project. Report to the nearest whole acre.	Up to 4 acres treated during volunteer events for non-native, invasive plant removal.
H10 - Acres of Invasive Plant Species Surveyed, Inventoried, or Monitored	Report the number of acres of weed infestation inventoried or monitored. Include monitoring of weed treatment projects reported under performance measure H9. Report to the nearest whole acre.	Up to 1,500 acres. During reconnaissance visits for seed collections, the seed crew will survey at least 1,500 acres of habitat, taking notes on the location of non-native, invasive plants.
H12 - Acres of Herd Management Areas Surveyed, Inventoried, or Monitored	Report the number of acres of wild horse and burro herd management areas or herd areas surveyed, inventoried, or monitored. Report to the nearest whole acre.	
H13 - Number of Conservation or Protection Actions Taken	Report the number of actions taken within a wild horse and burro herd management area to conserve or protect the	

within a Herd Management Area	area for the benefit of the herd (e.g., fences, water developments, vegetative treatments). Report each action as one unit.	
H14 - Number of Threatened and Endangered Species Recovery Actions Implemented	Report the number of individual recovery actions performed for threatened or endangered species recovery as identified in recovery plans, conservation management plans, or land use planning documents. Include surveys, inventories, and monitoring as recovery actions. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same recovery action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	Up to 3 recovery actions for Mojave Desert tortoise, Mount Charleston blue butterfly, and southwestern willow flycatcher. In the desert tortoise recovery plan (USFWS 2011), Recovery Action 2.6 is restoring desert tortoise habitat. Specifically, from the plan, “collection of native seed is recommended to ensure adequate seed is available to conduct restoration. Agencies should seek partnerships where possible to grow native plants for restoration.” In the Mount Charleston blue butterfly recovery plan (USFWS 2023), part of Recovery Action 1 is to “enhance and manage existing and new habitat.” In the southwestern willow flycatcher recovery plan (USFWS 2002), Recovery Action 1 is to increase and improve currently suitable and potentially suitable breeding habitat. One of the identified ways to do this is to manage non-native, invasive plant species, especially flammable ones, and replace with higher quality native plants.
H15- Number of Conservation Actions Implemented for Non-Listed Species	Report the number of individual conservation actions for species not listed under the Endangered Species Act. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same conservation action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	18 actions. Growing native plant seeds or native plant container stock for future habitat restoration projects on federal lands will potentially benefit 18 BLM sensitive species: relict leopard frog, western burrowing owl, crissal thrasher, LeConte’s thrasher, loggerhead shrike, phainopepla, bighorn sheep, banded Gila monster, common chuckwalla, desert glossy snake, desert horned lizard, desert iguana, desert rosy boa, Great Basin collard lizard, long-nosed leopard lizard, McNeil sooty wing skipper,

		monarch butterfly, northern Mojave blue, and screwbean mesquite. All the sensitive animals need native plants for foraging, nesting, or cover.
H16 - Miles of Roads or Trails Decommissioned and/or Rehabilitated	Report the number of miles of roads and/or trails decommissioned and/or rehabilitated within all habitats (urban, upland, riparian, stream, trails in caves, etc.). Closure may include designation, signing, blockage by physical means, obliteration, etc. Report to the nearest whole mile.	Up to 1 mile. One of the volunteer events with non-native, invasive plant removal and native species planting or seeding will take place along a road that needs to be rehabilitated.
H17 – Miles of Roads or Trails Surveyed, Inventoried, or Monitored	Report the number of miles of roads and/or trails inventoried or monitored. Report to the nearest whole mile or linear foot. Report to the nearest whole mile.	Up to 1 mile during preparation for a road-oriented volunteer event with non-native, invasive plant removal and native species planting or seeding.

<b>SNPLMA STRATEGIC PLAN: Other Performance Measures that Also Support the Three Values for SNPLMA Implementation of Sustainability, Connectivity, and Community</b>		
<b>Other Performance Measures</b>	<b>Definition of Performance Measures</b>	<b>Quantity</b>
O1 - Number of Hazardous Sites Remediated	Report the number of hazardous sites where remediation actions are completed. Actions to be included are: removal of safety hazards, clean-up operations, restoration actions, and water quality remediation actions. Do not report temporary remediation measures. Report each site as one unit. When applicable, also report total weight of trash removed during clean-up operations.	
O3 - Number of Law Enforcement Patrols, Incident Reports, Investigations	Report the number of law enforcement patrol actions, incident reports taken, and investigations conducted. Report each item as one unit.	

O4 - Number of Scientific / Technical Reports Produced	Report the number of scientific technical reports produced. Report each report as one unit.	One technical report will be produced: the education and outreach plan.
O5 - Number of Outreach Contacts Made	Report the number of education and outreach contacts made through interpretation and environmental education, such as number of teachers trained, number of participants in workshops, etc. Report each participant as one unit.	Over the course of this 5-year project, we will make outreach contact with over 1,000 people. Outreach contact will occur at formal presentations, volunteer events, meetings, field trips, tabling events, and at events hosted by project partners and other stakeholders.
O6 - Number of New Interpretive or Education Publications/Signs/ Kiosks/Displays/etc. Produced	Report the number of new interpretive or education publications produced, signs produced and installed, public informational websites or other electronic media presentations designed and implemented, and informational or interpretive kiosk displays produced and installed. Report each item produced as one unit.	We will produce at least 13 interpretative materials, including: 3 kiosks for pollinator gardens and at least 10 new informational packets, which could include brochures, flyers, or other media.
O7 - Number of Interpretive or Education Presentations Given and/or Community Events Participated in or hosted	Report the number of interpretive or educational presentations given. Report each presentation as one unit.	15 total over the course of the 5-year project.
O9 – Number of GIS Databases Generated and/or Map Layers Produced	Report the number of GIS databases created and/or the number of map layers produced to identify the location of natural resources within the environment and provide mapping for use in educational programs. Report each database or map layer as one unit.	5. This includes GIS layers for seed collection sites, non-native, invasive plant layer, out planting or seeding layer, pollinator garden layer, and seed grow-out layer.
O10 – Number of Volunteers Used	Report the number of volunteers used in educational or interpretive programs and for surveying, monitoring, or restoration activities. Report each volunteer as one unit.	125 volunteers during the volunteer events with non-native, invasive plant removal and native species planting or seeding.
O11 – Number of Databases, Reports, and Other Electronic Means of Documenting Activities	Report the number of new databases, electronic reporting tools, mathematical/statistical models, websites, or reports developed and implemented to document project and/or program work. Report each electronic document or method developed as one unit.	



O12 – Number of Management Plans/Handbooks/Manuals/Guides for Activity on Public Lands Completed (formerly under H11, F3, C4, and R1)	Report the number of new or revised ecosystem restoration, hazardous fuels reduction, recreation, cultural, resource management, or other activity plans when the decision document for the plan is signed. Revisions include modification of a significant portion of the decisions in the activity plan. Do not report minor amendments or changes in these plans. Report each plan as one unit.	
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### **Glossary**

**Accession** – One or more objects and/or specimens acquired in the same manner from one source at one time for the museum property collection. Accessioning is the process of formally accepting and establishing permanent legal title (ownership) and/or custody for an object or specimen or group of objects and/or specimens. An accession can consist of materials and associated archives from a single site or fossil locality, or materials from several sites or fossil localities.

**Biological Treatments** – Treatment of vegetation using domestic animals, insects, etc.

**Chemical Treatments** – Treatment of vegetation with herbicides, etc.

**Inventory** – Collection and analysis of baseline information; counting number of a given species, cultural feature, etc.

**Mechanical Treatments** – Treatments using hand or motorized tools for mowing, chaining, ripping, thinning, seeding, etc.

**Monitoring** – Establishment of current status and/or trends in environmental variables

**Riparian Habitat** – Riparian habitat includes the interface between upland habitat and a river, stream, or lake, regardless of whether it is intermittent or perennial. Riparian habitats are characterized by vegetation adapted to growing in water or saturated soils. Includes riparian woodlands, forests, buffer zones, or strips.

**Survey** – Observing an area to determine if a species or resource exists after which an inventory may or may not be performed.

**Upland Habitat** – Upland habitats include Mojave Desert, grassland, shrub lands, pinyon juniper forests, and woodland sites.

**Wetland Habitat** – Wetlands are saturated areas, either permanently or seasonally, with characteristic vegetation adapted to its unique soil conditions.

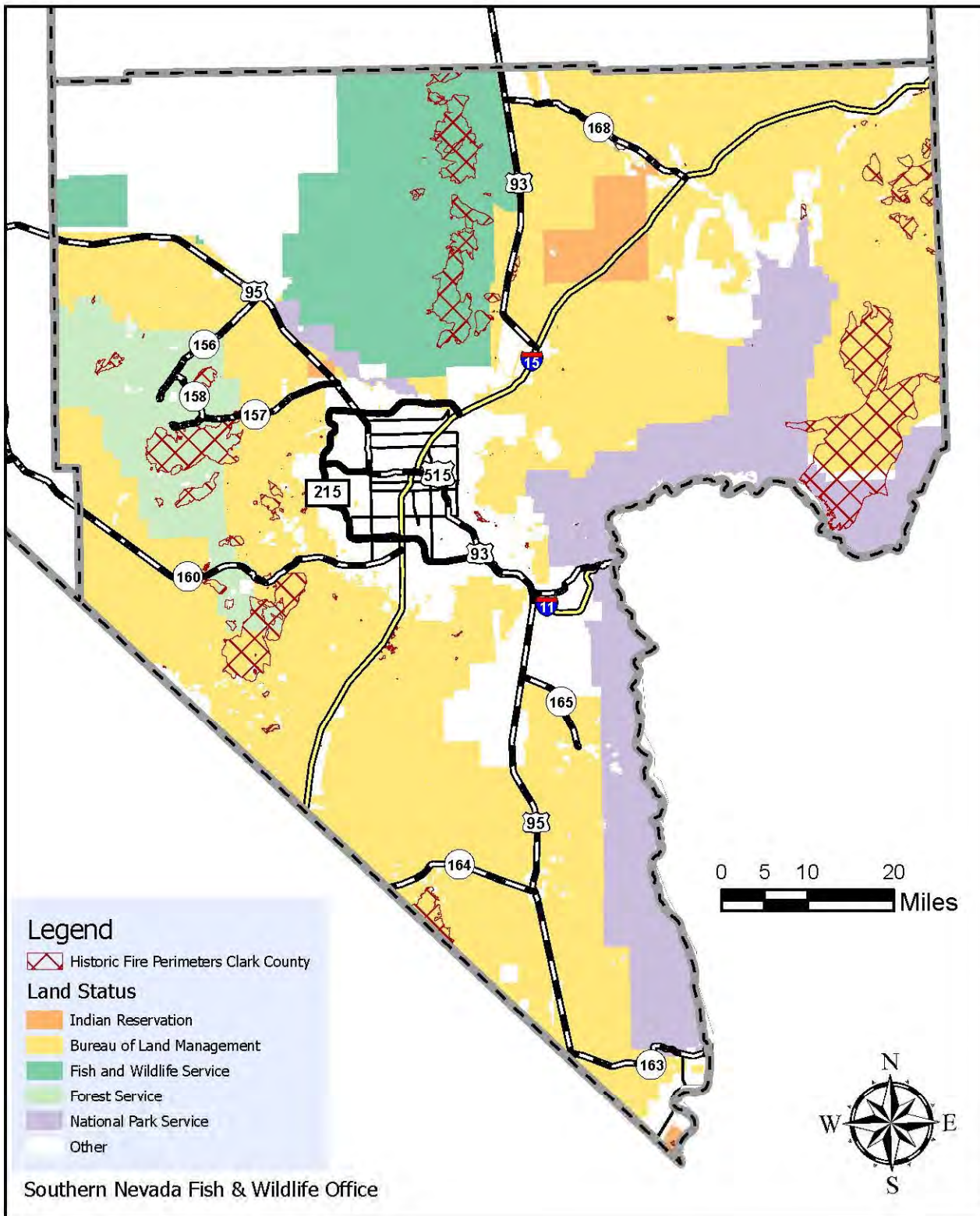
U.S. Fish and Wildlife Service (Lead)  
Southern Nevada Restoration Team

SNPLMA Round 20

Promoting Native Plants for Restoration,  
Landscaping, and Water Conservation

November 2, 2023

Figure 1: Fire History of Clark County,  
2005 to Present



Future fires will require native plant materials for restoration. This project will therefore assist with future restoration needs.

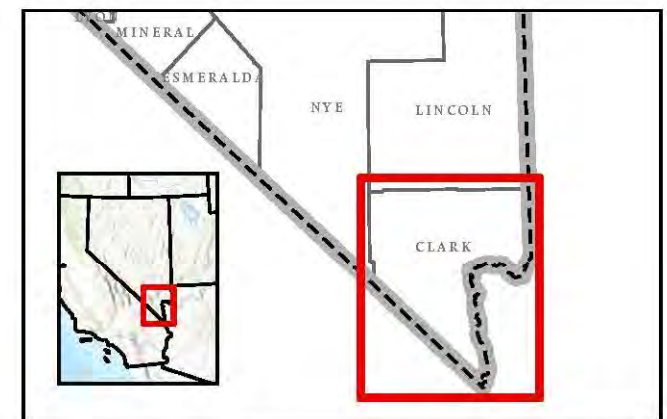
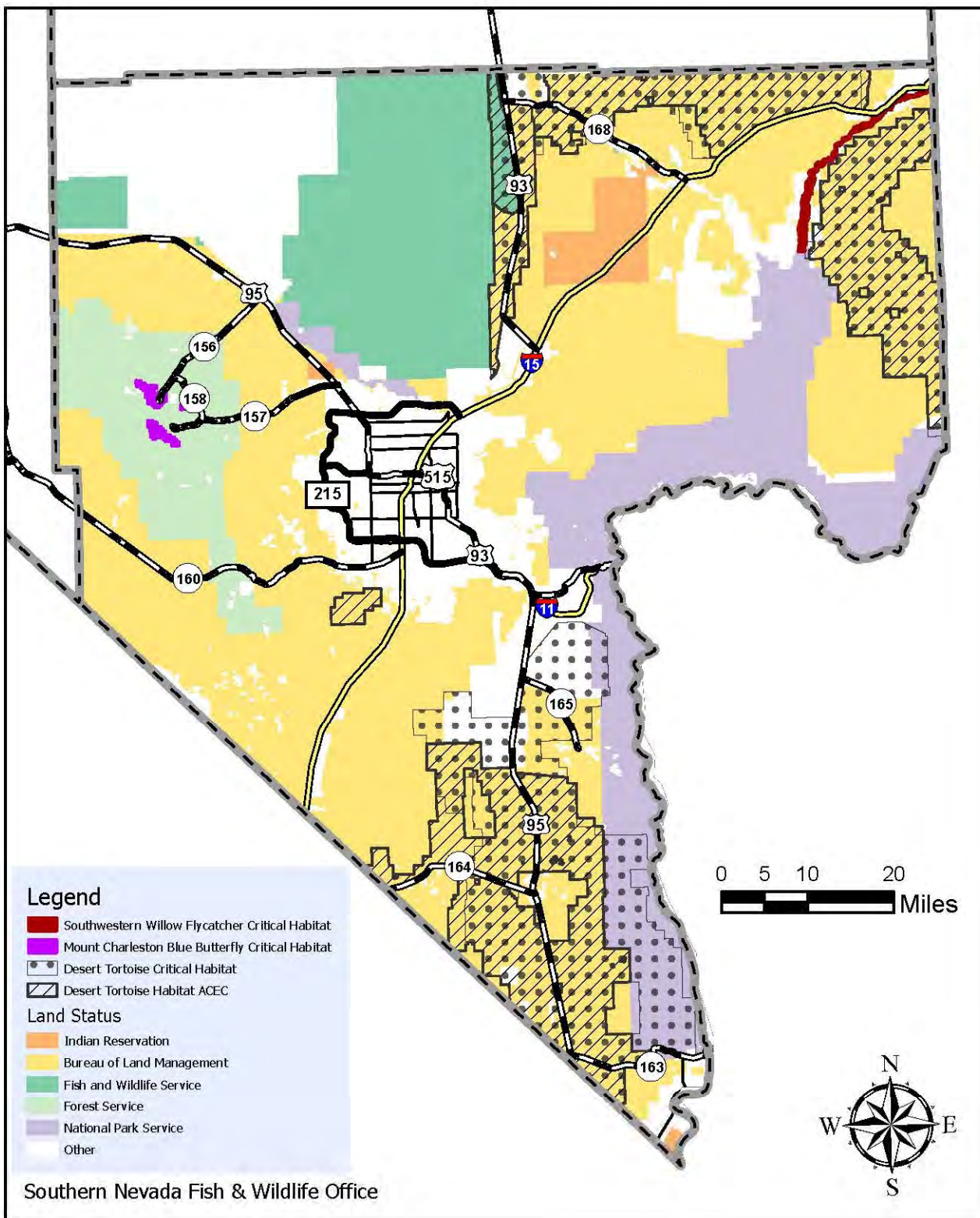
U.S. Fish and Wildlife Service (Lead)  
Southern Nevada Restoration Team

SNPLMA Round 20

Promoting Native Plants for Restoration,  
Landscaping, and Water Conservation

November 2, 2023

Figure 2: Important Habitat for  
Threatened and Endangered Species



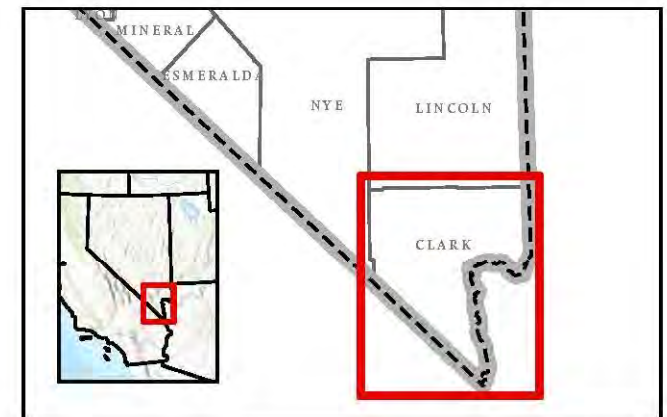
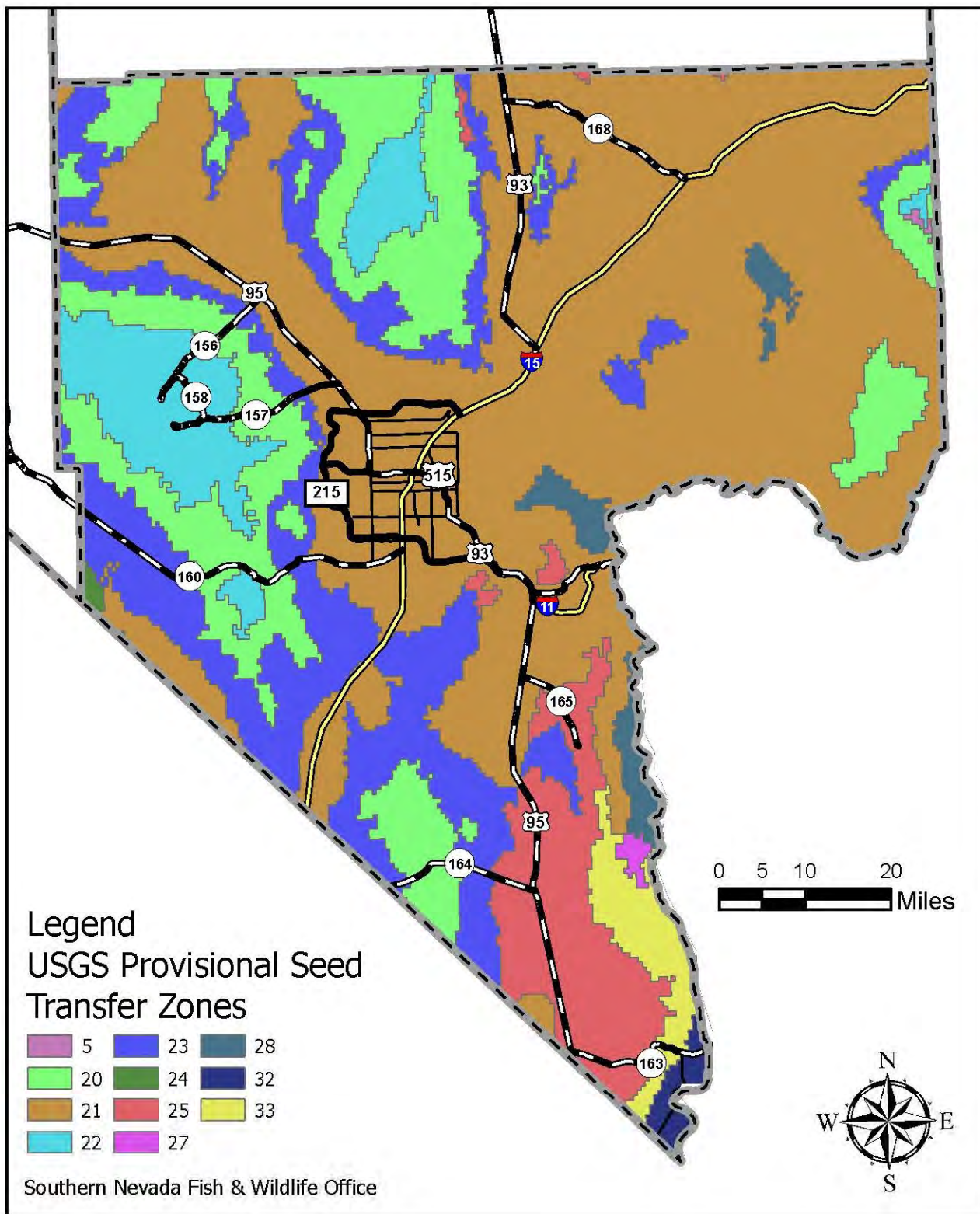
U.S. Fish and Wildlife Service (Lead)  
Southern Nevada Restoration Team

SNPLMA Round 20

Promoting Native Plants for Restoration,  
Landscaping, and Water Conservation

November 2, 2023

Figure 3: Seed Transfer Zones in Clark County





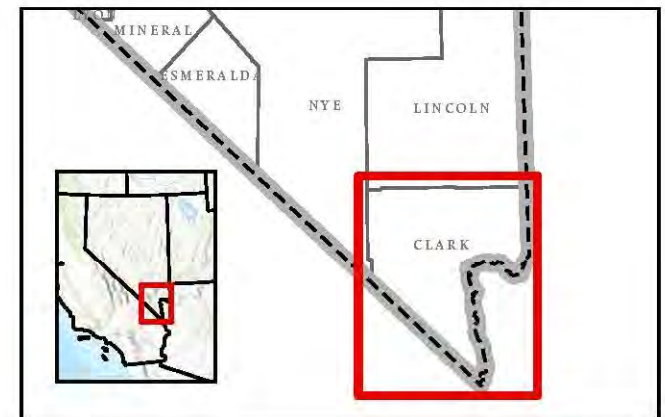
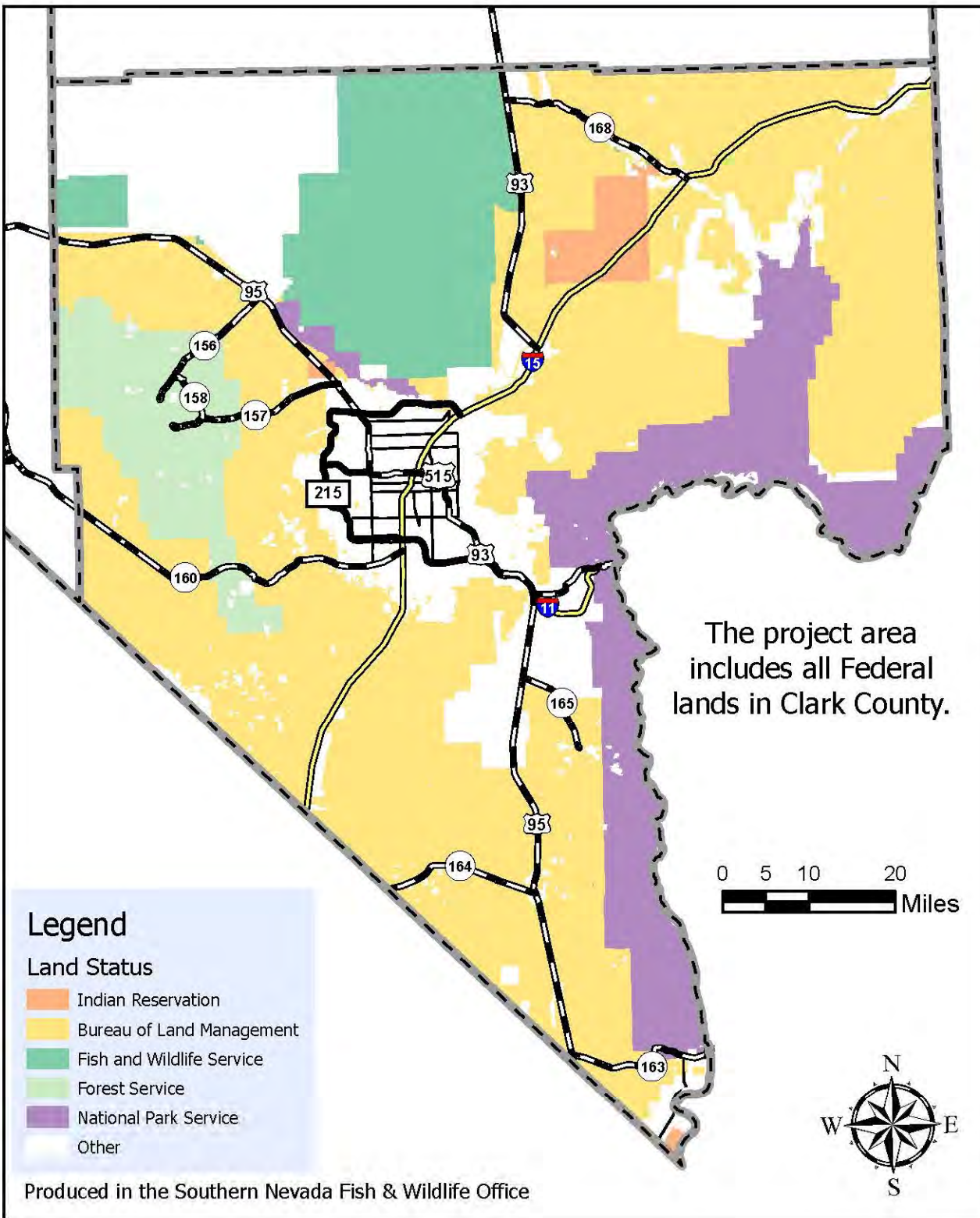
U.S. Fish and Wildlife Service (Lead)  
Southern Nevada Restoration Team

SNPLMA Round 20

Promoting Native Plants for Restoration,  
Landscaping, and Water Conservation

November 2, 2023

Figure 5: Project Location Map and  
Agency Management Areas



U.S. Fish and Wildlife Service (Lead)  
Southern Nevada Restoration Team

SNPLMA Round 20

Promoting Native Plants for Restoration,  
Landscaping, and Water Conservation

November 2, 2023

Figure 6: Project Components and  
Community and Sustainability EC Values

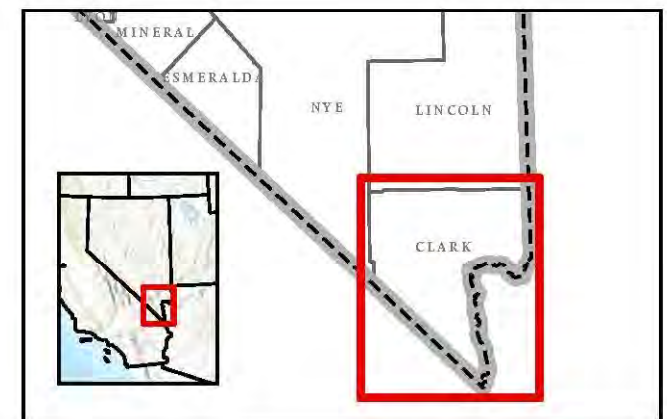
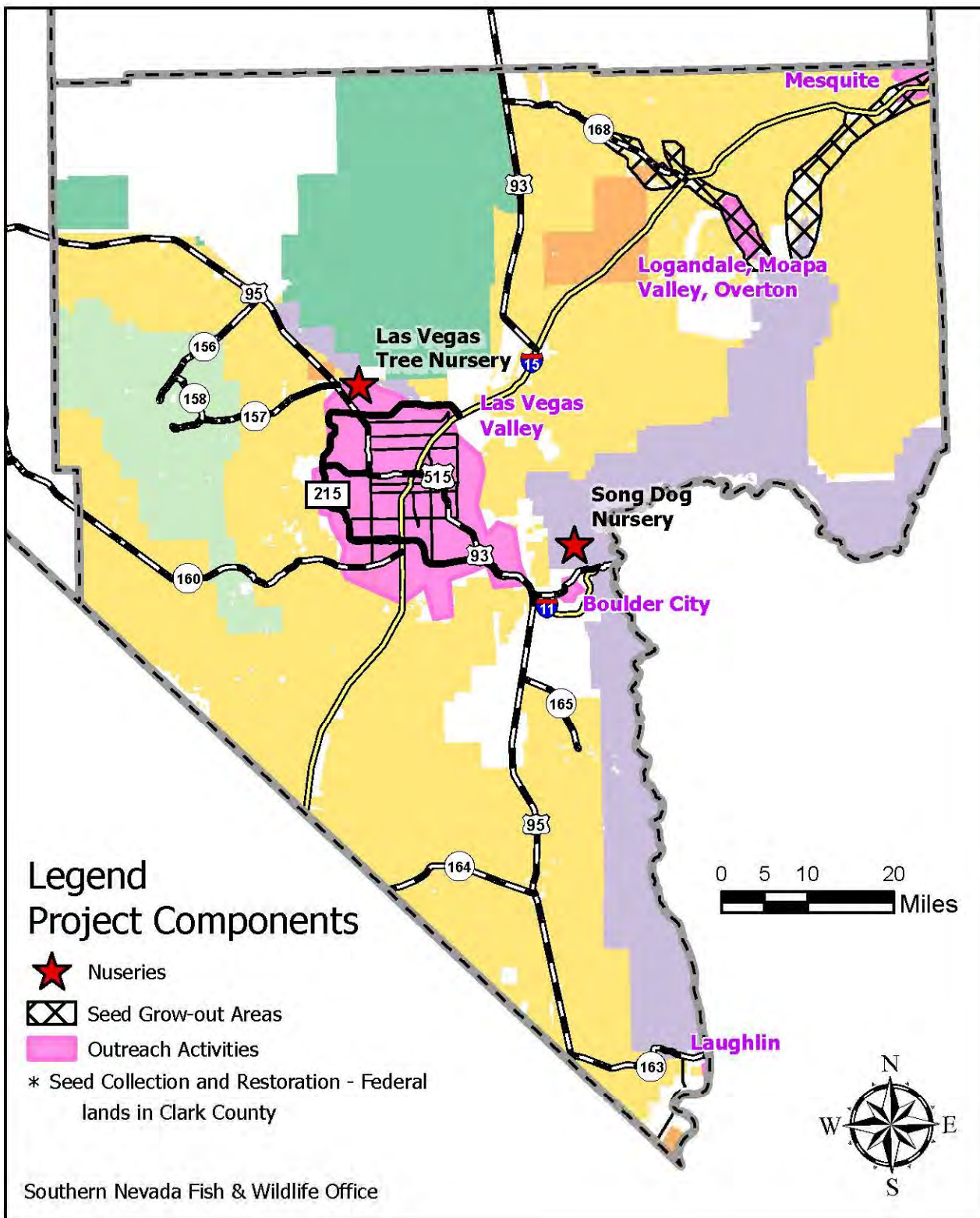










Photo 1. NPS's Song Dog Nursery produces native plants in containers for agency restoration projects. Photo by NPS.

Photo 2. The Middle Fire burned critical habitat for desert tortoise in 2005. Native plant materials are needed to restore burned areas such as this. Photo by FWS.

Photo 3. Collecting native blackbrush seeds on Desert National Wildlife Refuge. In this project, seeds will be collected on federal lands in Clark County. Photo by FWS.

Photo 4. The BLM's Mojave Desert Native Plant Materials Program pays Victor Valley College, in Victorville, California, to produce native seeds. This photo shows their native seed orchard where they are testing different growing protocols. In this project, we will work with rural producers in Clark County to increase native seeds. Photo by FWS.

Photo 5. Palmer's penstemon is a strong candidate for seed and container production because propagation techniques are established, it thrives in disturbed areas, and it is appealing for urban landscaping. Photo by USFS.

Photo 6. Existing pollinator garden at TC Sewell Elementary School in Henderson, Nevada. Many of the xeriscape plants are non-native. Photo by FWS.



## United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
Southern Nevada District Office  
Las Vegas Field Office  
4701 N. Torrey Pines Drive  
Las Vegas, Nevada 89130  
<http://www.blm.gov/nevada>

In Reply Refer To:  
6700 (NVS01000)

Kevin DesRoberts  
Project Leader  
Desert National Wildlife Refuge Complex  
United States Fish and Wildlife Service  
4701 North Torrey Pines Drive  
Las Vegas, Nevada, 89130

Dear Mr. DesRoberts:

The Bureau of Land Management, Southern Nevada District, Las Vegas Field Office, supports the Fish and Wildlife Service's proposal for the Southern Nevada Public Land Management Act's Round 20 Conservation Initiatives project titled "Promoting Native Plants for Restoration, Landscaping, and Water Conservation." This project will increase native plant materials necessary for maintaining and restoring public land in Southern Nevada as well as educate the public and local industry on the importance of native plants.

The mission of the Bureau of Land Management is to sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations. This project will support and further the mission by building the capacity to sustain the diversity and productivity of public lands in Southern Nevada.

We appreciate your efforts and hard work in developing this proposal. We believe that the completion of the stated goals will be invaluable in maintaining and restoring public lands in Southern Nevada.

Sincerely,

Bruce Sillitoe  
Field Manager  
Las Vegas Field Office

INTERIOR REGION 8 • LOWER COLORADO BASIN

ARIZONA, CALIFORNIA\*, NEVADA\*

\* PARTIAL

---

**File Code:** 2020

**Date:** October 27, 2023

Kevin DesRoberts  
Project Leader, Desert National Wildlife Refuge Complex  
United States Fish and Wildlife Service  
U.S. Fish and Wildlife Service  
4701 North Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. DesRoberts,

I submit this letter in support of the Southern Nevada Public Land Management Act (SNPLMA) Conservation Initiative Round 20 project nomination "*Promoting Native Plants for Restoration, Landscaping, and Water Conservation.*" This project, nominated by the U.S. Fish and Wildlife Service, Southern Nevada Fish and Wildlife Office, was developed collaboratively by the Southern Nevada Restoration Team, a working group appointed by the Southern Nevada Agency Partnership Team.

The Spring Mountains National Recreation Area, Humboldt-Toiyabe National Forest, continues to pursue collaborative solutions to restore degraded southern Nevada ecosystems. I sincerely appreciate the consideration of this project proposal for the long-term health and resiliency of our public lands and resources throughout southern Nevada. Native plants will also reduce wildfire risk and resiliency, which is a critical component of our Shared Stewardship Wildfire Crisis Strategy. This project is an outstanding example of interagency collaboration and coordination to address shared challenges and deficiencies in the native plant materials supply chain. It also provides connectivity between our agencies and the communities we serve by engaging and educating the public in native plant cultivation for public lands and urban landscaping.

Sincerely,

DEBORAH J. MACNEILL  
Area Manager





# United States Department of the Interior



NATIONAL PARK SERVICE  
Lake Mead National Recreation Area  
601 Nevada Way  
Boulder City, Nevada 89005

IN REPLY REFER TO:

1.A.2

November 2, 2023

Kevin DesRoberts  
Project Leader, Desert National Wildlife Refuge Complex  
United States Fish and Wildlife Service  
4701 N. Torrey Pines DR  
Las Vegas, NV 89130

Dear Mr. DesRoberts:

I am pleased to provide this letter of support for the Southern Nevada Public Lands Management Act (SNPLMA) interagency proposal, “Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation”. Goals of this project include increasing the availability of native plant materials in southern Nevada; educating the public, landscapers, and local governments about the benefits of native plants; and preventing the spread of invasive landscape plants onto federal lands.

The mission of the National Park Service is to preserve unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. Given our mission, the Song Dog Native Plant Nursery was established in 1993 at Lake Mead National Recreation Area with the goal of providing native plant material to the park and to other federal agencies for restoration of disturbed lands across the Mojave Desert. Even with subsequent expansions of this nursery, the need for native plants for projects on federal lands exceeds our ability to produce plant material. Additionally, few native Mojave Desert species are available at local commercial plant nurseries to supplement the supply for restoration projects on federal lands or for purchase for urban landscaping on commercial properties and at private homes. As a result, there is a critical need to produce native plants on a larger scale to fill these needs and to reduce the use of non-native plants within urban landscapes which contribute to increasing weed issues on surrounding public lands.

The National Park Service supports the goals of this project, including the creation of a pollinator garden within the park at the Alan Bible Visitor Center, which in turn would support the outreach and education plan included within this proposal. Park staff participate as members of the Southern Nevada Restoration Team (SNRT), and staff will help support implementation of project components.

Sincerely,

Mike Gauthier  
Superintendent



# LAS VEGAS WASH COORDINATION COMMITTEE

100 City Parkway, Suite 700 • Las Vegas, NV 89106  
702-822-3300 • FAX 702-822-3360 • [lvwash.org](http://lvwash.org)

August 30, 2023

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Drive  
Las Vegas, Nevada 89130

Dear Mr. Wandel:

**SUBJECT: LETTER OF SUPPORT FOR SNPLMA R20 PROPOSAL:  
PROMOTING NATIVE PLANTS FOR RESTORATION, POLLINATORS,  
LANDSCAPING, ECONOMIC DEVELOPMENT, AND WATER  
CONSERVATION**

I am writing a letter of support on behalf of the Las Vegas Wash Coordination Committee for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public, landscapers, and local governments about native plants.

In 1998, the Las Vegas Wash Coordination Committee (LVWCC), a 28-member stakeholder group, was created to stabilize the Las Vegas Wash, restore its ecological function, and provide long-term management for the environmentally important waterway. Enhancement activities have included the installation of more than 600 acres of native plants. Restoration efforts continue and include increasing wildlife habitat value on existing sites by planting a greater diversity of native vegetation, including milkweed and nectar species. This project would help with our efforts, as finding native plant material has long been a challenge.

The LVWCC supports the Southern Nevada Restoration Team's application for this vital project.

Sincerely,

Keiba Crear  
Division Manager, Stewardship and Sustainability, Southern Nevada Water Authority (lead agency of the LVWCC)

KKC:JRE:DMV:nh

Basic Management, Inc.  
Bureau of Reclamation  
Citizen Members  
City of Henderson  
City of Las Vegas  
City of North Las Vegas  
Clark County Parks and Recreation  
Clark County Regional Flood Control District  
Clark County Water Quality  
Clark County Water Reclamation District  
Colorado River Commission  
Conservation District of Southern Nevada  
Desert Wetlands Conservancy  
Lake Las Vegas Resort  
Las Vegas Boat Harbor  
National Park Service  
Natural Resources Conservation Service  
Nevada Department of Wildlife  
Nevada Division of Environmental Protection  
Nevada State Health Division  
Southern Nevada Health District  
Southern Nevada Water Authority  
University of Nevada, Las Vegas  
U.S. Army Corps of Engineers  
U.S. Environmental Protection Agency  
U.S. Fish and Wildlife Service  
U.S. Geological Survey



Guy Seeklus  
PO Box 1140  
Mesquite, Nevada 89024

Date: August 25, 2023

Subject: Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. Wandel:

I am writing a letter of support for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public about native plants.

I own the Camel Safari business along the Virgin River near Bunkerville, Nevada. I get visitors from all over the world who participate on camel rides around my 176-acre property. They ask many questions about the Mojave Desert ecosystem and the plants that they see. I have been removing the non-native salt cedar trees on my property. I am working with the U.S. Fish and Service's Partners for Fish and Wildlife Program on a project to remove more salt cedar, quantify camel herbivory of salt cedar, and plant native riparian plants along the river.

I have old agricultural fields that are not being used and have water that I can use to grow plants on these fields. I would like to partner on this project by growing out native plants for seed production. I own tractors and other farming equipment and have staff who are present every day to care for the camels.

I am excited to partner with the Southern Nevada Restoration Team on this much needed project.

Sincerely,



Guy Seeklus



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# NEVADA DIVISION OF FORESTRY

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STATE OF NEVADA  
Department of Conservation & Natural Resources

Joe Lombardo, *Governor*  
James A. Settelmeyer, *Director*  
Kacey KC, *State Forester/Firewarden*

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

## **Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation**

Dear Mr. Wandel:

I am writing a letter of support for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public, green industry, and local governments about the effective use of native plants in modern, beautiful, and ecologically diverse landscapes.

The mission of Nevada Division of Forestry (NDF) is to support and enhance the forests, rangelands, and watersheds of the state of Nevada. We are focused on improving the form and function of ecosystems of all types across the state to promote, from remote wilderness to urban parks. NDF will partner on this project by managing crews to wild harvest seeds from native species and grow out containerized plants at our Las Vegas State Tree Nursery. Additionally, NDF can clean, process, catalog, and distribute wild harvested seeds to commercial nurseries for grow out to sell to the public to increase the abundance of local genetics of native plants in urban landscapes. Additionally, NDF's Urban Forestry Program can advise, provide contacts for producers and sustainable landscaping groups, and collaborate with green industry professionals about the best strategies to promote the use of native plants in urban landscapes. The Urban Forestry program currently promotes climate resilient native trees to rural and urban communities, with a strong focus on closing the equity gap of tree benefits in disadvantaged communities. This could be expanded to include promoting native forbs and shrubs that benefit native pollinators and desert tortoise.

NDF is excited to partner with the Southern Nevada Restoration Team on this much needed project. We commit to partnering through providing labor and subject matter experts to develop effective strategies, and we believe in and support the program goals.

Sincerely,

Cayenne Engel  
Urban and Community Forestry Program Coordinator  
Nevada Division of Forestry  
[cengel@forestry.nv.gov](mailto:cengel@forestry.nv.gov) | 702-683-0639



August 22, 2023

Robert Wandel  
Assistant District Manager - SNPLMA Division  
U.S.D.I. Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

Subject: Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation

Mr. Wandel:

On behalf of the Southern Nevada Cooperative Weed Management Area, I submit this letter of support for the SNPLMA Round 20 proposed project "Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation."

The Southern Nevada CWMA is a partnership of landowners, agencies, organizations, and individuals concerned about noxious and invasive weeds in our area. Our purpose is to share information and coordinate resources among our partners and the public to help identify and manage infestations of such weeds, and to prevent their spread. Southern Nevada Restoration Team members were instrumental in forming our CWMA and continue to participate in it.

This proposed project would increase the availability of native plant materials for use in ecological restoration and wildland fire rehabilitation by land management agencies, which helps prevent invasion by non-native plant species, as well as for water-wise landscaping in southern Nevada communities. The education component would promote the use of native plants in landscaping in preference to exotic ornamental plants, some of which have been proven to be invasive, spreading into open spaces and natural environments where they compete with and displace native vegetation, in many cases increasing wildfire risk.

This project would help reduce the threat of invasive weeds. Thank you for your consideration.

A handwritten signature in black ink that reads "John Jones". The signature is written in a cursive style.

John Jones, Chair  
Southern Nevada CWMA

S.NV.CWMA@gmail.com  
702-755-2410 mobile

***Spread the word, not the weeds!***



100 City Parkway, Suite 700 • Las Vegas, NV 89106  
MAILING ADDRESS: P.O. Box 99956 • Las Vegas, NV 89193-9956  
702-862-3400 • snwa.com

August 16, 2023

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

**SUBJECT: LETTER OF SUPPORT FOR SNPLMA ROUND 20 PROPOSAL:  
PROMOTING NATIVE PLANTS FOR RESTORATION, POLLINATORS,  
LANDSCAPING, ECONOMIC DEVELOPMENT, AND WATER  
CONSERVATION**

Dear Mr. Wandel:

The Southern Nevada Water Authority (SNWA) is pleased to provide this letter of support for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public, landscapers, and local governments about native plants.

SNWA currently has two large projects restoring degraded landscapes with native plants; the Warm Springs Natural Area (WSNA) in Moapa, Nevada and the Las Vegas Wash (Wash) on the eastern end of the Las Vegas Valley. At WSNA, we are restoring several hundred acres of abandoned farmlands and habitat for the endangered Moapa dace and other wildlife. At the Wash, SNWA has also restored over 600 acres along this important waterway over the past 20 years.

With two large restoration projects having the goal of reestablishing native plant communities, we can appreciate the need for a program to increase the availability of these species for similar projects throughout southern Nevada. SNWA would like to partner on this project by growing out native plants for seed production in our WSNA propagation facility and offer areas for planting native species at WSNA where we can work with agencies to access the site and collect seed for their projects.

SNWA supports the Southern Nevada Restoration Team on this much needed project and look forward to partnering with the BLM. If you have any questions or need further information, please feel free to contact me at [keiba.crear@snwa.com](mailto:keiba.crear@snwa.com) or (702) 822-3388.

Sincerely,

A handwritten signature in black ink, appearing to read "Keiba K. Crear", written over a horizontal line.

Keiba K. Crear, Manager  
Stewardship & Sustainability Division

KKC: nh

SNWA MEMBER AGENCIES

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Las Vegas Valley Water District



THE NATURE CONSERVANCY

Northern Nevada Office  
639 Isbell Rd. # 330  
Reno, NV 89509

Southern Nevada Office  
8329 W. Sunset Rd., Ste. 200  
Las Vegas, NV 89113

Tel 775-322-4990  
Fax 775-322-5132

Tel 702-737-8744  
Fax 702-737-5787

August 31, 2023

Robert Wandel  
Assistant District Manager – SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

**Subject: Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation**

Dear Mr. Wandel:

On behalf of The Nature Conservancy (TNC) in Nevada, we are pleased to provide this letter of support for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project, if funded, will increase the availability of native plant materials in southern Nevada and provide educational opportunities for increased native plant use by municipalities, landscapers and the general public.

TNC's mission is to conserve the lands and waters on which all life and depends. The Nevada Chapter of TNC has been active in the Mojave Desert since the 1970s and has a long history of collaborating with stakeholders to find workable solutions to conservation issues in southern Nevada. This proposal addresses the systemic issues that at times prevent successful habitat restoration in the Mojave Desert: adequate supply of native plant materials, access to native plant materials by a wide breadth of stakeholders, and the community support for greater use of native plants over introduced species.

TNC has been actively working with the Nevada Native Seed Partnership (NNSP) which aims to increase the availability and use of native seed for rehabilitation, reclamation, and restoration treatments. The NNSP developed the Nevada Seed Strategy which shares several of the deliverables found in this proposal. We are currently developing a Seed Needs Assessment for the entire state of Nevada which includes spatially explicit seed menus and forecasts of estimated seed materials needed for restoration. Likewise, we have also been assembling an inventory of seed cleaning and seed storage infrastructure which we will be able to share to support this work. We hope these efforts can help support this project and are committed to collaborating with the project team at every opportunity.

We are pleased to see efforts like this to increase native plant material availability in the community which will in turn address availability for habitat restoration projects such as what will need to occur following the recent York Fire in the Mojave Preserve.

Please feel free to contact me should you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Mauricia', with a long horizontal flourish extending to the right.

Mauricia M.M. Baca  
Nevada State Director



EXTENSION

College of Agriculture,  
Biotechnology & Natural Resources

August 10, 2023

Subject: Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. Wandel:

I am writing a letter of support for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public, landscapers, and local governments about native plants.

The mission of the University of Nevada Extension is to discover, develop, disseminate, preserve and use knowledge to strengthen the social, economic and environmental well-being of people. Extension can partner on this project by assisting with the Agricultural Economics for the private landowners we have lined up to participate by growing small plots of native plants for native seed production. This would be accomplished by creating Enterprise Budget to estimate the costs. In addition, the University of Nevada Extension can assist with the educational portion of the project by providing public outreach. Extension offices provide support and research for many conservation initiatives throughout the state of Nevada. This could be expanded to include promoting native forbs and shrubs that benefit native pollinators and desert tortoise.

University of Nevada Extension is excited to partner with the Southern Nevada Restoration Team on this much needed project.

Sincerely,

Carol Bishop  
Associate Professor  
Extension Educator  
Northeast Clark County



To: Robert Wandel  
Assistant District Manager -  
SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

August 21, 2023

Subject: Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation

Dear Mr. Wandel

I am writing a letter of support for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public, landscapers, and local governments about native plants.

The mission of the VRC is to develop strategies and implementing improvements for the human use and ecological health of the Virgin River within its watershed area in Arizona and Nevada. VRC can partner on this project by promoting and facilitating education to the community on Native Plants and sharing information on how the public can participate in this effort. Our Volunteers will assist in collecting native seeds and assist in the replanting process along the Virgin River and throughout the watershed area. The Virgin River Coalition plans to give native plants to the interested public.

VR. is excited to partner with the Southern Nevada Restoration Team on this much needed project.

Sincerely,

A handwritten signature in black ink, appearing to be "DH", written over a light blue circular stamp.

Denise Houston  
VRC Coordinator

**Virgin River Coalition**

702-308-6736

Po Box 1685

virginrivercoalition@gmail.com





September 19, 2023

Subject: Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. Wandel:

I am writing a letter of support for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public, landscapers, and local governments about native plants.

The mission of Get Outdoors Nevada is to connect people of all ages and backgrounds to the outdoors by providing opportunities to experience, learn about, and care for our natural and urban outdoor spaces. We can potentially partner on this project through installation of native plant/pollinator gardens, distribution of native plant seeds, and/or education and outreach opportunities. In addition, Get Outdoors Nevada can potentially advise on management and maintenance of installed pollinator gardens.

Get Outdoors Nevada is excited to partner with the Southern Nevada Restoration Team on this much needed project.

Sincerely,

A handwritten signature in black ink that reads "Rachel Bergren". The signature is written in a cursive, flowing style.

Rachel Bergren, Executive Director



September 11, 2023

Subject: Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. Wandel:

I am writing a letter of support for the Promoting Native Plants for Restoration, Pollinators, Landscaping, Economic Development, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public, landscapers, and local governments about native plants.

The mission of Get Outdoors Nevada is to connect people of all ages and backgrounds to Nevada's outdoor spaces by providing opportunities to explore, learn about, and care for our urban and natural outdoor spaces. They do this through stewardship events and volunteering, environmental education, and community engagement. GON can potentially partner on this project through installation of native plant/pollinator gardens, distribution of native plant seeds, and/or education and outreach opportunities. In addition, Get Outdoors Nevada can potentially advise on management and maintenance of installed pollinator gardens.

Get Outdoors Nevada is excited to partner with the Southern Nevada Restoration Team on this much needed project.

Sincerely,

A handwritten signature in black ink, appearing to read "Shelly Kopinski".

Shelly Kopinski  
Director of Programs



October 16, 2023

Robert Wandel  
Assistant District Manager – SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. Wandel:

On behalf of the Desert Conservation Program, I am pleased to extend our support for the Southern Nevada Public Land Management Act's round 20 Conservation Initiatives project nomination "Promoting Native Plants for Restoration, Landscaping, and Water Conservation." This project proposes to increase the availability of native plant materials in southern Nevada to aid in non-native, invasive plant replacement and restoration activities while also helping to educate the public, landscapers, growers, and local governments about the importance of native plants.

The Desert Conservation Program manages regional compliance with Section 10 of the Endangered Species Act via implementation of the Multiple Species Habitat Conservation Plan (MSHCP). As the MSHCP is nearing the end of the current permit term, the Desert Conservation Program has been contemplating the future of the program and necessary changes to our conservation strategy. As climate change continues to exert its effect on the natural environment, we anticipate carrying out conservation actions in a more volatile environment, prone to more frequent and intense periods of drought, flooding, heat, and fire. A central component of our revised conservation strategy includes the collection and storage of seed material, particularly for rare species threatened by development activities. Restoration will also continue to be an important tool for mitigation of impacts under a revised MSHCP. Local facilities to sort, clean, and store seed materials will be necessary, but are currently lacking in the southern Nevada region. The work proposed in this round 20 nomination will fill that gap and promote the use of native materials across a spectrum of industry and government uses.

The Desert Conservation program will partner on this project by contributing any seed and plant material collected under the MSHCP permit towards the local collection for use in restoration efforts. The Desert Conservation Program also manages several properties along the Virgin River, and we are happy to continue discussions with the Southern Nevada Restoration Team about the potential use of one or more of these sites for plant material grow out. And finally, the Desert Conservation Program operates a robust public outreach and education program and we will partner with the Southern Nevada Restoration Team to conduct outreach and promote local facilities for acquisition of restoration material.

**BUILD**TO THE**MAX** **SHRED**TO THE**MAX** **EXPLORE**TO THE**MAX** **LEARN**TO THE**MAX**

STREAMLINING DEVELOPMENT • PROTECTING SPECIES • PRESERVING OUR FUTURE

4701 W Russell Road, Suite 200, Las Vegas, NV 89118 • Phone 702.455.3536 • FAX 702.382.4593

We are pleased to see this proposal, as it fulfills this need for an adequate supply of native restoration materials, and we strongly urge the SNPLMA Partners Working Group and Executive Committee to select this nomination for funding. Please feel free to contact me should you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink that reads "Kimberley Jenkins". The signature is fluid and cursive, with a long, sweeping tail on the final letter.

Kimberley Jenkins  
Principal Environmental Specialist  
Clark County Desert Conservation Program



P.O. Box 8965  
Reno  
NV 89507

October 6<sup>th</sup>, 2023.

**Letter of Support for SNPLMA R20 Proposal: Promoting Native Plants for Restoration, Landscaping, and Water Conservation**

Robert Wandel  
Assistant District Manager - SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. Wandel:

I am writing a letter of support for the Promoting Native Plants for Restoration, Landscaping, and Water Conservation project. This project will increase the availability of native plant materials in southern Nevada and educate the public, landscapers, and local governments about native plants.

The Nevada Native Plant Society (NNPS) is a corporation organized solely for educational, scientific and charitable purposes for the stimulation of interest in and the developing of an appreciation for native Nevada plants and their preservation. The Promoting Native Plants for Restoration, Landscaping, and Water Conservation project will support that mission by increasing the availability of native plants for a variety of projects and by educating people in southern Nevada about native plants.

The NNPS is excited to support the Southern Nevada Restoration Team on this much needed project.

Sincerely,

Arnold Tiehm  
NNPS President

RECEIVED BLM  
SOUTHERN NEVADA  
DISTRICT OFFICE  
2023 OCT 13 P 2:47

Instructions: Put project cost estimates in Tabs 1-8. The values from those tabs will roll-up to this summary worksheet. The Non-Federal Contribution can be entered in Tabs 1-8 as a whole amount, it does not need to be broken out by unit cost.

**PROJECT BUDGET**

<b>Project Name:</b>	Promoting Native Plants for Restoration, Landscaping, and Water Conservation	<b>Date:</b> 11/3/2023	
<b>Project Manager:</b>	Vance Imhoff	<b>Agency:</b> USFWS	
<b>Cost Categories</b>		<b>SNPLMA</b>	<b>Non-Federal Contribution</b>
1. Personnel (labor plus benefits)		\$ 1,080,000.00	\$ -
2. Travel		\$ 21,050.00	\$ -
3. Training		\$ 6,000.00	\$ -
4. Equipment		\$ 13,500.00	\$ -
5. Supplies/Materials		\$ 59,400.00	\$ -
6. Contracts and/or Agreements		\$ 3,776,640.00	\$ -
7. Vehicle Use		\$ 134,400.00	\$ -
8. Other Necessary Expenses		\$ 20,250.00	\$ -
<b>9. TOTAL PROJECT BUDGET</b>		<b>\$ 5,111,240.00</b>	<b>\$ -</b>

Notes:



Schedule B  
 CONSERVATION INITIATIVE  
 ESTIMATED NECESSARY EXPENSES

Project Name: Promoting Native Plants for Restoration, Landscaping, and Water Conservation Project #: Prepared by: Jonathan Smith, Lillian Setters, Curtis Deuser, Carrie Norman, Christiana Manville, Bryce Donaghue, Juliet Wallis, and Vance Imhoff Phone: (702) 515-5253, Vance Imhoff Date: 11/3/2023	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%; text-align: center;">Priority #:</td> <td style="width: 15%;"></td> <td style="width: 15%; text-align: center;">Agencies:</td> <td style="width: 40%;">NPS</td> </tr> <tr> <td colspan="4"></td> <td style="text-align: center;">Initial</td> </tr> <tr> <td colspan="4"></td> <td style="text-align: center;">Updated</td> </tr> </table>		Priority #:		Agencies:	NPS					Initial					Updated
	Priority #:		Agencies:	NPS												
				Initial												
				Updated												

<b>1. Planning &amp; Environmental Documentation</b> (Surveys/reports for cultural, natural, biological, archaeological resources, NEPA documentation, etc)	\$	2,500.00		1%
<b>2. FWS Consultation - Endangered Species Act</b> (direct expenses for FWS if formal consultation is required)	\$	-		0%
<b>3. Direct Federal Labor to Implement Project (Payroll)</b> (Federal labor costs for completing the project)	\$	270,000.00		60%
<b>4. Project Equipment and/or Supplies/ Materials</b> (include specialized equipment, supplies and materials not included in contracts/ agreements)	\$	-		0%
<b>5. Travel &amp; Per Diem for Implementation</b>	\$	-		0%
<b>6. Official Vehicle Use</b> (Based on agencies procedures for use, fuel, equipment, and mileage charges)	\$	-		0%
<b>7. Contracts/Grants/Agreements to complete the project</b>	\$	180,000.00		40%
<b>8. Required Training to Implement Project</b> (includes initial and annual training for LEOs and training necessary to implement the project)	\$	-		0%
<b>9. Other Necessary Expenses - See Expanded Budget</b>	\$	-		0%
<b>TOTAL</b>	\$	452,500.00		100%

<b>COMMENTS</b>







**1. PERSONNEL**

Include labor costs for all aspects of project implementation where agency labor will perform the work, e.g. planning and environmental documentation, section 106 compliance, labor to perform implementation, project management, interdisciplinary team (ID team), engineering, etc. Labor expense documentation must correlate the individual labor expense with the deliverable, task, or subtask. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total labor costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
NPS (biologist, nursery manager, weed specialist) (3 pp per year per position)	3600	Hours	\$ 75	\$ 270,000	\$ -
USFWS - 2 Biologists/Refuge Specialist	3600	Hours	\$ 75	\$ 270,000	\$ -
USFS-2 Botanist & 3 technicians	3600	Hours	\$ 75	\$ 270,000	\$ -
BLM SNDO (weed specialist, botanist, restoration coordinator, wildlife biologist)	3600	Hours	\$ 75	\$ 270,000	\$ -
			<b>Total</b>	<b>\$ 1,080,000</b>	<b>\$ -</b>

## 2. TRAVEL

Travel expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total travel costs.

Description of Travel and Purpose	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Tabling at events 2x year (2 individuals)	16	Travel Day	\$ 100	\$ 1,600	\$ -
Meeting with growers and partners	16	Travel Day	\$ 100	\$ 1,600	\$ -
Travel to presentations, local meetings (15 total over 5 years for 2 people)	30	Travel Day	\$ 100	\$ 3,000	\$ -
Travel for 3-day training (Project manager, grower liason, education outreach, 3 technicians)	18	Travel Day	\$ 450	\$ 8,100	\$ -
Travel to presentations, national meetings (15 total over 5 years, 3 people)	15	Travel Day	\$ 450	\$ 6,750	\$ -

Total	\$	21,050	\$	-
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### 3. TRAINING

Training expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Example, contracting officer representative or program officer/assistance agreement training, training for chainsaw use, training for pesticide application, visual resource management, etc. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total training costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Project Manager or other members of the team - Various Training	6	Each	\$ 1,000	\$ 6,000	\$ -

Total	\$	6,000	\$	-
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#### 4. EQUIPMENT

Purchase, lease, or rental of equipment (not included in a contract or agreement) for project implementation. Equipment must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). SNPLMA will only pay for the value of the equipment used during the project. The value of the equipment must be documented at the beginning and end of use to determine the amount SNPLMA will pay, if greater than \$5,000. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Laptop	3	Each	\$ 2,000	\$ 6,000	\$ -
Cell phones - 3 phones for 3 staff for 5 years	15	year	\$ 500	\$ 7,500	\$ -

Total	\$	13,500	\$	-
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### 5. SUPPLIES AND MATERIALS

Supplies and materials necessary to complete the project. Supplies/materials must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Supplies/materials must be the minimum amount necessary to accomplish the project; purchasing extra supplies/materials to "stock the cache" for post project management activities is prohibited. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Design of outreach materials - graphic design	2	item	\$ 12,500	\$ 25,000	\$ -
Supplies for Weed Replacement Events (gloves, water, contractor bags, canopy) - 50 to 100 participants	4	event	\$ 1,650	\$ 6,600	\$ -
Native plant outreach games and/or activities	2	game	\$ 2,000	\$ 4,000	\$ -
Display booth supplies (tables, table cloth, pop-up sign, pop-up tent, promotional materials [pencils, key chains, etc.])	2	set	\$ 10,000	\$ 20,000	\$ -
shirts for public outreach events - to be given away to the public	100	shirt	\$ 13	\$ 1,300	\$ -
silkscreen design for shirt	1	design	\$ 2,500	\$ 2,500	\$ -

Total	\$	59,400	\$	-
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## 6. CONTRACTS AND AGREEMENTS

Contracts and/or agreements (grants, cooperative agreements, assistance agreements, stewardship agreements, interlocal or state agreements, etc.) necessary to implement the project's purpose and deliverables (including tasks and subtasks, as appropriate). Extra or more robust documentation may be necessary if the contract and/or agreement is for multiple projects (e.g. a Master Agreement or CESU agreement). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total grant and agreements used to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
Project planning - facilitator services for stakeholder meetings and opportunities assessment	2	job	\$ 30,000	\$ 60,000	\$ -
Seed Production by local growers	5	grower	\$ 68,000	\$ 340,000	\$ -
Partners Container Stock Growout	4	year	\$ 35,000	\$ 140,000	\$ -
Seed Cleaning	100	1 lb	\$ 180	\$ 18,000	\$ -
Partner Seed Collection Crew and monitor (2 people)	3	year	\$ 200,000	\$ 600,000	\$ -
Pollinator garden installations (fencing, irrigation, gravel/rock, signage, and/or benches)	3	garden	\$ 150,000	\$ 450,000	\$ -
Agreement for Project manager (GS-11 or equivalent)	5	year	\$ 124,800	\$ 624,000	\$ -
Agreement for Grower Liaison (GS-9/11 or equivalent)	5	year	\$ 91,520	\$ 457,600	\$ -
Agreement for Education and Outreach Coordinator (GS-9/11 or equivalent)	5	year	\$ 91,520	\$ 457,600	\$ -
Overhead (est. 20% of each agreement)	1	20% of all agreements	\$ 629,440	\$ 629,440	\$ -

<b>Total</b>	<b>\$ 3,776,640</b>	<b>\$ -</b>
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**7. VEHICLE USE**

Use of an agency/entity vehicle, purchase of a new vehicle, rental of vehicle, or any other vehicle use not covered under Equipment. If possible, use the agency/entity fixed operation rate (FOR) multiplied by the unit (miles or hours) over the life of the project. The FOR includes depreciation and wear and tear on the vehicle tires, wiper blades, routine vehicle maintenance, etc. If special tires or replacement tires or other vehicle equipment is necessary, please show it under "Equipment." Vehicle expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total vehicle use to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
Vehicle for project manager (BLM)	48	Month	\$ 800	\$ 38,400	\$ -
Vehicle for EOC (NPS)	48	Month	\$ 800	\$ 38,400	\$ -
Vehicle for grower liasion (USFWS)	48	Month	\$ 800	\$ 38,400	\$ -
Vehicle for Forest Service personel (USFS)	24	Month	\$ 800	\$ 19,200	\$ -

<b>Total</b>	<b>\$</b>	<b>134,400</b>	<b>\$</b>	<b>-</b>
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### 8. OTHER NECESSARY EXPENSES

Other Necessary Expenses are time and materials necessary for project implementation but are not specific to any one deliverable (including tasks and subtasks, as appropriate). If you included the labor, equipment, and/or supplies and materials in the other sheets, do not include them here. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total other necessary expenses to implement the project. This is not a complete list. Contact the SNPLMA Division for guidance on other necessary expenses.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
All environmental and cultural compliance (NEPA/SHPO/ESA)	240	Hours	\$ 75	\$ 18,000	\$ -
IT services to install hardware, software, or service SNPLMA-funded computer equipment (10 hours per computer)	30	Hours	\$ 75	\$ 2,250	\$ -

<b>Total</b>	<b>\$ 20,250</b>	<b>\$ -</b>
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**SNPLMA Round 20  
Conservation Initiatives Project Addendum**

**Nomination:** Tab 5

**Entity:** Bureau of Land Management, Ely District (Interagency Project with FS and NPS)

**Project:** Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties

**Remarks/Clarifications Needed:**

**Section D - Project Deliverables-Primary:**

1. Bullet #3 "... Once seed is extracted, it can be stored in chest freezers at a facility such as the Ely BLM Seed Warehouse. For each population, seed cones will be collected from at least 10 trees".

**Recommend moving the last sentence to bullet #4 as it seems to be talking about collection rather than storage.**

2. Bullet #4 "For larger populations (>3000 acres in size), seed cones will be collected from more trees, at a rate of approximately 20 trees per 3,000 acres of a population. Up to 20 cones per tree will be collected. In total, up to 55,200 cones will be collected from 2,760 trees. This includes:
  - o Up to 29,000 cones on BLM lands from 1,450 trees
  - o Up to 1,200 cones on NPS land from 60 trees
  - o Up to 25,000 cones from 1,250 trees on National Forest lands

**Clarification Needed: Does the 'up to 20 cones per tree' also apply to populations that are less than 3,000 acres? Also, do these figures have wiggle room in case new populations are discovered and cones need to be collected from them?**

3. Bullet #5 "...Materials will include NPS website materials, and up to 20 NPS and BLM social media posts.

**Clarification Needed: What are website 'materials'? Also, is the 20 media posts for NPS and BLM each, or 20 total between the two entities?**

**Section D - Project Deliverables-Anticipated:**

1. Bullet #3 "Conduct genetic analyses to determine distinct populations to develop appropriate, effective, and disease resistant plant materials for restoration."

**Clarification needed that developing plant material is not a Deliverable but more of a possible future use of the genetic analysis.**

2. Bullets #3, #4, and #5

**Clarification needed: What would each of these three Deliverables result in? What are the tangible/measurable items that the tasks will produce?**

3. Bullet #6 "Develop interpretive programs related to bristlecone, limber and ponderosa pines such as walking presentations, campfire programs, and patio talks.

**Quantification Needed: Approximately 5 programs per year, etc.**

## **Section K – Ranking Criteria**

### **Criteria #1; A**

1. **Answer:** “This project enhances and connects habitats through inventory, monitoring, and the development of genetically appropriate plant materials.”

**Clarification needed that developing plant material is not a Deliverable for this project, but more of a possible future use of the genetic analysis.**

### **Criteria #2; B**

1. **Answer:** “The inventory and monitoring information from this project will remain relevant for many decades. Seeds from cones can maintain viability for up to two decades if stored properly. Genetic information about these pines will help for long-term understanding and management.”

**Clarification Needed: Are these seeds to be stored for long periods of time? Who will pay for the storage after this project has ended?**

### **Criteria #3; A**

1. **Answer:** “The educational outreach component of this project will strive to connect humans with these long-lived and interesting pine species. This project involves the creation of website materials, social media....”

**Clarification Needed: What are website ‘materials’? Examples would be helpful.**

### **Performance Measures:**

1. **Performance Measure O6** “Number of New Interpretive or Education Publications/ Signs/ Kiosks/ Displays/etc. produced.” 25

**Clarification Needed – Nomination Deliverable states ‘up to 20 NPS and BLM media posts. This performance measure should match the Deliverable.**

2. **Performance Measure O7** “Number of Interpretive or Education Presentations Given and/or Community Events Participated in or hosted.” 50

**Clarification Needed – What are the 50 presentations? Nomination Deliverables state 10 school field trips. Performance Measure should match the Deliverable.**

### **Budget:**

1. **Project Budget Tab** – This is an Interagency project; individual agencies’ budgets need to be broken out alongside with the master overall budget.
2. **Supplies and Materials** – Only NPS outreach materials are listed. Should BLM be listed also?

# Southern Nevada Public Land Management Act Conservation Initiatives Round 20

Bureau of Land Management, Ely District



*Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties*

Amount Requested: \$5,528,095

## A. BACKGROUND INFORMATION

The higher mountain ranges of Eastern Nevada are home to a variety of conifer species which grow in isolated stands. These conifer species include three species of pine – Great Basin bristlecone pine (*Pinus longaeva*), limber pine (*Pinus flexilis*), and ponderosa pine (*Pinus ponderosa*) - that can live to a very old age and grow to impressive sizes for the region. Bristlecone and limber pines can live for over 3,000 years. These pines are susceptible to a variety of threats, and without action, their continued existence could be in jeopardy. Bristlecone and limber pines are susceptible to the non-native fungal pathogen white pine blister rust (*Cronarium ribicola*) which has already greatly impacted other pine species such as the federally threatened whitebark pine (*Pinus albicaulis*). While white pine blister rust has not yet been documented in Eastern Nevada, as a wind-dispersed pathogen, impacts can quickly spread among co-occurring tree species and between mountain ranges. All three species could be impacted by insect outbreaks such as mountain pine beetle, and increased fire frequency and severity. Beetle-killed bristlecone and limber pines appear to be increasing in our region. Intensified and more frequent drought associated with climate change could also cause declines in these species that are adapted to only the wetter and cooler conditions found on mountaintops and in deep canyons. These species likely had a larger historical distribution in Eastern Nevada, but the large trees were logged out by early settlers and miners. Work proposed in this nomination proactively addresses these risk factors and provides data and plant materials for research and restoration that can help reduce the likelihood that these species experience widespread declines in our region.

This is an interagency project, as these species occur on Bureau of Land Management, National Forest, and Great Basin National Park lands. Conducting a systematic seed cone collection of these three pine species across federal lands in Eastern Nevada to identify genotypes with resistance to diseases and developing a locally adapted seed bank for use in future restoration efforts will help preserve these iconic species into the future. Educational outreach will help the public understand the importance of these exemplary tree species and share efforts by land managers to protect them from threats and to restore them to their historic range.

This project is in conformance with the Ely District Resources Management Plan, as amended, approved in 2008, the 1986 Humboldt National Forest Land and Resource Management Plan, and the 2015 Great Basin National Park Foundation Document.

This project will be implemented jointly by the BLM Ely District, Humboldt-Toiyabe National Forest, Ely Ranger District, and Great Basin National Park. The first year of this project will involve planning including completion of National Environmental Policy Act (NEPA) compliance, a Minimum Requirements Analysis for work conducted in wilderness, and the development of contracts and agreements to complete project work. Years two through four will focus on inventory, monitoring, cone collection, research projects, and development of educational materials. The fifth year will focus on final products – implementing educational programs, developing monitoring reports, and publishing research articles.

This project will be complete after five years. There are likely other projects that could be initiated following this project. A logical future phase of this project would be to out-plant pine

seedlings in areas appropriate for and in need of restoration. However, that phase is beyond the five-year timeline for this project and would require additional and separate funding.

Project performance can be measured quantitatively; performance can be measured by the number of populations and acres inventoried, the number of monitoring plots completed, and the number of cones collected from each population. In addition to quantity, the quality of the work, in terms of accuracy and precision, can also be evaluated.

Results from this project will be disseminated via a variety of methods so that the broadest possible audience receives benefit from the work. This would include educational programs for schools and visitors to the area, research publications to be used by scientists and land managers, as well as social media posts and educational materials aimed at the general public.

This project enhances resource protection and visitor experience by supporting long-term persistence of iconic high elevation tree species that are fundamental components of ecosystem health and provide exceptional aesthetic value in the mountain ranges of Eastern Nevada. This work also improves habitat sustainability at a landscape scale in the following ways:

Resource Protection: Resources cannot be protected if we don't know where they occur or their condition. This project will comprehensively inventory three unique species of pine on federal lands in Eastern Nevada. The populations inventoried will be evaluated for health including impacts from pathogens, insects, drought, and other stressors. Without this information, protective measures to conserve these species cannot be successfully or efficiently implemented.

Visitor experience: These unique species of pine draw visitors to Eastern Nevada, especially the opportunity to see old-growth trees and intact, diverse forests. Without actions to protect and sustain these resources, they could be lost due to novel and increasing stressors. Development of educational interpretive materials and programs will connect visitors to these pine species and increase public interest in and support for their conservation.

Habitat Sustainability: Increased disturbance such as insect and disease outbreaks, wildfire, and drought-induced mortality and stress will continue to fragment populations, which are already isolated from each other in the highest mountain ranges of Nevada. Collected seed cones can be used for the development of plant materials and determination of disease resistance. This will allow for restoration using genetically appropriate and adapted materials in areas that need restoration following historic or future disturbance or disease outbreak. These efforts could uniquely enable the persistence of populations of these species by supporting abundance and promoting establishment of trees that are well-adapted and resilient to future conditions and by protecting existing genetic diversity through seed collection.

**a. Describe Relationship to Prior Approved Projects and/or Phases Relevant to this Project (SNPLMA funded or not), and any anticipated Future Phases**

This project builds from the work of others describing and understanding the distribution of conifer species in the region. Examples include David Charlet's *Atlas of Nevada Conifers* (1996), and *Nevada Mountains: Landforms, Trees and Vegetation* (2019), as well as a Round 18

ENLRP project, *Vegetation Mapping at Great Basin National Park*, which will produce a vegetation map of the South Snake Range. These resources can help inform locations for inventory and cone collection. Additionally, the National Park Service has a [white pine monitoring project](#) with 30 existing plots in Great Basin National Park, established as part of the Mojave Network Inventory and Monitoring Program. The Mount Moriah Trails Reconstruction SNPLMA project involved collection of ponderosa pine cones from a portion of the Mount Moriah area of the Humboldt-Toiyabe National Forest for restoration purposes following wildfire. Work for this project will build from and complement these previous efforts.

The work of this project will likely tier to future phases in which on-the-ground restoration work would be conducted including tree plantings in areas appropriate for restoration. This project will lay the framework for potential landscape-scale restoration and protection of unique pine species in Eastern Nevada.

**b. Acknowledgement of Stand-Alone Project and no Guarantee of Funding for Future Phases**

This project is a stand-alone project and there is no expectation of future SNPLMA funding.

## **B. EXECUTIVE COMMITTEE'S SNPLMA STRATEGIC PLAN VALUES**

Conservation Initiative projects have two goals identified in the Strategic Plan:

- Goal 1: Sustain the quality of the outdoor environment by conserving, preserving, and restoring natural and cultural resources.
- Goal 2: Improve the quality of life for all publics in urban and rural communities by enhancing recreational opportunities that connect people with the outdoor environment.

Nominated projects should meet these two goals by focusing on the three SNPLMA core values, connectivity, sustainability, and community. Every nomination must explain how the three values are promoted by the project.

- **Connectivity**

This project will promote both habitat connectivity and connections of people with these important species and the breathtaking landscapes where they occur. The focus of this project is to better understand and protect unique high elevation pine species in Eastern Nevada, and to enable forest restoration in areas where restoration is needed and appropriate, through inventory, monitoring, and through the eventual development of genetically appropriate plant materials. These actions will help ensure that the habitats that are able to support these species in the future will be able to do so following disturbances such as fire and insect and disease outbreaks. If connectivity of landscapes that support populations of these pine species is broken due to disturbance now or in the future, the desired outcomes of this project will allow for restoration of that connectivity. This project will build on current work on US Forest Service and NPS lands to monitor



target tree species. Monitoring protocols developed by the NPS Inventory and Monitoring Program can be used, or modified, for this project. The scale of this nomination, which includes federal lands in both White Pine and Lincoln Counties, ensures connectivity of populations at a landscape scale.

In addition to ecological connectivity, this project will ensure that people can continue to connect with these unique tree species on their recreational endeavors. Experiencing an old growth stand of bristlecones, or a stringer of ponderosa pines along a creek are examples of unique and outstanding recreational experiences for both local community members and visitors to the region. On a practical level, these trees often provide the only shade or shelter for recreationists during outdoor excursions. They provide opportunities for people to also experience the wildlife that utilize them as habitat. Without measures to protect and restore these species in place, it is likely that recreational opportunities will be diminished.

- **Sustainability**

This project will be developed through the lens of the [RAD Framework](#) – Resist, Accept, Direct. The RAD Framework helps land managers develop appropriate strategies for managing resources in the face of climate change. All three species of pine that this project focuses on could be greatly impacted by the effects of climate change in Eastern Nevada. These species are already restricted to the tops of mountains and deep, cool canyons. With comprehensive inventory, monitoring information, and the development of plant materials, land managers will be able to implement concepts of the RAD Framework to best plan for how to protect and restore these important species in the locations that are suitable for their continued existence.

- **Community**

These unique pine species are important to the identity of the Eastern Nevada region. Outdoor recreationists visit the area to view these species, especially the old-growth trees. The area around Ely, Nevada is often called “Bristlecone Country”, and a BLM field office and a BLM wilderness area are named after this species (Bristlecone Field Office, Bristlecone Wilderness). White Pine County is named for the populations of limber pine in the area which were historically referred to as white pines. The continued existence of these species is important to the economic health and the quality of life of the local communities in the region, as experiencing these unique pines are a draw for tourists and provide high-quality outdoor recreational opportunities for residents and visitors, particularly during the heat of the summer when high elevation environments provide a refuge from sweltering valley floors. This project also supports community as a multiagency effort which will have interest and support from non-federal groups that value these species and/or work in montane and sub-alpine environments such as Old Growth Forest Network, Friends of Nevada Wilderness, Nevada Native Plant Society, GLORIA Great Basin, and the Audubon Society to build community around the preservation of these iconic trees. Ideally, this project will foster partnerships with community groups interested in working to protect and restore these tree species.

## C. PURPOSE STATEMENT

The Bureau of Land Management, National Park Service, and United States Forest Service will inventory for distribution and abundance, monitor for health, and collect plant materials for restoration purposes from bristlecone, limber, and ponderosa pine across federal lands in White Pine and Lincoln Counties. This effort will be conducted where these species occur or occurred historically to ensure their continued existence into the future in the face of climate change, insect and disease outbreaks, and high severity wildfires.

## D. PROJECT DELIVERABLES

### Primary:

- Inventory approximately 82 known populations from approximately 527,000 acres, and survey for undocumented populations, of bristlecone, limber, and ponderosa pines in Lincoln and White Pine Counties to determine the current distribution and abundance of these species. Inventory end-products will include spatial data (polygons) describing the locations of the populations, and within each population an abundance estimate. At least one herbarium specimen would be collected from each population. This includes:
  - Up to 60 populations and 202,000 acres on BLM land
  - Up to 19 populations and 285,000 acres on USFS land
  - Up to 3 populations and 40,000 acres on NPS land
- Monitor populations of these species and their habitats for health including impacts from insects, disease, drought, wildfire and other stressors using appropriate protocols. Up to 470 monitoring plots would be completed, with a goal of completing at least one monitoring plot in each population.
  - 100 to 250 plots on BLM lands
  - 10 to 20 plots at Great Basin National Park
  - 80 to 200 plots on National Forest lands
- Collect, extract and properly store seed from cones from distinct populations of these species to develop disease-resistant plant materials for restoration purposes. Once seed is extracted, it can be stored in chest freezers at a facility such as the Ely BLM Seed Warehouse. For each population, seed cones will be collected from at least 10 trees.
- For larger populations (>3000 acres in size), seed cones will be collected from more trees, at a rate of approximately 20 trees per 3,000 acres of a population. Up to 20 cones per tree will be collected. In total, up to 55,200 cones will be collected from 2,760 trees. This includes:
  - Up to 29,000 cones on BLM lands from 1,450 trees
  - Up to 1,200 cones on NPS land from 60 trees
  - Up to 25,000 cones from 1,250 trees on National Forest lands
- Develop educational and interpretive materials to provide information to the public on these important tree species and management efforts to conserve them. Materials will include NPS website materials, and up to 20 NPS and BLM social media posts.

### Anticipated:

- Conduct research on the historic distribution and utilization of these species in Lincoln and White Pine Counties through targeted field surveys of up to 20 locations where

species may have been historically present. Locations chosen will be based upon review of historical records such as newspapers, US Forest Service documents, history books and historical reports and archives.

- Conduct genetic analyses to determine distinct populations to develop appropriate, effective, and disease resistant plant materials for restoration.
- Conduct research on the effects of fire of these species to best manage these species for resilience to changing conditions.
- Conduct research on the mechanisms, such as bark stripping, that these species utilize to form old-growth stands so that conditions conducive to old-growth can be managed for, where the potential for old-growth exists.
- Collect observations (coordinates, photos, herbarium specimens) from up to 570,000 acres of other unique conifer species in the region, especially the federally threatened Whitebark pine (*Pinus albicaulis*) which is currently not known to occur in White Pine or Lincoln Counties.
- Develop interpretive programs related to bristlecone, limber and ponderosa pines such as walking presentations, campfire programs, and patio talks.
- Conduct up to 10 school field trips of the bristlecone trail in Great Basin National Park to increase youth engagement with nature.
- Conduct an ethnographic history of these species including tribal perspectives.

Standard:

- Complete National Environmental Policy Act (NEPA) analysis. NEPA will need to be completed separately for each agency and management unit.
- Complete Minimum Requirements Analysis (MRA) for conducting work in wilderness. MRAs will need to be completed separately for each agency/management unit.
- Complete Section 106 and National Historic Preservation Act requirements (NHPA). NHPA will be completed separately for each agency and management unit.
- Complete administrative tasks associated with project, including writing performance work statements for contracts and agreements to fulfill primary and anticipated deliverables.
- Provide oversight and administration of project to ensure the proper execution of deliverables and associated products.
- Each agency will submit a detailed work plan to the SNPLMA program.
- Each agency will complete budget tracking, quarterly and annual SNPLMA reporting, and quarterly funds requests.
- Each agency will collaborate on final reporting and complete project closeout.

## **E. PROJECT LOCATION**

**Identify County in Nevada where Project will be carried out:**

White Pine, Lincoln

**Identify Congressional District(s):**

NV District 2, NV District 4

**Latitude and Longitude:**

38.3, -114.6 (This project occurs over a broad area within White Pine and Lincoln Counties. It is not possible to describe this project with a single point location. The coordinates provided are approximately central. Please see project map for the locations where work will occur.

## F. PROJECT TIMEFRAME

This will be a full five-year project. The following timeline is idealized, and certain tasks may be performed in a different order depending on conditions. For instance, cone collection needs to occur when trees are producing cones, and some years are better than others for cone production.

- Year 1:
  - Complete NEPA, NHPA and other necessary compliance.
  - Complete Minimum Requirements Analysis for work in wilderness.
  - Develop and award contracts and agreements.
  - Develop and/or identify appropriate monitoring protocols.
  - Hire or identify a project manager that works at Ely BLM to oversee project.
- Year 2:
  - Start inventory and mapping through contract or agreement.
  - Cone collection begins for known populations if conditions are favorable.
  - Research projects begin.
- Year 3:
  - Complete inventory and mapping.
  - Develop spatial data products from inventory and mapping effort.
  - Using mapping products, develop a monitoring and cone collection scheme.
  - Continue and/or begin cone collection.
  - Continue research projects.
  - Start monitoring plots.
- Year 4:
  - Continue and complete monitoring plots.
  - Continue and possible completion of cone collection.
  - Wrap-up research projects.
  - Develop educational and interpretive materials related to project outcomes.
- Year 5:
  - Finish cone collection (if needed).
  - Implement educational and interpretive programs.
  - Complete final monitoring reports.
  - Write and publish journal articles and associated products from research projects.
  - Close-out project.

## G. LEVEL OF PROJECT READINESS FOR IMPLEMENTATION

Is this a shovel-ready project?  Yes  No

This project has a large planning, NEPA, and wilderness compliance workload that will occur in Year 1. We are ready to begin the planning and compliance process as soon as funds are available.

## **H. FUTURE OPERATING AND MAINTENANCE**

This project does not include building renovation, construction, or refurbishment.

## **I. PROJECT BUDGET**

Complete the project budget using the provided Excel spreadsheet template and upload as a separate document to the “Submissions” tab in the Nomination Portal. Do not embed the project budget in this document.

### Partnership and/or Contributed Funds

There are not currently identified or committed in-kind contributions for this project. Some of the work on this project, including cone collection and monitoring, could be completed with volunteer labor. At this time, there are no commitments from volunteer groups to support this project, but we anticipate interest from local and regional non-profit groups.

## **J. KEY CONTACTS**

Authorized Officer: Robbie McAboy, BLM Ely District Manager  
Email: [rmcaboy@blm.gov](mailto:rmcaboy@blm.gov)  
Phone Number: 775-289-1840

Project Manager: Neil Frakes, Natural Resource Specialist, BLM Ely District  
Email: [nfrakes@blm.gov](mailto:nfrakes@blm.gov)  
Phone Number: 775-289-1887

Budget Officer: Marland Holloway  
Email: [mholloway@blm.gov](mailto:mholloway@blm.gov)  
Phone Number: 775-289-1887

## **K. RANKING CRITERIA**

The Ranking Criteria are used to evaluate the nomination against the goals for the Conservation Initiatives category. Nominating entities are not to include either the total point value or the point values by criteria in their responses. Nominations will be reviewed and scored by the Conservation Initiatives subgroup. Explain how the project meets each applicable criterion.

**1. The nomination supports habitat enhancement, cultural resources, environmental health and protection, and/or public health and safety through connectivity and sustainability.** Include as many project subtypes as applicable to your nomination. Points for this criterion will be awarded on how well the nomination addresses the concepts within the factors, and the quality/quantity of results the project provides. The examples identified are not an all-inclusive list.

A. Habitat Enhancement. *The following are examples of project subtypes for habitat enhancement goals, objectives, or actions: Enhances or connects habitats, migratory corridors, or protected areas; Protects endangered species; Proactive steps to prevent listing; Invasive species treatment and/or control (plant and/or animal); Restoration of habitat for sensitive species at the watershed and/or landscape level; Project addresses climate change; Water quality and quantity monitoring; Cave management; Restoration of springs/streams/rivers; Road decommissioning and rehabilitation/restoration; Reintroduction or augmentation of species to restore overall ecosystem; Mitigates impacts of drought.*

Answer: This project enhances and connects habitats through inventory, monitoring, and the development of genetically appropriate plant materials. These actions will help ensure that the habitats that are able to support these pine species in the future will be able to do so following disturbances such as fire and insect and disease outbreaks, reducing likelihood of future federal listing under the Endangered Species Act. If connectivity of landscapes that support populations of these pine species is broken due to disturbance, the desired outcomes of this project will allow for restoration of that connectivity. This project enhances migratory corridors for birds and other wildlife that utilize these species for habitat. This project enhances protected areas such as Great Basin National Park and numerous wilderness areas in which these species occur.

Through inventory, health monitoring and cone collection, this project will lay the groundwork for future habitat restoration efforts at a landscape scale. These tree species are important habitat for a variety of sensitive species that depend upon them.

This project addresses climate change. All three species of pine that this project focuses on could be greatly impacted by the effects of climate change in the region. These species are already restricted to the tops of mountains and deep, cool canyons, remnant habitats that are expected to shrink as global temperatures rise. With comprehensive inventory, monitoring information, and the development of plant materials through cone collection, land managers will be able to implement concepts of the Resist-Accept-Direct (RAD) Framework to best plan for how to protect and restore these important species in the locations that are suitable for their continued existence.

Through cone collection efforts, this project will allow for the reintroduction of pine species in areas where they have been lost due to disturbances to restore the overall ecosystem. One of those disturbances that could result in mortality is more frequent and intensified drought due to climate change. Cone collection will allow for the development of plant materials such as seed and seedlings for restoration following drought impacts.

B. Cultural Resources. *The following are examples of project subtypes for cultural resources goals, objectives, or actions: surveys; National Register (eligible or currently approved); Protection/site stewards; Restoration/stabilization; and tribal involvement in the planning, design and/or implementation.*

Answer: This project includes an anticipated research deliverable to understand the historical distribution of these species and how they may have been utilized by area residents of the past. Another anticipated deliverable is an ethnographic history of these species including tribal perspectives.

C. Environmental Health and Protection and/or Public Health and Safety. *The following are examples of project subtypes for public health and safety goals, objectives, or action: Illegal litter/dumping cleanup; Information kiosks and signs; Addresses and mitigates adverse impacts to resources caused by the volume of people using the resource; Resolving trespass/encroachment/illegal use of public lands (i.e. homeless encampments, marijuana grow sites)/boundary surveys; Abandoned mine land (AML) with habitat restoration component; Improve the sustainability of the landscape health and ecosystem function; Remove the threat of catastrophic fire loss of the ecosystem; Improve water quality and/or mitigate the threat of soil erosion.*

Answer: This project improves sustainability of landscape health and ecosystem function through monitoring of tree health. We cannot mitigate the impacts of insects, disease, wildfire, and drought unless we know where the impacts are occurring. Collection of cones for the development of plant materials will allow for the completion of future restoration efforts where populations of these species have experienced declines due to stressors. The anticipated deliverable of conducting fire history and fire effects research will help identify future areas where restoration may be appropriate and needed. This project will also contribute to public health by promoting outdoor recreation to interact with these species.

**2. The nomination promotes sustainability by providing benefits in the near and long term by implementing actions to conserve and sustain healthy and resilient landscapes and providing durability, and relevancy.**

A. Conserves resources to ensure availability to current and/or future generations through management of natural and/or cultural resources for public benefit and sustainable social and economic utilization.

Answer: The inventory, monitoring and plant materials development included in this project will lay the groundwork for conservation of the three ecologically and economically important species of pine growing in Eastern Nevada. Without the information on the location of these species, and an understanding of their health, it is not possible to conserve them for future generations.

B. Will remain relevant and continue to provide a benefit beyond the existence of SNPLMA.

Answer: The inventory and monitoring information from this project will remain relevant for many decades. Seeds from cones can maintain viability for up to two decades if stored properly. Genetic information about these pines will help for long-term understanding and management.

C. Conserves or restores the functionality, resilience, and integrity of biological communities.

Answer: This project will lay the framework for conservation and restoration of these three species of pine, ensuring that there are functional populations, and that resilience can be maintained in the face of threats including insect outbreaks, pathogens, and wildfires.

D. Conserves or restores cultural resources through prudent management and prevention of damage, injury, decay, waste, or loss.

Answer: The anticipated deliverable of conducting an ethnographic history of these pine species could result in the identification of culturally valuable stands or populations and could create opportunities for collaborative management of these trees between tribes and federal land managers.

**3. The nomination promotes community, connecting humans to engage in the protection and the integrity of biological communities or cultural sites. Encourages people to connect with habitats, migratory corridors, protected areas, etc., and to appreciate and care for the environment.**

A. Encourages people to meaningfully connect with their natural environment and helps them appreciate and be a steward for the environment. Provides information and resources to educate and engage people in understanding their role in protection and maintenance of the natural environment by providing opportunities for them to connect to the natural resources directly or virtually or provides education of the environment.

Answer: The educational outreach component of this project will strive to connect humans with these long-lived and interesting pine species. This project involves the creation of website materials, social media posts, interpretive programs and school trips to help connect people with these unique trees. This project may also create volunteer opportunities to assist with inventory, monitoring, or cone collection efforts.

B. The nomination clearly defines and includes a stewardship component (federal or non-federal) to broaden support and reduce long-term costs by minimizing the human impact on the environment through an education plan with clear curricula and achievable goals and objectives.



Answer: The interpretive staff at Great Basin National Park have provided education over the long-term for many habitats and projects. For this project, they will focus on expanding outreach about bristlecone, limber, and ponderosa pines via updates to the park website and on social media as well as school field trip tours of old-growth stands. With a large social media reach, this method has already been used to educate the public widely. A series called “Tree Talk” that debuted this summer shared great information about the different tree species in the park.

C. Preserves the past (cultural or historic sites) for present or future generations.

Answer: These species of pine can live for more than 3,000 years and are considered some of the oldest organisms in existence. By taking action to inventory and monitor these trees for health will enable their continued existence for future generations.

**4. The nomination enhances partnerships to promote cooperation, collaboration, and stewardship. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project.**

A. The nomination promotes partnerships to promote collaboration which addresses and meets the needs of more than one agency (federal or state).

Answer: This is a multi-agency project, between NPS, BLM and the USFS, which will enhance partnerships among the agencies.

B. The nomination involves non-Federal, public partners, citizen groups or organizations in the development or accomplishment of resource management goals and other activities to prevent waste, damage, or neglect.

Answer: We anticipate partnering with a variety of non-profit organizations including the Audubon Society, the Sierra Club, Nevada Native Plant Society, The Nature Conservancy, and Friends of Nevada Wilderness. These partners can assist with inventory, monitoring and cone collection efforts.

C. Project has support for the planning, design, and/or implementation from non-profit, local, or state government, academia, tribal, or youth initiatives.

Answer: This project is of interest to non-profit groups, such as the National Park Foundation, as well as state government including the Nevada Division of Forestry and the Nevada Division of Natural Heritage. It is also of interest to academic researchers and builds upon existing scientific work by researchers that study these species.

D. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project, (i.e., volunteer labor valuation to be computed at the rate used by the Department of the Interior, non-federal employees’ actual hourly rate plus the value of any fringe benefits

received, actual costs for material, equipment, and supplies. *Overhead costs may not be included in determining in-kind contributions.*

Answer: It is likely that we will perform some of the work of this project through volunteer labor. The activities associated with this project lend themselves well to volunteer support.

## **L. ORDERS AND PRIORITIES**

Respond to the Executive Orders, Secretarial Orders, Department of the Interior Priorities, and USDA Forest Service Priorities as they apply to the purpose of the nomination.

Please see separate document, uploaded in the Nomination Portal

## **M. MAPS**

Maximum of six maps, labeled with a description. Insert here and upload maps as JPEG in the Nomination Portal.

Please see JPEG maps uploaded in the Nomination Portal

## **N. PHOTOS**

Maximum of six photos, up to 20mg each or less. Provide descriptions. Insert here and upload photos as JPEG in the Nomination Portal.

Please seed JPEG photos uploaded in the Nomination Portal.

## L. ORDERS AND PRIORITIES

Respond to the Executive Orders, Secretarial Orders, Department of the Interior Priorities, and USDA Forest Service Priorities as they apply to the purpose of the nomination.

### A. Executive Orders (EO):

- ***EO No. 13855: Promoting Active Management of America's Forests, Range Lands to Improve Conditions and Reduce Wildfire Risk***

This project greatly reduces the potential for catastrophic loss of forest habitat from wildfire through active management. This will be accomplished through the collection of seed to enable more rapid restoration efforts following wildfire.

- ***EO No. 14005: Ensuring the Future is Made in All of America by All of America's Workers***

This project involves the issuance of contracts and financial assistance agreements to complete the deliverables and activities associated with the project. The estimated amount of funds issued through contracts and agreements for this project exceeds \$3.7 million. This project will comply with EO #14005 and procure services from sources that will help American businesses and America's workers to the maximum extent possible.

- ***EO No. 14063: Use of Project Labor Agreements for Federal Construction Projects (applicable to projects estimated at \$35 million or more)***

Not applicable

- ***EO No. 14072: Strengthening the Nation's Forests, Communities, and Local Economies***

This project specifically addresses EO No. 14072 by promoting the continued health and resilience of old growth forests on BLM and USFS managed lands; i.e. BLM's IB 2023-013, Strengthening BLM Management Considerations in Old-Growth and Mature Forests. Bristlecone and limber pines are some of the oldest living organisms in existence; lifespans can exceed 3,000 years.

- ***EO No. 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All***

This project enhances environmental sustainability and builds climate resilience in areas where people recreate. School field trips will allow for opportunities for young people of all backgrounds to experience and understand these unique tree species. Media outreach will also allow for those that cannot make a trip to experience these trees in person an opportunity for a virtual experience.

## B. Secretarial Orders

- ***SO No. 3347: Conservation Stewardship and Outdoor Recreation.***

This project enhances conservation stewardship and improves outdoor recreation opportunities such as hunting by improving forest health and restoring healthy forests in Eastern Nevada. Visitors and locals enjoy opportunities to experience these species, and the species of wildlife that depend upon them for habitat

- ***SO No. 3356: Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories.***

This project includes managing habitat to support wildlife and other resources which will lead to enhancements for hunting and wildlife conservation. This project also includes an anticipated deliverable of conducting an ethnographic history, which would lead toward increased coordination with tribes. This project has strong support from the state government including the Nevada Division of Forestry and the Nevada Division of Natural Heritage.

- ***SO No. 3362: Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors.***

This project aims to understand threats to these unique species of pine, and to lay the groundwork for restoration efforts where appropriate and needed. As big game such as Rocky Mountain elk and mule deer use these forests as habitat, this project will enable improvements to habitat quality for big game.

- ***SO No. 3366: Increasing Recreational Opportunities on Lands and Waters Managed by the U.S. Department of the Interior***

This project increases recreational opportunities on Department of Interior lands both directly and indirectly. The educational and outreach components of this project will directly enable recreational pursuits to explore these unique tree species. Since experiencing these tree species, especially the old-growth stands, are a draw for recreational activities, ensuring their continued existence is important to maintain that draw for visitors. If catastrophic wildfires, droughts, or insect and disease damage cause a decline in these trees, then recreational opportunities will be diminished. This project aims to understand and mitigate the impacts of these stressors on these important trees, allowing for exceptional recreation into the future.

- ***SO No. 3370: Conservation Stewardship and Increasing Public Access to Urban National Wildlife Refuges.***

Not applicable

- ***SO No. 3372: Reducing Wildfire Risks on Department of the Interior Land Through Active Management.***

This project seeks to reduce wildfire risks on Department of Interior lands by collecting cones to produce seed in a way that utilizes the best available science. Seeding is a technique promoted in this Secretarial Order (Section 4.c.).

- ***SO No. 3373: Evaluating Public Access in Bureau of Land Management Public Land Disposal and Exchanges (focus is on Sec. 4.b.(3) Potential increased public recreational access to existing public lands resulting from the proposed land acquired through an exchange (acquisition).***

Not applicable

- ***SO No. 3376: Increasing Recreational Opportunities through the use of Electric Bikes.***

Not applicable

C. Department of the Interior Priorities:

- ***Identifying steps to accelerate responsible development of renewable energy on public lands and waters. We are investing in climate research and environmental innovation to incentivize the rapid deployment of clean energy solutions, while reviewing existing programs to restore balance on America's public lands and waters to benefit current and future generations.***

This project specifically involves climate change related research and how to best manage these species of pine under future climate scenarios by utilizing the Resist-Accept-Direct framework.

- ***Strengthening the government-to-government relationship with sovereign Tribal Nations. We understand that tribal sovereignty and self-governance, as well as honoring the federal trust responsibility to Tribal Nations, must be the cornerstones of federal Indian policy.***

An anticipated deliverable of this project is to conduct an ethnographic history of these pine species including tribal perspectives. This effort could enhance government-to-government relations with Tribal Nations.

- ***Making investments to support the Administration's goal of creating millions of family-supporting and union jobs. This includes establishing a new Climate Conservation Corps Initiative to put a new generation of Americans to work conserving and restoring public lands and waters, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate.***

This project will create numerous jobs through approximately \$3.7 million of funds obligated into contracts and agreements. This project will provide a multitude of opportunities for Americans to conduct meaningful conservation work to restore public lands, increase reforestation, protect biodiversity, improve access to recreation and mitigate the impacts of climate change.

- ***Working to conserve at least 30% each of our lands and waters by the year 2030.*** *We will work to protect biodiversity, slow extinction rates, and help leverage natural climate solutions by conserving 30% of America's lands and waters by 2030. This relies on support for local, state, private, and tribally led conservation and restoration efforts that are underway across America.*

This project involves work to help conserve public lands in Eastern Nevada, where pine forest species are under threat from climate change induced stressors like the spread of pathogens, increased insect outbreaks and severe drought. Systematic seed cone collection is a natural climate solution to these stressors.

- ***Centering equity and environmental justice.*** *The impacts of the multiple crises in the United States are not evenly distributed in our society. Communities of color, low-income families, and rural and indigenous communities have long suffered disproportionate and cumulative harm from air pollution, water pollution, and toxic sites. At every step of the way, Interior will engage diverse stakeholders across the country, as well as conduct formal consultation with Tribes in recognition of the U.S. government's trust responsibilities.*

Not applicable

D. USDA Forest Service Priorities:

- ***Controlling the COVID-19 pandemic***

Not applicable

- ***Providing economic relief***

This project will create numerous jobs through contracts and agreements and will provide opportunities for Americans to conduct meaningful conservation work to mitigate the impacts of climate change.

- ***Tackling climate change***

This project specifically involves climate change related research and how to best manage these species of pine under future climate scenarios by utilizing the Resist-Accept-Direct framework.

- *Advancing racial equity*

Not applicable

- *Improving our workforce and work environment*

This project will create numerous jobs through contracts and agreements and will provide opportunities for Americans to conduct meaningful conservation work to mitigate the impacts of climate change

Bureau of Land Management,  
 Ely District  
 US Forest Service, HTNF,  
 Ely Ranger Station  
 National Park Service,  
 Great Basin National Park  
 Round 20 Proposal

**PROTECT AND RESTORE UNIQUE  
 PINE SPECIES ON FEDERAL  
 LANDS OF WHITE PINE AND  
 LINCOLN COUNTIES**

SEPTEMBER 15, 2023



**Legend**

**Known Project Locations**

- ◇ Limber pine
- ◆ Great Basin bristlecone pine
- ◆ Ponderosa pine

□ White Pine and Lincoln Counties

— Interstates

— US Highways

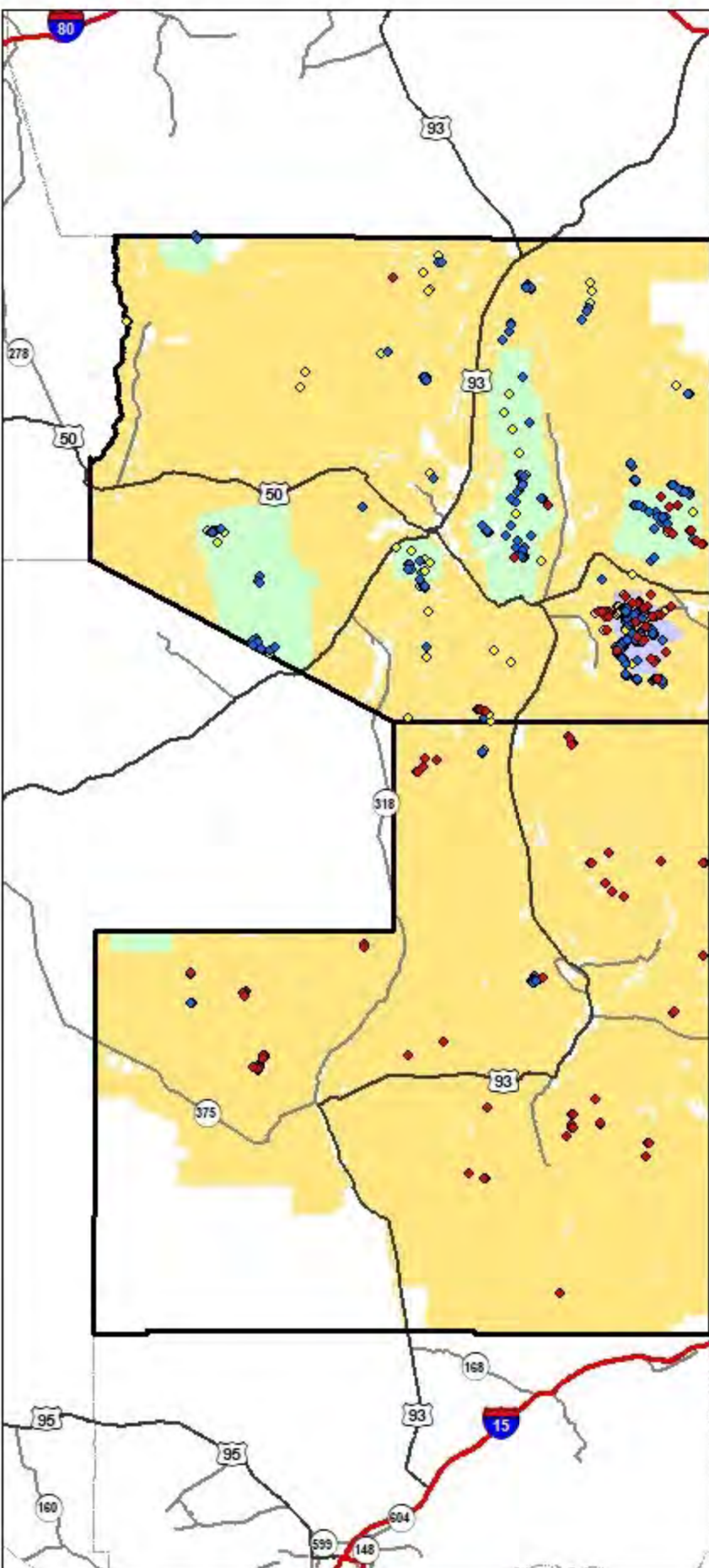
— State Highways

**Land Status**

■ Bureau of Land Management

■ Forest Service

■ National Park Service



Neil Frakes, Ely BLM

Project locations based on distribution data from Charlet (2021) and GBIF.org (2023)



Bureau of Land Management,  
Ely District  
US Forest Service, HTNF,  
Ely Ranger Station  
National Park Service,  
Great Basin National Park  
Round 20 Proposal

**PROTECT AND RESTORE UNIQUE  
PINE SPECIES ON FEDERAL  
LANDS OF WHITE PINE AND  
LINCOLN COUNTIES**

NOVEMBER 3, 2023



**Legend**

**Known Project Locations**

- ◇ Limber pine
- ◆ Great Basin bristlecone pine
- ◆ Ponderosa pine

□ White Pine and Lincoln Counties

● Communities

— Interstates

— US Highways

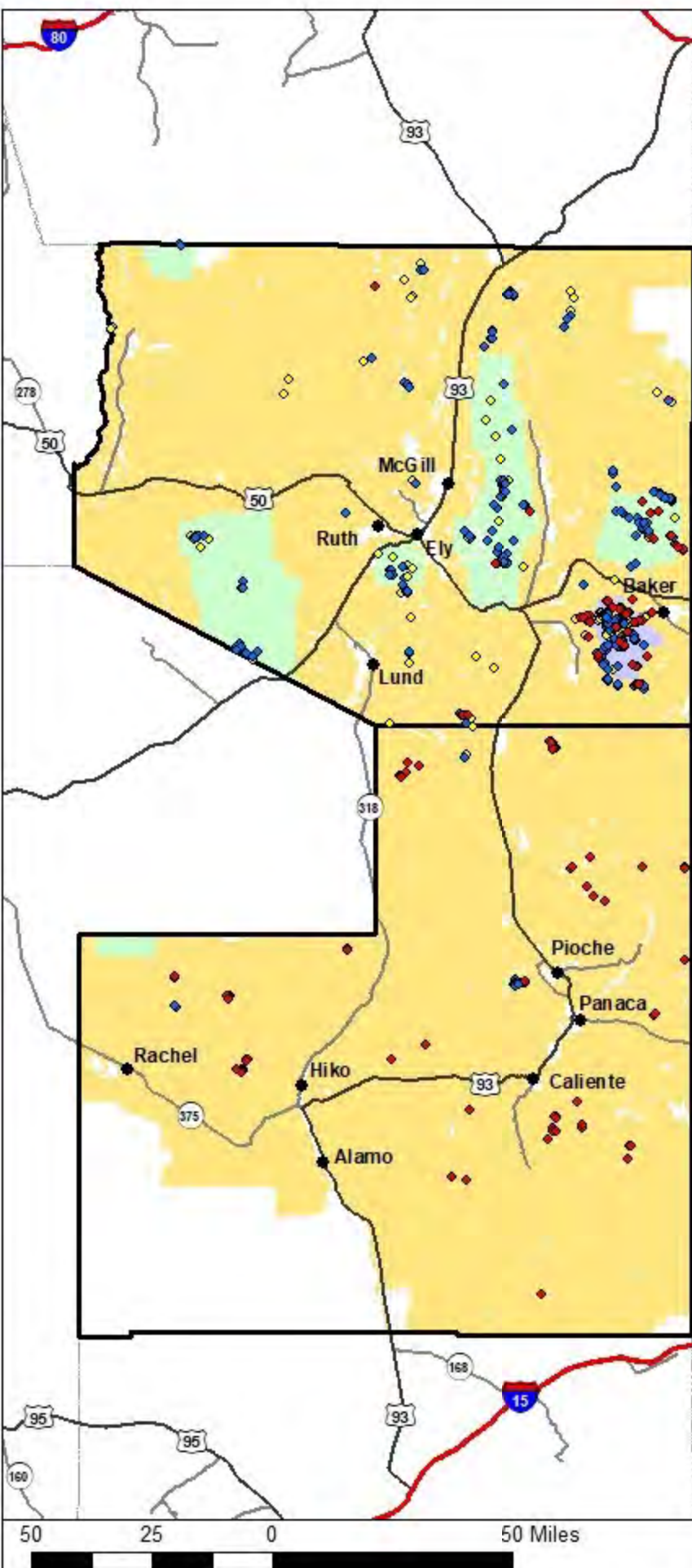
— State Highways

**Land Status**

■ Bureau of Land Management

■ Forest Service

■ National Park Service



Project locations based on distribution data from Charlet (2021) and GBIF.org (2023). Map shows locations of local communities in proximity to project locations. Despite a low population density, there are 11 communities in the two county area close to where these pine species occur.







## SNPLMA ROUND 19 NOMINATION Conservation Initiatives

### Performance Measures

<b>SNPLMA STRATEGIC PLAN GOAL 1: Sustain the Quality of the Outdoor Environment by Conserving, Preserving, and Restoring Natural and Cultural Resources</b>		
<b>Performance Measures for Habitat Enhancement</b>	<b>Definition of Performance Measure</b>	<b>Quantity</b>
H1 - Acres of Land Identified for Withdrawal from Multiple Use	<p>Report the number of acres of land identified for withdrawal or withdrawn from multiple use management (e.g., as the result of a cultural or biological survey, etc.).</p> <p>Report the number of acres of specially designated areas such as a wilderness area, national recreation or conservation area that are automatically withdrawn from multiple use or where use is limited as a consequence of acquisition using SNPLMA funds. Land acquired in an ACEC is not automatically withdrawn from multiple use and should be reported under L1 only.</p> <p>Report to the nearest whole acre.</p>	0
H2 - Miles of Riparian Stream or Shoreline Habitat Treated, Enhanced, or Restored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the miles have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as those should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as those should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole mile.</p>	0
H3 - Miles of Riparian Stream or Shoreline Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole mile.</p>	0
H4 - Acres of Upland Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of upland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland</p>	0

	<p>fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	
H5 - Acres of Upland Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of upland vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole acre.</p>	527,000
H6 - Acres of Wetland / Riparian Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of wetland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	0
H7 - Acres of Wetland / Riparian Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of wetland vegetation and/or wildlife habitats inventoried or monitored.</p> <p>Report to the nearest whole acre.</p>	0
H8 - Number of Water Developments Constructed or Improved for Wildlife	<p>Report the number of water developments for use by wildlife constructed or improved/repared within all habitat types. Existing projects may be counted under this performance measure if functional improvements/repairs are made as defined in the project nomination.</p> <p>Report each development constructed or improved as one unit (e.g., one project may have three water developments).</p>	0
H9 - Acres of Invasive Plant Species Treated or Restored	<p>Report the number of acres of weed infestation treated with chemical, mechanical, physical, or biological control agents for the purpose of weed control. Include acres treated by fire when fire is used as a physical control agent for weed control rather than as a hazardous fuels treatment. Each acre treated is counted only once during the life of the project, no matter how many re-treatments occurred during the project.</p> <p>Report to the nearest whole acre.</p>	0
H10 - Acres of Invasive Plant Species Surveyed, Inventoried, or Monitored	<p>Report the number of acres of weed infestation inventoried or monitored. Include monitoring of weed treatment projects reported under performance measure H9.</p> <p>Report to the nearest whole acre.</p>	0

H12 - Acres of Herd Management Areas Surveyed, Inventoried, or Monitored	Report the number of acres of wild horse and burro herd management areas or herd areas surveyed, inventoried, or monitored. Report to the nearest whole acre.	0
H13 - Number of Conservation or Protection Actions Taken within a Herd Management Area	Report the number of actions taken within a wild horse and burro herd management area to conserve or protect the area for the benefit of the herd (e.g., fences, water developments, vegetative treatments). Report each action as one unit.	0
H14 - Number of Threatened and Endangered Species Recovery Actions Implemented	Report the number of individual recovery actions performed for threatened or endangered species recovery as identified in recovery plans, conservation management plans, or land use planning documents. Include surveys, inventories, and monitoring as recovery actions. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same recovery action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	0
H15- Number of Conservation Actions Implemented for Non-Listed Species	Report the number of individual conservation actions for species not listed under the Endangered Species Act. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same conservation action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	82
H16 - Miles of Roads or Trails Decommissioned and/or Rehabilitated	Report the number of miles of roads and/or trails decommissioned and/or rehabilitated within all habitats (urban, upland, riparian, stream, trails in caves, etc.). Closure may include designation, signing, blockage by physical means, obliteration, etc. Report to the nearest whole mile.	0
H17 – Miles of Roads or Trails Surveyed, Inventoried, or Monitored	Report the number of miles of roads and/or trails inventoried or monitored. Report to the nearest whole mile or linear foot. Report to the nearest whole mile.	0

Performance Measures for Wildland Fire Management	Definition of Performance Measure	Quantity
F1 - Acres of Hazardous Fuels Treated – Non-Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency outside the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	0
F2 - Acres of Hazardous Fuels Treated – Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency within the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	0

Performance Measures for Cultural / Paleontological Resources	Definition of Performance Measures	Quantity
C1 - Number of Cultural or Historic Sites or Structures Stabilized or Protected	Report the number (one unit for each site or each structure) where work is completed to protect, stabilize, restore, excavate, and/or manage cultural features. For sites receiving multiple treatments, count each site only once, but if multiple structures are on a site, count each structure separately. For example, an archeological dig site would be counted as one although multiple excavations may take place on the site, whereas a site having remnants of three separate dwellings would be counted as three. Report installation of interpretive signs and structures (e.g., kiosk displays) under O6. Report administrative actions such as mineral withdrawals, closures, or special designations under H1. Report each site or structure as one unit.	0
C2 - Number of Cultural or Paleontological Artifacts Protected	Report the number of cultural and/or paleontological artifacts protected, stabilized, or catalogued. Report one unit for each repatriation or transfer of custody of Native American human remains, funerary objects, sacred objects, and/or objects of cultural patrimony (cultural items) held in collections, pursuant to Title 43 CFR Part 10.10.; each instance in which all requirements of Title 43 CFR Part 10.10 have been met but where actual repatriation has not been completed because of decisions made by lineal descendants or Indian tribes or lack of a valid claim; and reburial of repatriated cultural items on BLM public lands. Report the number of accessions cataloged, inventoried, rehoused and/or otherwise	0



	<p>upgraded. Materials from several sites or localities that are accessioned and cataloged under a single accession number should be considered one unit. An accession for which any one or more of the tasks of cataloging, inventorying, or upgrading has been completed should be reported as one unit.</p> <p>Report each artifact as one unit.</p>	
C3 - Acres of Cultural / Paleontological Resources Surveyed, Inventoried or Monitored	<p>Report the number of acres of land surveyed, inventoried, or monitored for cultural and/or paleontological resources. Include acres surveyed using Class I study of existing information inventory, Class II probabilistic field survey, or Class III intensive field survey and resultant inventory as required by Section 14 of the Archaeological Resources Protection Act (ARPA) or Section 110 of the National Historic Preservation Act (NHPA).</p> <p>Report to the nearest whole acre.</p>	0

<b>SNPLMA STRATEGIC PLAN: Other Performance Measures that Also Support the Three Values for SNPLMA Implementation of Sustainability, Connectivity, and Community</b>		
<b>Other Performance Measures</b>	<b>Definition of Performance Measures</b>	<b>Quantity</b>
O1 - Number of Hazardous Sites Remediated	<p>Report the number of hazardous sites where remediation actions are completed. Actions to be included are: removal of safety hazards, clean-up operations, restoration actions, and water quality remediation actions. Do not report temporary remediation measures.</p> <p>Report each site as one unit. When applicable, also report total weight of trash removed during clean-up operations.</p>	0
O3 - Number of Law Enforcement Patrols, Incident Reports, Investigations	<p>Report the number of law enforcement patrol actions, incident reports taken, and investigations conducted.</p> <p>Report each item as one unit.</p>	0
O4 - Number of Scientific / Technical Reports Produced	<p>Report the number of scientific technical reports produced.</p> <p>Report each report as one unit.</p>	10
O5 - Number of Outreach Contacts Made	<p>Report the number of education and outreach contacts made through interpretation and environmental education, such as number of teachers trained, number of participants in workshops, etc.</p> <p>Report each participant as one unit.</p>	300
O6 - Number of New Interpretive or Education Publications/Signs/ Kiosks/Displays/etc. Produced	<p>Report the number of new interpretive or education publications produced, signs produced and installed, public informational websites or other electronic media presentations designed and implemented, and</p>	25

	informational or interpretive kiosk displays produced and installed. Report each item produced as one unit.	
O7 - Number of Interpretive or Education Presentations Given and/or Community Events Participated in or hosted	Report the number of interpretive or educational presentations given. Report each presentation as one unit.	50
O9 – Number of GIS Databases Generated and/or Map Layers Produced	Report the number of GIS databases created and/or the number of map layers produced to identify the location of natural resources within the environment and provide mapping for use in educational programs. Report each database or map layer as one unit.	6
O10 – Number of Volunteers Used	Report the number of volunteers used in educational or interpretive programs and for surveying, monitoring, or restoration activities. Report each volunteer as one unit.	25
O11 – Number of Databases, Reports, and Other Electronic Means of Documenting Activities	Report the number of new databases, electronic reporting tools, mathematical/statistical models, websites, or reports developed and implemented to document project and/or program work. Report each electronic document or method developed as one unit.	1
O12 – Number of Management Plans/Handbooks/Manuals/Guides for Activity on Public Lands Completed (formerly under H11, F3, C4, and R1)	Report the number of new or revised ecosystem restoration, hazardous fuels reduction, recreation, cultural, resource management, or other activity plans when the decision document for the plan is signed. Revisions include modification of a significant portion of the decisions in the activity plan. Do not report minor amendments or changes in these plans. Report each plan as one unit.	0

### **Glossary**

**Accession** – One or more objects and/or specimens acquired in the same manner from one source at one time for the museum property collection. Accessioning is the process of formally accepting and establishing permanent legal title (ownership) and/or custody for an object or specimen or group of objects and/or specimens. An accession can consist of materials and associated archives from a single site or fossil locality, or materials from several sites or fossil localities.

**Biological Treatments** – Treatment of vegetation using domestic animals, insects, etc.

**Chemical Treatments** – Treatment of vegetation with herbicides, etc.

**Inventory** – Collection and analysis of baseline information; counting number of a given species, cultural feature, etc.

**Mechanical Treatments** – Treatments using hand or motorized tools for mowing, chaining, ripping, thinning, seeding, etc.

**Monitoring** – Establishment of current status and/or trends in environmental variables

**Riparian Habitat** – Riparian habitat includes the interface between upland habitat and a river, stream, or lake, regardless of whether it is intermittent or perennial. Riparian habitats are characterized by vegetation adapted to growing in water or saturated soils. Includes riparian woodlands, forests, buffer zones, or strips.

**Survey** – Observing an area to determine if a species or resource exists after which an inventory may or may not be performed.

**Upland Habitat** – Upland habitats include Mojave Desert, grassland, shrub lands, pinyon juniper forests, and woodland sites.

**Wetland Habitat** – Wetlands are saturated areas, either permanently or seasonally, with characteristic vegetation adapted to its unique soil conditions.



# United States Department of the Interior



NATIONAL PARK SERVICE  
Great Basin National Park  
100 Great Basin National Park  
Baker, NV 89311

IN REPLY REFER TO:  
10.C. (GRBA)

Robbie McAboy, Ely District Manager  
Bureau of Land Management  
702 North Industrial Way  
Ely, NV 89301

Dear Ms. McAboy,

Great Basin National Park is pleased to provide a letter of support and commit to being a funded project partner on the Bureau of Land Management's Round 20 SNPLMA proposal, *Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties*. The project includes work on NPS lands to inventory, monitor, and preserve bristlecone, limber and ponderosa pine in the South Snake Range. The project will also engage the public with these species and increase educational opportunities.

Bristlecone and ponderosa pine are NPS species of management concern. All three species are susceptible to multiple threats including climate change, white pine blister rust, and increases in fire severity and frequency. With assistance from the NPS Inventory and Monitoring Program, Great Basin National Park has started long-term monitoring of bristlecone and limber pine in response to the threats listed above. The NPS monitoring protocol and data collected thus far will benefit the work planned on NPS, USFS and BLM lands as part of the SNPLMA proposal. This project will support the NPS mission to protect and preserve resources for future generations and incorporate the RAD Framework (Resist, Accept, Direct), a framework already used to respond to other complex management issues on NPS lands.

The NPS fully supports this project and looks forward to working closely with the BLM and other partners on this project.

Sincerely,

**ANITA  
HANSEN**

Digitally signed by  
ANITA HANSEN  
Date: 2023.10.19  
11:37:13 -07'00'

Anita Hansen, Acting Superintendent  
Great Basin National Park

INTERIOR REGION 8 • LOWER COLORADO BASIN\*  
INTERIOR REGION 9 • COLUMBIA—PACIFIC NORTHWEST\*  
INTERIOR REGION 10 • CALIFORNIA—GREAT BASIN  
INTERIOR REGION 12 • PACIFIC ISLANDS

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AMERICAN SAMOA, ARIZONA\*, CALIFORNIA, GUAM, HAWAII, IDAHO, MONTANA\*,  
NEVADA, NORTHERN MARIANA ISLANDS, OREGON, WASHINGTON  
\*PARTIAL



United States  
Department of  
Agriculture

Forest  
Service

Humboldt-Toiyabe  
National Forest

Ely Ranger District  
825 Avenue E  
Ely, NV 89301  
(775) 289-3031 Fax (775) 289-2132

Date: October 24, 2023

Robbie McAboy,  
Ely District Manager  
Bureau of Land Management  
702 North Industrial Way  
Ely, NV 89301

### LETTER OF SUPPORT

Dear Ms. McAboy,

The Ely Ranger District, Humboldt-Toiyabe National Forest is pleased to provide a letter of support and commit to being a funded project partner on the Bureau of Land Management's Round 20 SNPLMA proposal, *Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties*. The project includes work on Forest Service administered lands to inventory, monitor, and preserve bristlecone, limber and ponderosa pine on multiple mountain ranges. The project will also engage the public with these species and increase educational opportunities.

All three species are susceptible to multiple threats including climate change, white pine blister rust, and increases in fire severity and frequency. The Forest Service fully supports this project and looks forward to working closely with the BLM and other partners on this project.

If you have any questions or require additional information, please contact me via email at [jose.noriega@usda.gov](mailto:jose.noriega@usda.gov), or by phone at (775) 289-0176.

Sincerely,

JOSE NORIEGA  
District Ranger





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## NEVADA DIVISION OF FORESTRY

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STATE OF NEVADA  
Department of Conservation & Natural Resources  
Joe Lombardo, *Governor*  
James A. Settelmeyer, *Director*  
Kacey KC, *State Forester/Firewarden*

Robbie McAboy, Ely District Manager  
Bureau of Land Management  
702 North Industrial Way Ely, NV 89301

Re: Nevada Division of Forestry support for BLM, Ely District SNPLMA proposal: *Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties*

Dear Mr. McAboy,

I am writing in support of Bureau of Land Management, Ely District and their proposed Southern Nevada Public Land Management Act Conservation Initiatives Round 20 application. As the State Forester Firewarden for the Nevada Division of Forestry, I believe this project has the potential to make long lasting positive impact on the management and health of three important, and unique, pine species in the region.

These species face a variety of threats including pathogen outbreaks and drought exacerbated by climate change. These stressors have the potential to negatively impact all three species and the species that depend on them. This is a pressing issue that demands immediate attention and action.

This project proposes to inventory more than half a million acres over 2 counties, monitor hundreds of forest plots for health and stressors, collect cones for long-term storage, genetic analysis and out planting. The actions this project proposes to conduct will increase the potential for successful implementation of conservation measures to sustain these species.

The results of this proposed project will be communicated through published research, educational events and interpretive materials. This information reaching a broader audience and moving research forward will be beneficial for the protection and conservation of these species across all jurisdictions.

I strongly believe that *Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties* is the right next step for managing these three special conifer species. The partnering of Bureau of Land Management, US Forest Service and US National Park Service is a remarkable collaboration that has the experience and expertise to execute this project with excellence.

Thank you for considering this proposal. Your support will make a meaningful difference in the perpetuation of three unique and iconic conifers of eastern Nevada.

Sincerely,

Kacey KC  
State Forester Firewarden



# NEVADA

DIVISION OF

## NATURAL HERITAGE

STATE OF NEVADA  
Department of Conservation & Natural Resources

Joe Lombardo, *Governor*  
James A. Settelmeyer, *Director*  
Kristin Szabo, *Administrator*

25 October 2023

Elizabeth Young, SNPLMA Program Manager  
Conservation Initiatives & Capital Improvements  
BLM Southern Nevada District Office – SNPLMA Division  
4701 N. Torrey Pines  
Las Vegas, NV 89130

Dear Ms. Young,

I wish to convey the support of myself and the Nevada Division of Natural Heritage for the *Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties* proposal, being submitted by an interagency team as a Round-20 Conservation Initiative Nomination under the Southern Nevada Public Lands Management Act.

The Nevada Division of Natural Heritage (NDNH) maintains and provides a central information source for all endangered, threatened, rare, and at-risk plant and animal species in Nevada. The agency is non-regulatory and serves as an independent resource for scientifically objective data, environmental review, technical assistance, and expertise in support of a wide variety of planning, conservation management, research, educational, and economic development activities in the State. By coordinating with neighboring states, setting sound conservation priorities, and providing high-quality information early in the planning process, our agency helps to minimize resource conflicts and their costs to the citizens of Nevada, thereby avoiding higher future costs by helping to prevent Nevada's native animals and plants from becoming threatened or endangered.

Native plants in Nevada are facing unprecedented threats from multiple interacting natural and anthropogenic factors, including climate change, spread of pests, diseases, and invasive species into novel environments, and increasing pressure from recreation-related disturbance and urban and industrial development. These factors, among many others, have high potential to reduce the extent and genetic diversity of populations of bristlecone, limber, and ponderosa pine on federal lands throughout Nevada. Their presence on the landscape supports a plethora of ecosystem services and human benefits, from providing food, roosting, and nesting sites for birds and other animals to promoting soil stabilization and development, sequestering and storing carbon in woody tissues, increasing longevity and water storage capabilities of the snowpack, and facilitating establishment of other plant species, as well as providing shade for hiking trails, aesthetic value and spiritual inspiration, and promoting public appreciation of nature as charismatic mega-flora, among countless other benefits.

This project seeks to proactively provide critical ecological data and plant materials that will enable sustainable long-term management of these priceless resources. Currently, a lack of comprehensive data on the distribution and status of these important tree species precludes federal land managers (who oversee more than 80% of the land area in Nevada) from making informed decisions about land



**NEVADA**  
DIVISION OF  
**NATURAL HERITAGE**

**STATE OF NEVADA**  
Department of Conservation & Natural Resources

Joe Lombardo, *Governor*  
James A. Settelmeyer, *Director*  
Kristin Szabo, *Administrator*

use and allocation of conservation efforts. Similarly, a lack of genetically appropriate, locally adapted seeds either reduce effectiveness of restoration efforts or prevent their success entirely, making it impossible to support ecosystem recovery after disturbances such as wildfire, bark beetle outbreaks, and mortality from white pine blister rust. The long-term value of the products of this project would far exceed the SNPLMA funding being requested. We recommend this project without reservation for full SNPLMA funding and look forward to supporting this project as a technical resource as work proceeds.

Sincerely,

Jamey D. McClinton, Supervisory Botanist  
Nevada Division of Natural Heritage  
775-684-2902  
jmcclinton@heritage.nv.gov





# Aldo Leopold Wilderness Research Institute

790 E. Beckwith Ave.  
Missoula, Montana 59801-8089  
(406) 542-4190 FAX (406) 542-4196

*USDA - Forest Service and USDI - Bureau of Land Management, Fish and Wildlife Service, Geological Survey, and National Park Service*

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10/26/2023

Robbie McAboy, Ely District Manager  
Bureau of Land Management  
702 North Industrial Way  
Ely, NV 89301

Ms. McAboy,

Please accept this letter of support for the proposal entitled, "Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties," co-produced by BLM, FS, and NPS partners in eastern Nevada. This project proposes to inventory, monitor, and assess the current and future health of three sensitive pine species (ponderosa, limber, and bristlecone) by engaging in seed cone collection, field surveys of current populations, research to understand climate change and fire effects, climate change adaptation planning, and education and outreach. This interagency project will take place in the BLM Ely District, Humboldt-Toiyabe NF, and Great Basin National Park over the next five years.

Ponderosa, limber, and bristlecone pine face similar environmental threats in eastern Nevada, including white pine blister rust, beetle damage, increased wildfire frequency and severity, and increased drought associated with climate change. Moreover, because distinct populations of these trees are isolated along high elevation mountaintops in a unique basin and range landscape, the negative impacts of natural and human-caused disturbances to forest stand health and overall distribution are potentially exacerbated. These environmental threats alongside the ecological, cultural, and recreation significance of these species make them high priority species for conservation and research. Furthermore, a large proportion of these tree species exist within federally designated wilderness, potentially complicating management and conservation activities. Given the immediacy of threats to these species and the intricacies of managing their populations, this proposal is timely and necessary.

The proposed work is pertinent to current research and the expertise of scientists at the Aldo Leopold Wilderness Research Institute (ALWRI). ALWRI specializes in interagency work that connects science to wilderness management throughout the United States. We believe the research, inventory, and monitoring work outlined for this project will be particularly useful to inform the management of sensitive species within wilderness in an era of climate change. Current ALWRI research topics relevant to this project include wildfire and fuels management, sensitive species conservation and management, climate change modeling, distribution modeling, and climate change adaptation planning (resist-accept-direct framework: RAD). Because of this relevancy and wilderness emphasis, we strongly support this project and can provide consultation on research needs concerning wildfire, climate change, and population range shifts under climate change. Additionally, using the RAD framework, we can provide guidance on

climate change adaptation planning inclusive of the unique constraints of wilderness. We will also support project deliverables such as publications, reports, and presentations.

Sincerely,

Primary Contact:

**Kira  
Hefty**

Digitally signed  
by Kira Hefty  
Date:  
2023.11.02  
09:49:47 -06'00'

Kira Hefty  
Biological Scientist  
Kira.Hefty@usda.gov

Co-sign:

*Sean Parks*

Sean Parks  
Research Ecologist  
sean.parks@usda.gov

October 27, 2023

Robbie McAboy, Ely District Manager  
Bureau of Land Management  
702 North Industrial Way  
Ely, NV 89301



**LETTER OF SUPPORT**

**SNPLMA Proposal Round 20**

***Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties***

Dear Ms. McAboy,

Great Basin National Park Foundation strongly supports this interagency project that will both study and preserve of the iconic tree species of the Great Basin. The Great Basin Bristlecone pine and limber pine are magnificent features of Great Basin National Park. People come from all over the country to hike amongst the world's oldest trees. Unfortunately, these trees are under threat from climate change, increased fire severity, and disease.

This interagency SNPLMA project will increase our science understanding and provide tools for managing our public lands to protect the trees of the Snake Range including the oldest trees on our planet. The project will also benefit the general public and pre-college students through robust and innovative educational resources.

Great Basin National Park Foundation reaches thousands of pre-college students each year with Next-Generation Science Standard Great Basin place-based educational programs. We are excited to leverage students' ability to learn STEM classroom concepts through sequenced lesson modules that teach both the "why" and "how" of this complex scientifically driven land management project.

Sincerely,

A handwritten signature in black ink, appearing to read "Aviva O'Neil".

Aviva O'Neil  
Executive Director, Great Basin National Park Foundation

**BOARD OF DIRECTORS:** Briget Eastep *Chair*, Greg Fine *Vice Chair*, Alicia Reban *Secretary*, Jeremy Reichenberg *Treasurer*, Kenji Hakuta *Education Chair*, Melodi Rodrigue *Great Basin Observatory Chair*, Senator Richard Bryan, John Kenney, Rebecca Mills, Robert Morrill, Mike Niggli, Julia Ratti, Kevin Robison, McClure Wallace  
**ADVISORY BOARD:** Timothy Cashman, Janae Johnson, Marc Johnson, Margaret Rees, James T. Reynolds, Bill & Holly Wilson **FOUNDER:** Bonnie Bryan (1939-2016) **BOARD EMERITUS:** Steven Brown, Dave Tilford

Robbie McAboy, Ely District Manager  
Bureau of Land Management  
702 North Industrial Way Ely, NV 89301

Re: Letter of Support for Pine Restoration Project for White Pine and Lincoln Counties, Nevada

2 November 2023

Dear Ms. McAboy

I am writing in enthusiastic support of the BLM proposal, *Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties* to the Southern Nevada Public Lands Management Act (SNPLMA). This project will provide multiple benefits to the ecosystems of eastern Nevada and is greatly needed.

The project helps address the legacy of prior actions of settlers in the region who found the ponderosa and other pines and harvested them for their immediate needs without giving thought to the persistence of the populations or of the ecosystems that produced them. As a result, small, highly fragmented populations of mountain conifers throughout the state were already imperiled by the early part of the last century. Changes in climate and additional demands on natural resources in the state exacerbates the peril for these populations. This project helps to fulfill one of the original purposes of the SNPLMA which was to reduce the footprint of modern human activity on the biodiversity and resilience of the native ecosystems in which we find ourselves.

For the past 35 years I have been working on two of the dimensions addressed by the proposal (distribution of the species and characterization of the communities in which they occur) but it has become clear that I alone will not be able to achieve even those goals by the end of my working life. As such, I am gratified to learn of these plans to establish a geographically appropriate seed bank, plans for restoration where appropriate, and a monitoring program in addition to more collecting efforts to increase our awareness of the sporadic distribution of these pines in eastern Nevada.

The College of Southern Nevada has a new bachelor's degree program in environmental conservation whose graduates will be well-suited for these studies and "field-ready" upon graduation many of whom are already employed by federal agencies in the state. As we produce more of these graduates, they would be a natural fit to supply bodies to the work at hand. In addition, I am happy to provide whatever I can in terms of expertise, data, and labor to the project.

Sincerely yours,

David Charlet, Ph.D.

Professor of Biology

Curator, Wesley E. Niles Herbarium

College of Southern Nevada

Henderson NV 89002



United States  
Department of  
Agriculture

Forest  
Service

Pacific  
Southwest  
Research  
Station

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November 3, 2023

Robbie McAboy, Ely District Manager  
Bureau of Land Management  
702 North Industrial Way  
Ely, NV 89301

Dear Ms. McAboy,

I am writing to enthusiastically endorse the proposal, *Restore and Protect Unique Pine Species on Federal Lands of Lincoln and White Pine Counties*, submitted by Neil Frakes to Conservation Initiatives Round 20, Southern Nevada Public Land Management Act. Information resulting from this project will be of enormous value to scientists, conservationists, land managers, and the public. I have spent 40 years working as a research ecologist and conservation geneticist focusing on climate and health relations of high-elevation pines of the Great Basin, in particular limber and bristlecone pines, which are the subject of the proposal along with ponderosa pine. While continuing this research I also serve currently as a member of the USFWS Recovery Team for whitebark pine.

Given these perspectives, I fully support the focus of the proposal on inventory and monitoring; assessing health including impacts of climate, insects, and disease; conservation seed collections; and an impressive array of education, outreach, and research goals. I can testify that our limited knowledge of the distribution, health, fire effects, and genetic diversity throughout high Great Basin, including in White Pine and Lincoln County, constrains research progress and stymies conservation goals. While excellent point data for these species exist in the atlases of Nevada biogeographer David Charlet, landscape scale coverage is non-existent or of limited extent. Without widespread coverage, we can only chip away at research that will support management and restoration of these vital upland ecosystems. The proposal will fill important gaps for the counties involved.

As a climate scientist, I have studied impacts of climate, particularly drought and warming temperatures on limber and bristlecone pines, and witnessed dramatic impacts in the decades of my research. These were, however, local projects in a sea of greater forest land, which remains unanalyzed. Annual effects of weather/climate, fires, and insects/pathogens translate to an ever-changing mosaic of forest conditions that are unmonitored. Results from the current proposal will provide important information on these dynamic processes.

Finally, I applaud and fully support the goal of seed collections. As a forest geneticist, I was long affiliated with USFS genetic conservation programs, and helped to develop and implement conservation archives for forest tree species. Hearteningly, I watched these collections serve essential roles for conservation when emergency conditions arose. I have, therefore, great confidence in the value of the seed collections proposed here.

In sum, I encourage full support to this proposal, and I greatly anticipate the results.

Sincerely,

CONSTANCE I. MILLAR, *PhD*

*Scientist Emerita*

conniemillarGBNH@gmail.com

constance.millar@usda.gov

<https://www.fs.usda.gov/research/about/people/cmillar>



Instructions: Put project cost estimates in Tabs 1-8. The values from those tabs will roll-up to this summary worksheet. The Non-Federal Contribution can be entered in Tabs 1-8 as a whole amount, it does not need to be broken out by unit cost.

**PROJECT BUDGET**

<b>Project Name:</b>		<b>Date:</b>	
<b>Project Manager:</b>		<b>Agency:</b>	
<b>Cost Categories</b>		<b>SNPLMA</b>	<b>Non-Federal Contribution</b>
1. Personnel (labor plus benefits)		\$ 1,761,470.00	\$ -
2. Travel		\$ -	\$ -
3. Training		\$ -	\$ -
4. Equipment		\$ -	\$ -
5. Supplies/Materials		\$ 9,000.00	\$ -
6. Contracts and/or Agreements		\$ 3,757,625.00	\$ -
7. Vehicle Use		\$ -	\$ -
8. Other Necessary Expenses		\$ -	\$ -
<b>9. TOTAL PROJECT BUDGET</b>		<b>\$ 5,528,095.00</b>	<b>\$ -</b>

Notes:

### 1. PERSONNEL

Include labor costs for all aspects of project implementation where agency labor will perform the work, e.g. planning and environmental documentation, section 106 compliance, labor to perform implementation, project management, interdisciplinary team (ID team), engineering, etc. Labor expense documentation must correlate the individual labor expense with the deliverable, task, or subtask. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total labor costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
BLM Project Manager Term Position (4 years) GS-9 or equivalent	8320	Hours	\$ 41	\$ 341,120	\$ -
BLM NEPA, Wilderness and other Compliance (various specialists, GS-11 )	4545	Hours	\$ 55	\$ 249,975	\$ -
BLM Administration, Oversight, Project support (various specialists) 20% of overall project cost	7493	Hours	\$ 55	\$ 412,115	\$ -
BLM Interpretation/Education Specialist	273	Hours	\$ 55	\$ 15,015	\$ -
				\$ -	\$ -
NPS NEPA, Wilderness and other Compliance (various specialists, GS-11 )	909	Hours	\$ 55	\$ 49,995	\$ -
NPS Administration, Oversight, Project support (various specialists) 20% of overall project cost	1516	Hours	\$ 55	\$ 83,380	\$ -
NPS Interpretation/Education Rangers GS-5	1440	Hours	\$ 25	\$ 36,000	\$ -
		Hours		\$ -	\$ -
USFS NEPA, Wilderness and other Compliance (various specialists, GS-11 )	3636	Hours	\$ 55	\$ 199,980	\$ -
USFS Administration, Oversight, Project support (various specialists) 20% of overall project cost	6798	Hours	\$ 55	\$ 373,890	\$ -
		Hours		\$ -	\$ -
		Hours		\$ -	\$ -
		Hours		\$ -	\$ -
		Hours		\$ -	\$ -
		Hours		\$ -	\$ -

<b>Total</b>	\$ 1,761,470	\$ -
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**2. TRAVEL**

Travel expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total travel costs.

Description of Travel and Purpose	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
(ex) Travel to National Operations Center to participate in pre-award contract meeting for Deliverable# 2.	0	Trip	\$ -	\$ -	\$ -
(ex) Travel to Palm Springs, CA, to attend training for desert tortoise monitoring	0	Trip	\$ -	\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
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		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -

<b>Total</b>	\$	-	\$	-
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### 3. TRAINING

Training expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Example, contracting officer representative or program officer/assistance agreement training, training for chainsaw use, training for pesticide application, visual resource management, etc. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total training costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
(ex) Project Manager - contracting officer's representative training in Colorado.	0	Each	\$ -	\$ -	\$ -
(ex) Wildlife Biologist - training for desert tortoise monitoring protocol in Palm Springs, CA.	0	Each	\$ -	\$ -	\$ -
		Each		\$ -	\$ -
		Each		\$ -	\$ -
		Each		\$ -	\$ -
		Each		\$ -	\$ -
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<b>Total</b>	\$	-	\$	-
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**5. SUPPLIES AND MATERIALS**

Supplies and materials necessary to complete the project. Supplies/materials must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Supplies/materials must be the minimum amount necessary to accomplish the project; purchasing extra supplies/materials to "stock the cache" for post project management activities is prohibited. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
NPS Outreach and Educational materials	1	Bundle	\$ 9,000	\$ 9,000	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
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<b>Total</b>	<b>\$</b>	<b>9,000</b>	<b>\$</b>	<b>-</b>
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## 6. CONTRACTS AND AGREEMENTS

Contracts and/or agreements (grants, cooperative agreements, assistance agreements, stewardship agreements, interlocal or state agreements, etc.) necessary to implement the project's purpose and deliverables (including tasks and subtasks, as appropriate). Extra or more robust documentation may be necessary if the contract and/or agreement is for multiple projects (e.g. a Master Agreement or CESU agreement). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total grant and agreements used to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
BLM Contract or Agreement for Inventory and Mapping of Pine Species*	202000	Acres	\$ 2.50	\$ 505,000	\$ -
BLM Contract or Agreement for monitoring of populations	201	Plots	\$ 2,500	\$ 502,500	\$ -
BLM Contract or Agreement for Cone Collections	1435	Trees	\$ 300	\$ 430,500	\$ -
BLM Contract and Agreements for Research Projects	5	Projects	\$ 50,000	\$ 250,000	\$ -
BLM Contract or Agreement for seed extraction and storage	1	Job	\$ 107,625	\$ 107,625	\$ -
				\$ -	\$ -
NPS Contract or Agreement for Inventory and Mapping of Pine Species*	40000	Acres	\$ 2.50	\$ 100,000	\$ -
NPS Contract or Agreement for monitoring of populations	20	Plots	\$ 2,500	\$ 50,000	\$ -
NPS Contract or Agreement for Cone Collections	225	Trees	\$ 300	\$ 67,500	\$ -
NPS Contract and Agreements for Research Projects	1	Project	\$ 50,000	\$ 50,000	\$ -
NPS Contract or Agreement for seed extraction and storage	1	Job	\$ 25,000	\$ 25,000	\$ -
				\$ -	\$ -
USFS Contract or Agreement for Inventory and Mapping of Pine Species*	285000	Acres	\$ 2.00	\$ 570,000	\$ -
USFS Contract or Agreement for monitoring of populations	175	Plots	\$ 2,500	\$ 437,500	\$ -
USFS Contract or Agreement for Cone Collections	1232	Trees	\$ 300	\$ 369,600	\$ -
USFS Contract and Agreements for Research Projects	4	Projects	\$ 50,000	\$ 200,000	\$ -
USFS Contract or Agreement for seed extraction and storage	1	Job	\$ 92,400	\$ 92,400	\$ -

<b>Total</b>	<b>\$ 3,757,625</b>	<b>\$ -</b>
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\*Inventory and mapping costs are based upon number of inventory areas and size of inventory areas. Large contiguous areas provide an efficiency compared to small, dispersed areas. USFS lands typically have large, contiguous areas for inventory, while BLM has smaller, isolated areas. This is why unit costs vary between agencies.

**7. VEHICLE USE**

Use of an agency/entity vehicle, purchase of a new vehicle, rental of vehicle, or any other vehicle use not covered under Equipment. If possible, use the agency/entity fixed operation rate (FOR) multiplied by the unit (miles or hours) over the life of the project. The FOR includes depreciation and wear and tear on the vehicle tires, wiper blades, routine vehicle maintenance, etc. If special tires or replacement tires or other vehicle equipment is necessary, please show it under "Equipment." Vehicle expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total vehicle use to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
(ex) Vehicle for project manager	0	Miles	\$ -	\$ -	\$ -
(ex) Vehicle# 1 for biological survey crew	0	Miles	\$ -	\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
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				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	\$	-	\$	-
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### 8. OTHER NECESSARY EXPENSES

Other Necessary Expenses are time and materials necessary for project implementation but are not specific to any one deliverable (including tasks and subtasks, as appropriate). If you included the labor, equipment, and/or supplies and materials in the other sheets, do not include them here. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total other necessary expenses to implement the project. This is not a complete list. Contact the SNPLMA Division for guidance on other necessary expenses.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
(ex) Construction site security	0	Hours	\$ -	\$ -	\$ -
(ex) NEPA, Section 106	0	Hours	\$ -	\$ -	\$ -
(ex) Financial audit support		Hours		\$ -	\$ -
(ex) Supervision and oversight of SNPLMA-funded staff and/or contractors (not directly billed under Tab# 1 - Personnel)		Hours		\$ -	\$ -
(ex) Rental/temporary trailer/employee workspace		Hours		\$ -	\$ -
(ex) IT services to install hardware, software, or service SNPLMA-funded computer equipment		Hours		\$ -	\$ -
(ex) Cell phones for project staff (not included under Tab# 4 - Equipment)		each/month		\$ -	\$ -
(ex) Furniture and fixtures for SNPLMA-funded employee workspace		each		\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	\$ -	\$ -
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**SNPLMA Round 20  
Conservation Initiatives Project Addendum**

**Nomination:** Tab 6

**Entity:** U.S. Fish and Wildlife Service, Desert National Wildlife Refuge

**Project:** Wildlife Water Reestablishment for Desert Bighorn Sheep Conservation

**Overall Comment:**

Each of these systems need some type of assessment/evaluations on feasibility, such as viability of self-leveling floats, collection strategies, upgradability, and/or storage ability. These are a lot of unknowns. It is unclear how an accurate budget was arrived at with this many unknowns.

**Remarks/Clarifications Needed:**

**Section A – Background Information:**

1. Paragraph 7 – “Indian Canyon is a guzzler with both a very old and disintegrating hyperlon apron (Figure 3) and two slickrock collection points and degrading storage tanks.”

**Clarification Needed:** Is this 2 systems?

**Section B – Strategic Plan Values:**

1. Sustainability - This not only supports climate-smart management but will make some refuge resources available for other important wildlife management work.

**Clarification that SNPLMA projects are for the public and not for ease of the government’s management work.**

**Section D - Project Deliverables-Primary:**

1. Though the Deliverables do state the systems that will be acted upon, each one should state what those actions will be rather than adjectives of what is currently wrong with them. This would also help build a more accurate budget.
2. Typo “Grave Canyon”, should read “Gravel Canyon”.

**Section D - Project Deliverables-Anticipated:**

1. Bullet #1 “Except for Desert 5 each of these waters are highly individual developments with their unique challenges, so follow-up work may be necessary.

**Clarification needed: Where/what is Desert 5? Also, how was a cost come to for undefined ‘follow-up work’?**

2. Bullets #2 “Education of approximately 150 students and youth in regard to climate change, wildlife, and importance of water in the desert

**Clarification needed: Is this a duplicate of Primary Deliverable bullet #2 with just more detail or is this an additional 150 students?**

### **Section F – Project Timeframe**

1. Clarification Needed: Project is for 5 years, with five of the seven sites to be completed being within the NV Test Site boundaries where access is severally limited, is 5 years feasible?
2. Recommend inserting the names of the systems that will be started/completed each year into the outline rather than just saying ‘next 2...’ to better convey timeframe.

### **Section G – Project Readiness**

1. **Clarification Needed:** Project claims it is shovel-ready but also states EA/cultural compliance has not been completed.

### **Section I – Project Budget**

#### **1. NDOW Labor Contribution**

Math error 2,030 hours x \$59.00 is \$119,770. Which also changes total overall contribution figure to \$354,278.40.

### **Section K – Ranking Criteria**

#### **Criteria #4; D**

1. Fraternity Volunteer Labor math error, 540 x \$31.80 is \$160,272.00.
2. NDOW Volunteer Labor math error, 2,030 hours x \$59.00 is \$119,770.00.

### **Performance Measures:**

1. Performance Measure O10 “Number of Volunteers Used.” 85  
**Clarification Needed – Nomination 58 volunteers between Fraternity, NDOW and FWS.**

### **Budget Spreadsheet:**

#### **1. Personnel Tab**

- Same NDOW volunteer labor math error made here, and it is carried up to the overall Project Budget Tab.
- \$56,881 for Project Leader, \$48,137 for Deputy Project Leader, \$148,744 for Refuge Manager. This is an odd amount of management/leader when none of them are the Project Manager.

#### **2. Supplies and Materials**

- Only \$241,078 for supplies to correct seven sites seems low. Will project need to request SAR after all the assessments are completed?
- Why does project need 24 storage tanks for 7 sites?
- Why does project need 30 Rhino tank adapters for 7 sites?

#### **3. Contracts and Agreements**

- First and second line item seem to be duplicates, both indicate transport of tools and personnel with same number of hours/days. Recommend breaking them out or combining.



**Southern Nevada Public Land Management Act  
Conservation Initiatives  
Round 20**

Desert National Wildlife Refuge



**WILDLIFE WATER REESTABLISHMENT FOR DESERT  
BIGHORN SHEEP CONSERVATION**

**Amount Requested: \$ 1,858,117**

## A. BACKGROUND INFORMATION

The U.S. Fish & Wildlife Service (Service) requests SNPLMA Round 20 funding to upgrade seven aging and failing existing wildlife waters to more reliable and efficient systems on the Desert National Wildlife Refuge (DNWR, Refuge). The waters proposed for restoration include catchment systems (guzzlers), springs and hybrids systems that have both springs and rainwater collection. Proposed work includes converting guzzlers and hybrid systems to self-leveling gravity feed design and refurbishing springs in locations where water is currently unreliable or not available due to system failure, with the goal of improving habitat for desert bighorn sheep and other wildlife. The DNWR was established in 1936 for the protection, enhancement, and maintenance of the desert bighorn sheep (*Ovis canadensis nelsoni*) and its habitat. The DNWR has a legacy of having outstanding bighorn sheep populations, dating to its establishment in 1936. Over 50 recorded mammal species and approximately 320 bird species utilize the refuge and the water sources. Creating and enhancing water sources will perpetuate the DNWR legacy of providing available water to Mojave Desert wildlife. The Refuge encompasses over 1.6 million acres, the largest National Wildlife Refuge in the 48 contiguous states. The proposed projects will upgrade and repair old systems near failure to provide water for wildlife, especially desert bighorn sheep. The restored wildlife waters will be more reliable and improve precipitation collection and storage capacity at existing projects. The water sources are positioned to provide habitat connectivity for wildlife during the extreme parts of the summer months and times of prolonged drought.

Six mountain ranges are included in this massive landscape, providing premier habitat for numerous desert species, including desert bighorn sheep. The Refuge was established as the Desert Game Range and it was originally 2.25 million acres. In October of 1940, approximately 846,000 acres of the Desert Game Range were reserved for the use of the War Department (Department of Defense) as an aerial bombing and gunnery range, now known as the Nevada Test and Training Range (NTTR). The Service retained secondary jurisdiction over these lands. The withdrawal for the NTTR was renewed in the 2021 NDAA (P.L. 116-283), which extended the existing withdrawal for 25 years, with no changes in jurisdiction or authorized military training activities. The NTTR is closed to the public and access is restricted by the Air Force for security. However, a portion of DNWR within the NTTR is open to bighorn sheep hunting for two weeks each winter in coordination with the Air Force and Nevada Department of Wildlife (NDOW). Outside of the bighorn sheep hunt window access to habitat on DNWR within the NTTR is difficult and must be coordinated far in advance with Nellis Air Force Base. Access for Service employees is usually restricted to weekends and holidays and requires an escort. Water, always a critical element in a desert environment, is available to wildlife at over 60 sources scattered across the refuge, including both springs and ‘guzzlers’, or man-made water catchments, designed to capture precipitation (Map 1). However, many springs are unreliable and most existing guzzlers have fallen into various stages of disrepair and are of an old design using float valves, a system prone to catastrophic failure.

Historically, DNWR was considered the last stronghold of desert bighorn sheep, supporting at least 1000 animals. Today, DNWR continues to sustain a critically important population of bighorn sheep. Population estimates from the late 1940’s were 1000-1200 individuals. Due to the limited number and distribution of water sources, a majority of the

population lived on the Sheep Range. Elsewhere in the west, desert bighorn sheep populations declined due to human influence. From 1988 to 1992, the bighorn sheep estimates on the Sheep Range precipitously declined from 1133 individuals to 217. A study was initiated in 2010, to assess the factors that might have caused the original population to decline in the Sheep Range and be causing the current depressed population number. Through a vigorous translocation program and the building of man-made water catchment systems throughout the six mountain ranges, the bighorn sheep population started to recover and stabilize. After 2019 surveys, estimates showed bighorn sheep populations on DNWR returned to approximately 900 individuals, but with noteworthy differences in demographics and distribution. Since 2020 the population estimates declined again, to approximately 500 bighorn sheep, likely largely due to the prolonged severe drought leading to not just water, but also food shortages. While the past year has brought rain, reliable water sources are one critical piece in ensuring long-term persistence of desert bighorn sheep on the Refuge.

Climate change is a critical threat to the entire desert bighorn sheep population, migratory wildlife, and other Refuge resident species. Modeling efforts have been undertaken to determine shifts in regional climate patterns across the Southwest. For this region, studies suggest a decline in precipitation, causing negative changes in forage quality and quantity, resulting in a reduction of suitable habitat. Beyond desert bighorn sheep, restored and more reliable water sources will benefit a huge variety of native wildlife, including small and large mammals, resident and migratory birds, and pollinators such as hummingbirds and insects. The DNWR's land use plan is included in the Desert National Wildlife Refuge Complex Comprehensive Conservation Plan (CCP), which was approved in August 2009. This proposal conforms with the CCP, which stresses the importance of improving habitat, wildlife management, and wildlife water resources. This nomination is tied to DNWR's Desert Bighorn Sheep Management Plan (SMP) completed in 2020. Water availability and climate change have been identified as critical threats to the desert bighorn sheep population on the Refuge.

This nomination proposes restoring or improving seven wildlife waters within three mountain ranges on DNWR (Map 2). The new design of guzzler and hybrid spring/guzzler systems is a self-leveling gravity fed system that has metal collection aprons, flat storage tanks and no moving drinker parts (Figure 1). The projects on DNWR all vary in age and condition. Older system design has a smaller storage and precipitation collection capacity and is prone to catastrophic failure. The modern gravity fed design increases storage and precipitation capacity and lowers maintenance requirements. The greatest weakness of the old design is the float-valve drinker. Most of the projects are in remote locations and/or on the NTTR and visited infrequently, a failure in the float valve can lead to catastrophic failure and loss of available water for bighorn sheep. The modern gravity-fed design eliminates the need for a float valve. These improvements will provide a more stable water source that will require less maintenance and fewer visits to the guzzlers and hybrid spring/guzzler systems. Existing guzzlers are situated in critical areas and are in various stages of disrepair. The Spotted Range and Pintwater Range are access restricted by the NTTR, making the improvement of reliable wildlife waters critically important. The Sheep range has fewer access restrictions, but the two springs that are included in this nomination are both extremely remote and difficult to access due to location and topography.

In the Spotted Range, the reconstruction of Spotted 5 is being proposed. Bighorn sheep greatly rely on Spotted 5 which is an outlier project as it is approximately 6 miles from the closest water project. It is heavily used, especially during hot times of year. This system is aging, and key components need to be replaced, including piping and storage tanks. The apron and drinker will be assessed for replacement or upgrading needs.

In the Pintwater Range, four projects are proposed for refurbishment. Quartz Spring is a combination of a spring and a rainwater collections system. It contains a float valve operated drinker and has degraded over time, making it an unreliable system (Figure 2). Restoration will include a complete rebuild of the spring piping, and guzzler portion of this water. The storage will be replaced and increased, the very small apron will be replaced and increased in size to allow for more collection of rainwater and an assessment to evaluate the viability of replacing the float valve drinker with a self-leveling system will be conducted and if feasible implemented. Indian Canyon is a guzzler with both a very old and disintegrating hyperlon apron (Figure 3) and two slickrock collection points and degrading storage tanks (Figure 4). One slickrock collection point is currently not functional, and the aging float valve drinker is becoming unreliable. This system will be completely rebuilt with new flat storage tanks, increasing storage capacity. A new metal collection apron will be installed and the slickrock collection points will be assessed and refurbished or abandoned in favor of a larger metal collection apron to ensure the best possible and most reliable functioning of the rebuild system. The float valve drinker will be replaced with a self-leveling gravity fed system that has no moving parts. The Gravel Canyon guzzler is a currently barely functional slickrock collection system with a very small metal apron. In last winter's floods the slickrock collection and drinker were destroyed. It was temporarily made serviceable by replacing and temporarily relocating the drinker and reconnecting it with only the small metal apron and degrading storage tank (Figure 5). This system will need to be completely replaced and will either be rebuilt with a large metal apron or a medium apron with the slickrock collection reinstated. An assessment will evaluate options and the best, most reliable and long-lived option will be implemented. Special attention will be given to more resilient design. DeJesus Spring is a fairly isolated spring in the high elevations of the Pintwater range. The unusual elevation makes it a particularly valuable water source to bighorn sheep in the summer months and it is heavily used. This spring requires replacement of storage and additional storage capacity as well as an assessment for additional upgrades that would increase reliability.

In the Sheep Range, Wiregrass spring has become unreliable (Figure 6), and the approximately 200 yards of piping needs to be replaced, the drinker will be replaced and the area around the spring needs to be stabilized, the possibility of adding storage to this spring will be evaluated. Perkins Spring is currently not functional. It was buried by flooding in the past year and needs to be dug out and completely refurbished with new piping, drinker and spring box. The viability of adding storage to this spring will be evaluated and if feasible added to the system. Exact refurbishment actions will be determined during spring assessments for both springs.

As part of this project, a presentation about importance of water for to resident and migratory wildlife populations in the desert will be developed. The presentation will be delivered to at least five school groups, youth groups and community groups during the project timeframe, but will be used beyond the lifespan of the project for education efforts. Each group will average

30 school children or youth to reach a total of at least 150 young individuals in this outreach effort.

**a. Describe Relationship to Prior Approved Projects and/or Phases Relevant to this Project (SNPLMA funded or not), and any anticipated Future Phases**

SNPLMA Round 17 approved funding for upgrades to the Woody wildlife guzzler, which has been completed and Spring Stewardship and Restoration Project, which is at the end of the implementation phase. In Round 19 the construction or upgrade of a total of six guzzlers was funded, implementation has begun and one guzzler has already been completed ahead of schedule (Saddle Mountain, Figure 1)). All of these projects entail improvements to other wildlife waters on the DNWR (Map 3). There are no future phases for this proposed project.

**b. Acknowledgement of Stand-Alone Project and no Guarantee of Funding for Future Phases**

The is a stand-alone project and will not be impacted by availability of future funding. The improvements are anticipated to fully function for approximately 40 years with regular servicing and minimal maintenance.

## **B. EXECUTIVE COMMITTEE'S SNPLMA STRATEGIC PLAN VALUES**

Conservation Initiative projects have two goals identified in the Strategic Plan:

- Goal 1: Sustain the quality of the outdoor environment by conserving, preserving, and restoring natural and cultural resources.
- Goal 2: Improve the quality of life for all publics in urban and rural communities by enhancing recreational opportunities that connect people with the outdoor environment.

Nominated projects should meet these two goals by focusing on the three SNPLMA core values, connectivity, sustainability, and community. Every nomination must explain how the three values are promoted by the project.

**Connectivity (Map 3)**

- The proposed upgrades to wildlife waters will increase connectivity to other water sources on the Refuge and improve habitat connectivity within the Refuge and regionally. Bighorn sheep regularly move between mountain ranges on, and off, the Refuge. These movements are needed to maintain genetic diversity and to build healthy populations. The improved wildlife waters will help build and maintain movement, dispersal and migratory corridors for bighorn sheep and other species. Mule deer (*Odocoileus hemionus*) and other species are known to utilize wildlife waters on the refuge and are facing the same challenges that bighorn sheep face during times of drought and climate change. These water sources provide wildlife a critical drinking site without the need to travel extraordinary distances and ensure the year-round wildlife use opportunities of habitat surrounding these waters.

- Due to its vicinity to Las Vegas with a population of over 2 million people DWR is both rugged and remote, as well as an Urban Refuge just outside of the population center. This project will be critical to conservation of desert bighorn sheep, other mammals, birds, and other wildlife. Increased and more stable populations of wildlife and on the publicly accessible part of the Refuge will allow the community, including tribal members, children, other city residents and tourists to connect to nature by having increased opportunities to watch wildlife and experience the outdoors.

#### **Sustainability (Map 4)**

- All seven upgraded and restored wildlife waters addressed in this nomination will be more efficient and less prone to failure. The upgraded guzzler systems have better storage capacity and are gravity fed and have no moving parts which is an improvement over the existing float valve system. The refurbished springs will provide wildlife more reliable access to water and incorporate storage or additional storage and where possible rainwater collection. The upgraded systems will be more effective at collection and storing rainwater, which has become more important now and for the future with climate change and drought. All components of the newly designed waters will be lower maintenance and more easily repaired than old systems. This will lower the carbon footprint, decrease cost and time needed to check, maintain and when necessary complete emergency water delivery to the wildlife waters. This not only supports climate-smart management but will make some refuge resources available for other important wildlife management work.
- The desert bighorn sheep holds significance for Nuwu/Nuwuvi people, is an icon of the West and a popular large game species for Nevada. Updating guzzlers and improving spring developments supports the bighorn sheep population on the Refuge, which historically supported the largest meta-population in Nevada. Other native wildlife species important to local tribes will also benefit from these reliable water sources and the biological integrity of the habitat will be maintained for future generations of Nuwu/Nuwuvi people.
- As part of this project, a presentation about importance of water for to resident and migratory wildlife populations in the desert will be developed. The presentation will be delivered to at least five school groups, youth groups and community reaching at least 150 young individuals in this outreach effort. The participants will receive information regarding the importance of water sources in the desert, the fragility of the desert ecosystems and the plant and animal populations that have adapted to live within it and how they rely on both rain and groundwater availability. The importance of conserving water resources and the ecosystems we live in in southern Nevada will be addressed.

#### **Community (Map 5)**

- The Refuge provides educational and wildlife-associated recreational opportunities to the community. Individuals, private groups, tour buses and school field trips visit the Refuge and learn about the wildlife and the natural environment here. The public have utilized the wildlife water sites as prime areas for wildlife viewing and photography. Having stable and robust wildlife populations are important to the community and the proposed wildlife water upgrades are an essential component. This project will promote stable

bighorn sheep populations, thus ensuring the communities hunting opportunities for this highly sought-after game species into the future.

- The mountain ranges within the Refuge and desert bighorn sheep hold importance cultural significance for the Nuwu/Nuwuvi (Southern Paiute/Chemehuevi) Tribes. By stabilizing biological diversity and ecological integrity through this project and working with Tribes to identify opportunities for incorporating traditional ecological knowledge and management on the Refuges, which can benefit tribal interests regarding wildlife conservation and habitat management.
- Locals and tourists from all over the country, and foreign countries, visit the Refuge for hunting bighorn sheep, wildlife viewing, and wildlife photography. The Refuge and the wildlife attract tour bus groups and field trips by schools, youth groups and colleges within Clark County.
- A presentation about importance of water for resident and migratory wildlife populations in the desert will be developed and delivered to school groups, youth groups and community reaching at least 150 young individuals in this outreach effort. The participants will learn about Desert and the other National Wildlife Refuges in southern Nevada (Ash Meadows, Moapa Valley and Pahrnagat), providing opportunity for them to visit and enjoy these outdoor recreation resources in their groups and with their families.
- The wildlife at the Refuge provides benefits to the community and upgrading wildlife waters will increase the lifespan of these projects far past the current life expectancy prolonging all Refuge benefits quality and to the community.

### C. PURPOSE STATEMENT

The U.S. Fish and Wildlife Service requests SNPLMA Round 20 funding to upgrade seven existing wildlife water catchment systems (guzzlers) and developed springs to more reliable and efficient self-leveling gravity feed guzzler design and improved spring design on Desert National Wildlife Refuge for the benefit of desert bighorn sheep and other native wildlife. The new guzzler design and spring enhancements will improve water accessibility for wildlife, precipitation collection, increase storage capacity, and reduce the need for costly maintenance and emergency water deliveries.

### D. PROJECT DELIVERABLES

1. Primary Deliverables:
  - 1) Restore or enhance seven wildlife waters depending on site to include added storage, replacement of failing or failed components, redesign of failed collection points, self-leveling drinkers, high-capacity flat storage tanks and large rain collection aprons:
    - Spotted 5 upgrade (insufficient storage, replace aging system components)
    - Quartz spring/guzzler hybrid system restoration (unreliable, insufficient storage and collection).
    - Indian Canyon guzzler replacement (unreliable, insufficient storage and some collection points failed).
    - DeJesus Spring upgrade (insufficient storage and unreliable high use location)

- Grave Canyon guzzler upgrade (unreliable, insufficient storage and failed collection points).
- Wiregrass spring restoration (unreliable).
- Perkins spring restoration (currently not functional).

2) Develop presentation about importance of water for to resident and migratory wildlife populations in the desert and deliver to minimum of five school classes, youth and community groups.

2. Anticipated Deliverables:

- Revisit each wildlife water within 6 months of restoration/upgrade to assess function and if warranted make additional changes to improve function. – Except for Desert 5 each of these waters are highly individual developments with their unique challenges, so follow-up work may be necessary.
- Education of approximately 150 students and youth in regard to climate change, wildlife, and importance of water in the desert.

3. Standard Deliverables:

- A. Site-specific design for each of 7 wildlife water enhancements.
- B. Environmental compliance documentation (NEPA and Section 7 consultation) for guzzler projects.
- C. Section 106 compliance for guzzler projects.
- D. Acquisition of helicopter services through contracting or agreements.
- E. Access coordination with NTTR for project work in restricted areas and airspace for helicopter operations for all water projects (restricted airspace encompasses the entire Refuge)
- F. Material purchasing, directly or through contracts as needed.
- G. SMART quarterly status updates.
- H. SMART annual and final accomplishment reports.
- I. Preparation of the close out package.

## **E. PROJECT LOCATION**

### **Identify County in Nevada where Project will be carried out:**

Clark and Lincoln Counties

### **Identify Congressional District(s):**

Congressional District 4

### **Latitude and Longitude:**

#### Spotted Range

Spotted 5 36.673602°, -115.827827°

#### Pintwater Range

Quartz Spring 36.985571°, -115.601241°

Indian Canyon 36.942454°, -115.548250°



Gravel Canyon 36.901152°, -115.587602°  
 DeJesus Spring 36.883193°, -115.574935°

Sheep Range

Perkins Spring 36.705209°, -115.165676°  
 Wiregrass Spring 36.633285°, -115.207803°

## **F. PROJECT TIMEFRAME**

### 5 Year- General Timeline:

- Year 1 Complete work plan and funding authorization.  
 Complete planning for 2 wildlife water enhancements to include:
- Assess issues and develop site-specific designs
  - Environmental and cultural compliance
- Year 2 Complete acquisition of all materials for first 2 projects.  
 Complete construction of first 2 wildlife water enhancements.  
 Complete planning for 2 additional wildlife water enhancements to include:
- Assess issues and develop site-specific designs
  - Environmental and cultural compliance
- Develop a presentation about importance of water for wildlife populations in the desert for school and youth groups.
- Year 3 Complete acquisition of all materials for next 2 projects.  
 Complete construction of next 2 wildlife water enhancements.  
 Complete planning for last 2 wildlife water enhancements to include:
- Assess issues and develop site-specific designs
  - Environmental and cultural compliance
- Deliver 2 presentations about water for wildlife to school or youth groups.
- Year 4 Complete acquisition of all materials for next 2 s  
 Complete construction of next 2 wildlife water enhancements.  
 Complete planning for last wildlife water enhancement to include:
- Assess issues and develop site-specific design
  - Environmental and cultural compliance
- Deliver 2 presentations about water for wildlife to school or youth groups.
- Year 5 Complete acquisition of all materials for last project.  
 Complete construction of last wildlife water enhancement.  
 Deliver 1 presentation about water for wildlife to school or youth groups.  
 Project completion, final documentation, and closeout.

## **G. LEVEL OF PROJECT READINESS FOR IMPLEMENTATION**

Is this a shovel-ready project?  Yes  No

Service and NDOW staff are ready to begin working on the project as soon as it is approved. As soon as the project is approved, site specific planning, followed by Environmental and cultural compliance can begin. Wildlife water locations will remain the same, so depending on final designs some projects will be entirely shovel ready (2-3 projects), while others will require planning and compliance (4-5 projects). National Environmental Policy Act clearance, Section 7 consultation, and cultural compliance with tribal coordination for rebuilds can begin as soon as funding for the project is approved. Cultural resources and habitat for threatened and endangered species will be avoided, expediting the process. The general designs for three of the wildlife water upgrades have been developed by the Service and NDOW and require only fine-tuning. General planning and design for guzzler and spring upgrades exist already, however unique features and history of wildlife and bighorn sheep use of each sites will be considered in the final design for each wildlife water. Service staff and partner organizations are ready to begin project work as soon as funding becomes available. Final planning and compliance, as well as initial supply purchases will be completed in year 1. Wildlife water upgrades as well as presentation development and delivery will be completed in year 2-5 of the project. Close out will be completed in the second half of year 5.

## **H. FUTURE OPERATING AND MAINTENANCE**

The improved wildlife waters will be designed and constructed for minimization of long-term maintenance. Generally minor maintenance is conducted once per year via ground or helicopter by Service and NDOW staff, as well as volunteers for both agencies. Maintenance involves determining water level in storage tanks, measuring spring flow, cleaning the debris from the drinker and any collection points, smaller plumbing repairs. If drought conditions require, NDOW and the Fraternity for Desert Bighorn partner with the USFWS to complete the most urgent emergency water hauls by helicopter to prevent key water sources from going dry.

## **I. PROJECT BUDGET**

Complete the project budget using the provided Excel spreadsheet template and upload as a separate document to the “Submissions” tab in the Nomination Portal. Do not embed the project budget in this document.

### Partnership and/or Contributed Funds

An estimated total of **\$354,846.80** for in-kind labor and vehicle mileage from NDOW, the Fraternity and Service volunteers will be contributed to the project. Volunteer hours were valued at \$31.80 per hour, roundtrip average distance to projects was assumed at a conservative average of 200 miles round -trip, and vehicles mileage was calculated at 65,5 cents/mile.

- On average 30-50 volunteers from the Fraternity assist with the construction phase of wildlife water projects. A conservative estimate of 30 volunteers for 12 hours on two

days for construction at each of 7 wildlife water projects was used for a total of 5040 hours for a total of \$160,272 in-kind contribution, assuming the volunteer rate of \$31.80/hour).

- Fraternity volunteers typically use personal vehicles for access to project staging areas. The average distance from volunteers' residences to these sites is 200 miles round-trip. At 2 people per vehicle (=15 vehicles), times 2 days of work on each project, times 7 projects, mileage contributes are approximately 42,000 for a total of \$27,510 in-kind contribution.
- NDOW will contribute on average at least 5 staff per project implementation for each of the 7 wildlife waters at 4 days of work per project and assuming average 12-hour days. NDOW staff assist with project site preparation and material moving (to and from) the site. NDOW staff will also contribute at least 350 hours for project planning and design. This equals 2030 hours of time at an average rate of \$59/hour (average salary + benefits), for a total of \$120,338.40 in-kind contribution.
- NDOW will be using on average 3 vehicles to access each of 7 sites on 4 days per project (includes planning preparation, implementation) for a total of 16,800 miles and \$11,004 in-kind contribution.
- USFWS will contribute a minimum of an average 3 volunteers for project planning and implementation for each of 7 projects. On average 12-hour days and 4 days per project equals 1008 hours assuming the volunteer rate of \$31.80/hour for a total in-kind contribution of \$32,054.40.
- USFWS volunteers will contribute a minimum of 2 roundtrips with 2 vehicles for each of the 7 project to transport volunteers to staging sites for a total of \$3,668 in-kind contribution.
- In addition to committed in-kind contributions above, additional NGO's are interested in assisting with future water development projects, including the Friends of Nevada Wilderness and the Wild Sheep Foundation.

## **J. KEY CONTACTS**

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## **K. RANKING CRITERIA**

The Ranking Criteria are used to evaluate the nomination against the goals for the Conservation Initiatives category. Nominating entities are not to include either the total point value or the point values by criteria in their responses. Nominations will be reviewed and scored by the Conservation Initiatives subgroup. Explain how the project meets each applicable criterion.

**1. The nomination supports habitat enhancement, cultural resources, environmental health and protection, and/or public health and safety through connectivity and sustainability.** Include as many project subtypes as applicable to your nomination. Points for this criterion will be awarded on how well the nomination addresses the concepts within the factors, and the quality/quantity of results the project provides. The examples identified are not an all-inclusive list.

A. *Habitat Enhancement. The following are examples of project subtypes for habitat enhancement goals, objectives, or actions: Enhances or connects habitats, migratory corridors, or protected areas; Protects endangered species; Proactive steps to prevent listing; Invasive species treatment and/or control (plant and/or animal); Restoration of habitat for sensitive species at the watershed and/or landscape level; Project addresses climate change; Water quality and quantity monitoring; Cave management; Restoration of springs/streams/rivers; Road decommissioning and rehabilitation/restoration; Reintroduction or augmentation of species to restore overall ecosystem; Mitigates impacts of drought.*

Answer:

- 1) **Connectivity:** The proposal enhances and connects habitats and wildlife migratory corridors in the regional sense. Providing stable water at these locations improves the habitat and allows for greater movement of wildlife within and in between mountain ranges. The restoration and improvement of wildlife waters enhances water availability for wildlife and water resources connectivity on a regional scale. Water sources within the Spotted, Pintwater and Sheep Ranges support and enhances the connectivity between the mountains within and beyond of the Refuge. Maintaining viable corridors allowing for regular movement for bighorn sheep and other wildlife (including migratory birds and pollinators) is critically important. Bighorn sheep regularly move between mountain ranges on, and off, the Refuge. These movements are needed to maintain genetic diversity and to build healthy populations. The improved and restored wildlife waters will help build and maintain migratory corridors for bighorn sheep and other species. Mule deer and other species are known to utilize waters on the Refuge and are facing the same challenges that bighorn sheep face during these times of drought and climate change.
  
- 2) **Climate Change:** The restoration and improvement of waters, using the modern design, increase water availability redundancy in key bighorn sheep habitat. The improvements proposed for existing wildlife waters will restore functionality, increase storage, and increase precipitation capture at critical projects. These components are all geared towards preparing for the increased frequency of prolonged, severe drought in the future. The improvements will also require fewer trips

to the waters for maintenance, thereby reducing the carbon footprint of maintaining them while ensuring better water availability for bighorn sheep and other wildlife.

B. Cultural Resources. *The following are examples of project subtypes for cultural resources goals, objectives, or actions: surveys; National Register (eligible or currently approved); Protection/site stewards; Restoration/stabilization; and tribal involvement in the planning, design and/or implementation.*

Answer:

- 1) Tribal Involvement and/or Consultation: Tribal consultation and involvement will occur as part of the planning and implementation of these projects. Desert bighorn sheep are an important part of the Nuwu's/Nuwuvi's (Southern Paiute's/Chemehuevi's) culture, restoring and maintaining populations is important to our tribal partners. The Refuge contains many cultural sites and Traditional Cultural Properties. The proposal will allow DNWR to further collaborate and support relationships with members of the Nuwu/Nuwuvi.
- 2) Surveys: Any new prominent cultural features will be recorded during site surveys.

C. Environmental Health and Protection and/or Public Health and Safety. *The following are examples of project subtypes for public health and safety goals, objectives, or action: Illegal litter/dumping cleanup; Information kiosks and signs; Addresses and mitigates adverse impacts to resources caused by the volume of people using the resource; Resolving trespass/encroachment/illegal use of public lands (i.e. homeless encampments, marijuana grow sites)/boundary surveys; Abandoned mine land (AML) with habitat restoration component; Improve the sustainability of the landscape health and ecosystem function; Remove the threat of catastrophic fire loss of the ecosystem; Improve water quality and/or mitigate the threat of soil erosion.*

Answer:

- 1) Litter/Dumping Cleanup: Litter cleanup is a component of all the Refuge improvement projects and will contribute to environmental health of the area and increased public safety for staff and visitors. During project implementation, work at sites that are otherwise difficult to access and removing of large trash items or large amounts of litter is often not feasible on foot. During construction litter in the area surrounding the project sites are cleaned up as part of the work, as at that time a helicopter will be available for removal of collected debris.
- 2) The NTTR portion is difficult to access but is littered with mylar balloons and military training debris. Access approved for completing projects will also be used to clean-up any litter in the surrounding areas and potentially hazardous military waste such as unexploded ordinance are documented during projects. These are reported to the Air Force for safe removal. While the NTTR is not generally accessible to the public, it is open to sheep hunters two weeks a year. All waste removal benefits human safety and reduces hazards to desert bighorn sheep and other wildlife.

- 3) Some of the aging wildlife water structures, especially storage tanks are beginning to degrade and crack. If tanks and tank lids are not replaced before structural integrity further declines, they may become hazards to smaller wildlife with the potential of trapping animals inside the tanks.

**2. The nomination promotes sustainability by providing benefits in the near and long term by implementing actions to conserve and sustain healthy and resilient landscapes and providing durability, and relevancy.**

A. Conserves resources to ensure availability to current and/or future generations through management of natural and/or cultural resources for public benefit and sustainable social and economic utilization.

Answer:

- 1) The project helps conserve wildlife resources to ensure availability to future generations. There is a current public benefit and a sustainable social and economic utilization. Locals and tourist from all over the country, and foreign countries, visit the Refuge for hunting bighorn sheep, wildlife viewing, and wildlife photography. The Refuge and the wildlife attract tour bus groups and field trips by schools within Clark County. The wildlife at the Refuge provides benefits to the community and upgrading the existing wildlife waters will increase the sustainability of these projects far past the life expectancy of the previous design. Upgraded wildlife waters will be built according to the now self-leveling design, which is less prone to failure and will survive decades of use by wildlife before major improvements become necessary. Additionally, when any of the materials require replacement, all the metal will be recycled. Used material taken off site for the improvement projects will also be recycled.
- 2) Improvements on the existing wildlife waters will ensure biological integrity for public benefit by increasing water availability for wildlife during the height of summer and times of severe, prolonged drought. Providing stable water will allow for migration and migration corridors. Bighorn sheep regularly move between mountain ranges on, and off, the Refuge. These movements are needed to maintain genetic diversity and to build healthy populations. The improved wildlife waters will help build and maintain migratory corridors for bighorn sheep and other species. Mule deer and other species are known to utilize guzzlers on the refuge and are facing the same challenges that bighorn sheep face during these times of drought and climate change.

B. Will remain relevant and continue to provide a benefit beyond the existence of SNPLMA.

Answer:

- 1) The improvements in this proposal will remain relevant and continue to provide a benefit beyond the existence of SNPLMA. These improvements should remain

- functional and benefit wildlife for approximately 40 years or more with modest maintenance. In Southern Nevada, bighorn sheep occupy mountain ranges permanently where there are perennial water sources. Enhancing, restoring and maintaining water sources on the Refuge is a critical component of the SMP. The Interagency Management Team of the SMP regularly collaborate to maintain the water sources on the Refuge.
- 2) Water Resources are a critical habitat component for wildlife within the Mojave Desert and benefit countless species. The wildlife waters restored and upgraded through this nomination will benefit the populations and movement corridors of many mammal and bird species beyond bighorn sheep for decades to come.
  - 3) As part of this project, a presentation about the importance of water for resident and migratory wildlife populations in the desert will be developed. The presentation will be delivered to at least five school groups, youth groups and community groups during the project timeframe, but will be used beyond the lifespan of the project for education efforts. A total of at least 150 young individuals in this outreach effort and the benefits of this education effort will outlast the existence of SNPLMA.
  - 4) The developed presentation itself will be modified and enhanced over time and will be used for additional outreach and education efforts and beyond the lifespan of SNPLMA.

C. Conserves or restores the functionality, resilience, and integrity of biological communities.

Answer:

- 1) The proposal conserves and restores the functionality, resilience, and integrity of biological communities. The improvements in this proposal will provide real benefits to wildlife for many decades and will help conserve and restore the functionality, resilience, and the integrity of the biological community at the DNWR. Upgrading and restoring wildlife waters is in alignment with DNWR's SMP, which is a step-down species plan of the Desert National Wildlife Refuge Complex CCP. The CCP defines five goals for the Refuge, the first of which states, "Maintain and, where necessary, restore healthy population levels of bighorn sheep on DNWR within each of the six major mountain ranges". Water Resources have been identified as a Key Ecological Resource as it is a critical habitat component for the bighorn sheep in the Mojave Desert.
- 2) Water Resources are a critical habitat component for wildlife within the Mojave Desert and benefit countless species, especially in light of prolonged droughts, high summer temperatures and reduced rainfall brought about by global climate change. The wildlife waters restored and upgraded through this nomination will increase habitat quality and functionality and as a result increase resilience and benefit populations and improve integrity of movement corridors for many mammal and bird species beyond bighorn sheep for decades to come.

D. Conserves or restores cultural resources through prudent management and prevention of damage, injury, decay, waste, or loss.

Answer:

- 1) Tribal consultation and involvement will occur as part of the planning and implementation of these projects to ensure that cultural resources are not negatively impacted.
- 2) Desert bighorn sheep are themselves an important part of the Nuwu's/Nuwuvi's (Southern Paiute's/ Chemehuevi's) culture. Restoring and maintaining populations is important to our tribal partners and a form of conserving important cultural resources.

**3. The nomination promotes community, connecting humans to engage in the protection and the integrity of biological communities or cultural sites. Encourages people to connect with habitats, migratory corridors, protected areas, etc., and to appreciate and care for the environment.**

A. Encourages people to meaningfully connect with their natural environment and helps them appreciate and be a steward for the environment. Provides information and resources to educate and engage people in understanding their role in protection and maintenance of the natural environment by providing opportunities for them to connect to the natural resources directly or virtually, or provides education of the environment.

Answer:

- 1) The refuge allows people to meaningfully connect with their natural environment and helps them appreciate and care for the environment by providing information, experiences, and resources to educate and engage. The presence of wildlife attracts people to the Refuge, which enables the Refuge to educate and engage people. This is done by building and maintaining a stable bighorn sheep population, which this proposal would help in accomplishing. Water resources projects offer an opportunity for volunteers to work on a project that's directly tied to natural resources management. This helps build ownership of the resources in the community.
- 2) The DNWR is within the ancestral homeland of Nuwu/Nuwuvi people and desert bighorn sheep have special cultural significance to tribal members. This project will help ensure this culturally important species and the biological community of Mojave desert habitat exists for present and future generations of tribal people.

B. The nomination clearly defines and includes a stewardship component (federal or non-federal) to broaden support and reduce long-term costs by minimizing the human impact on the environment through an education plan with clear curricula and achievable goals and objectives.

Answer:

- 1) The Service is collaborating with state and non-profit entities on the planning, design, and implementation of this plan. NDOW, USGS and Fraternity representatives are members of the Interagency Bighorn Sheep Management Team



for DNWR. The Fraternity is a non-profit organization and a key partner and stakeholder in the SMP. NDOW and the Fraternity also provide critical technical expertise and a huge amount of labor for the implementation of these water developments. The development of a presentation and delivery to school and youth groups will educate young people and through their increased understanding of the functioning of the desert ecosystem and importance of its features will lead some to change their behaviors and increased their interest in support conservation of fragile habitat. Some will likely become volunteers or employees of the involved or other federal, state or non-governmental conservation organizations. In addition, some of these students will likely education others in a similar way.

- C. Preserves the past (cultural or historic sites) for present or future generations.

Answer:

- 1) The DNWR is within the ancestral homeland of Nuwu/Nuwuvi people and desert bighorn sheep have special cultural significance to tribal members. This project will help ensure this culturally important species exists for present and future generations. There are numerous cultural sites throughout the DNWR. All project sites have been or will be surveyed for cultural and historic resources and if cultural or historical resources are discovered they will be avoided by modifying site specific plans as needed.

**4. The nomination enhances partnerships to promote cooperation, collaboration, and stewardship. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project.**

- A. The nomination promotes partnerships to promote collaboration which addresses and meets the needs of more than one agency (federal or state).

Answer:

- 1) This is a collaboration between the Service and the state wildlife agency. NDOW, USGS and Fraternity representatives are all members of the Interagency Bighorn Sheep Management Team for DNWR and needs for all three involved agencies are addressed Desert bighorn sheep is a state managed large game species and NDOW coordinates bighorn sheep management activities, which are planned and implemented with the Service. This proposal also has a partnership and promotes cooperation and collaboration with the Fraternity, a non-government group made up of Nevada residents and wildlife enthusiasts from all over the country. The Friends of Nevada Wilderness and the Wild Sheep foundation have supported previous wildlife water projects and other conservation work though funds and volunteer assistance and will likely do so again for these projects. This proposal promotes sustainability, connectivity, and community by linking people to nature and recreational opportunities by increasing wildlife viewing opportunities.
- 2) By addressing critical conservation needs for desert bighorn sheep populations within the largest tract of land with bighorn sheep conservation as a purpose, the

project benefits the BLM, National Park Service and U.S. Forests Service Lands in southern Nevada that are home to desert bighorn sheep.

- 3) This project will promote stable bighorn sheep populations, thus ensuring the communities hunting opportunities for this highly sought-after game species into the future.
- 4) The proposal enhances and connects habitats and wildlife migratory corridors in the region. Providing stable water at these locations improves the habitat and allows for greater movement of wildlife within and in between mountain ranges. These movements are needed to maintain genetic diversity and to maintain healthy wildlife populations. The improved and restored wildlife waters will help create and maintain migratory corridors for bighorn sheep and other species.

B. The nomination involves non-Federal, public partners, citizen groups or organizations in the development or accomplishment of resource management goals and other activities to prevent waste, damage, or neglect.

Answer:

- 1) This is a collaborative project with NDOW and the Fraternity. Both partners will participate actively in the planning, design, and implementation of this project, providing technical expertise in designing wildlife water projects. Both non-federal partners will also be involved in the implementation of the projects. The Service relies on working with these partners to achieve the Refuges resource management goals. The collaboration of all three organizations, federal agencies, state agency and a non-profit organization, allows for leveraging matching resources and preventing waste by completing tasks and project components using strength and avoiding weaknesses within the policies and abilities of each organization. Improvements to wildlife waters would require fewer human impacts in the future through reduced maintenance and fewer trips to these waters, thus increasing wilderness values and decreasing disturbance.

C. Project has support for the planning, design, and/or implementation from non-profit, local, or state government, academia, tribal, or youth initiatives.

Answer:

- This is a collaborative project with NDOW and the Fraternity. Both partners will participate actively in the planning, design, and implementation of this project, providing technical expertise in designing wildlife water projects. Both non-federal partners will also be involved in the implementation of the projects. In addition, we have received financial and volunteer support from the Wild Sheep Foundation and volunteer support from the Friends of Nevada Wilderness for similar projects and these organizations have indicated they intend to support our work in similar ways in the future.
- Information about these wildlife waters and their benefits to wildlife are shared with the public at the DNWR Visitor Center and through social media with many

groups, such as school groups and tour buses, that visit the Refuge. This project offers volunteers an opportunity to be directly involved with natural resource management through hands-on work. These volunteers will learn key factors of bighorn sheep management as well as the challenges they face. In addition, particular efforts will be made through outreach and tribal consultation to engage the local tribes. The DNWR is within the ancestral homeland of Nuwu/Nuwuvi people and desert bighorn sheep have special cultural significance to tribal members. This project will help ensure this culturally important species exists for present and future generations and offer tribal members and especially tribal youth the opportunity to participate in and volunteer for these projects.

- As part of this project, a presentation about importance of water for resident and migratory wildlife populations in the desert will be developed. The presentation will be delivered to at least five school groups, youth groups and community groups during the project timeframe, but will be used beyond the lifespan of the project for education efforts. A total of at least 150 young individuals in this outreach effort and the benefits of this education effort will outlast the existence of SNPLMA.

D. The nomination has identified committed non-SNPLMA sources of funding or in-kind contributions in the development and/or implementation of the project, (i.e., volunteer labor valuation to be computed at the rate used by the Department of the Interior, non-federal employees' actual hourly rate plus the value of any fringe benefits received, actual costs for material, equipment, and supplies. *Overhead costs may not be included in determining in-kind contributions.*

Answer:

The following in-kind contributions for this nomination are from non-appropriated funding.

Non-profit Partnership in-kind contributions (Fraternity):

Volunteer labor: \$160,262

Mileage: \$27,510

State agency in-kind contributions (NDOW):

Labor: \$120,338.40

Mileage: \$11,004

Service in-kind contributions (USFWS volunteers):

Labor: \$32,054.40

Mileage: \$3,668

**Total: \$354,846.80**

In addition to committed in-kind contributions above, additional NGO's are interested in assisting with future water development projects, including the Friends of Nevada Wilderness and the Wild Sheep Foundation.

## L. ORDERS AND PRIORITIES

Respond to the Executive Orders, Secretarial Orders, Department of the Interior Priorities, and USDA Forest Service Priorities as they apply to the purpose of the nomination.

### A. Executive Orders (EO):

- ***EO No. 13855: Promoting Active Management of America's Forests, Range Lands to Improve Conditions and Reduce Wildfire Risk***

Click or tap here to enter text.

- ***EO No. 14004: Ensuring the Future is Made in All of America by All of America's Workers***

The proposal would comply with EO No. 14004. The Service will follow all current policy and, whenever possible, procure goods, products, materials, and services from sources that will help American businesses compete in strategic industries and help America's workers thrive.

- ***EO No. 14063: Use of Project Labor Agreements for Federal Construction Projects (applicable to projects estimated at \$35 million or more)***

n/a

- ***EO No. 14072: Strengthening the Nation's Forests, Communities, and Local Economies***

The proposal complies with EO No, 14072. The Service supports local communities and the Local Economy by providing recreation opportunities for local residents and visitors/tourists. This project enhances native wildlife populations and increases habitat quality, allowing for additional nature experiences, including the much sought-after once in a lifetime desert bighorn sheep hunt opportunities.

- ***EO No. 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All***

Click or tap here to enter text.

### B. Secretarial Orders

- ***SO No. 3347: Conservation Stewardship and Outdoor Recreation.***

This proposal supports SO No. 3347. The SO No. 3347 states: “The purpose of this Order is to enhance conservation stewardship, increase outdoor recreation, and improve the management of game species and their habitat”. This project could result in an increase in outdoor recreation, such as wildlife viewing, wildlife photography, hunting, and improved management of game species by providing stable water sources for wildlife.

- ***SO No. 3356: Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories.***

This project could enhance conservation stewardship; increase outdoor recreation opportunities for all Americans, including opportunities to hunt; and improve the management of game species and their habitats for this generation and beyond. This would benefit all Americans and the NDOW. Desert bighorn sheep holds significance for Nuwu/Nuwuvi people, is an icon of the West and a popular large game species for Nevada. Updating and building guzzlers support the bighorn sheep population on the Refuge, which historically supported the largest meta-population in Nevada.

- ***SO No. 3362: Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors.***

This proposal works in close partnership with the State of Nevada through the NDOW. This proposal would enhance and improve the quality of big-game winter range and migration corridor habitats on Federal lands under the management jurisdiction of this Department in a way that recognizes state authority to conserve and manage big-game species. These guzzlers are located at critical areas for bighorn sheep. The Saddle Mountain project is located in the East Desert Range which is a movement corridor between the Sheep and Desert Ranges. Having reliable water sources within the East Desert Range facilitates movement between the two ranges.

- ***SO No. 3366: Increasing Recreational Opportunities on Lands and Waters Managed by the U.S. Department of the Interior***

This proposal supports public lands under the management and administration of the U.S. Department of the Interior (Department) are open and accessible for recreational pursuits by all Americans and visitors to the United States. This proposal could increase recreational opportunities on the DNWR through increased hunting, wildlife viewing and wildlife photography opportunities.

- ***SO No. 3370: Conservation Stewardship and Increasing Public Access to Urban National Wildlife Refuges.***

This proposal is consistent with SO No. 3370. The DNWR is an Urban National Wildlife Refuge, and this proposal supports conservation stewardship on public lands. This proposal would support the Secretary's priorities, including restoring trust in the

stewardship of public lands by being a good neighbor; creating a conservation stewardship legacy second only to that of President Theodore Roosevelt, Jr.; and encouraging and assisting Americans, particularly those who live in urban areas, to experience the outdoors within their local communities.

- ***SO No. 3372: Reducing Wildfire Risks on Department of the Interior Land Through Active Management.***

*n/a*

- ***SO No. 3373: Evaluating Public Access in Bureau of Land Management Public Land Disposal and Exchanges (focus is on Sec. 4.b.(3) Potential increased public recreational access to existing public lands resulting from the proposed land acquired through an exchange (acquisition).***

*n/a*

- ***SO No. 3376: Increasing Recreational Opportunities through the use of Electric Bikes.***

*n/a*

C. Department of the Interior Priorities:

- ***Identifying steps to accelerate responsible development of renewable energy on public lands and waters.*** *We are investing in climate research and environmental innovation to incentivize the rapid deployment of clean energy solutions, while reviewing existing programs to restore balance on America's public lands and waters to benefit current and future generations.*

*n/a*

- ***Strengthening the government-to-government relationship with sovereign Tribal Nations.*** *We understand that tribal sovereignty and self-governance, as well as honoring the federal trust responsibility to Tribal Nations, must be the cornerstones of federal Indian policy.*

The Desert NWRC has been coordinating with Nuwu/Nuwuvi (Southern Paiute/Chemehuevi) Tribes for the past several years, building relationships. As part of that coordination, we are working with Tribes to identify opportunities for incorporating traditional ecological knowledge and management on the Refuges, which can benefit tribal interests regarding wildlife conservation and habitat management. Tribal involvement and consultation will occur as part of the planning and implementation portion of this project.

- ***Making investments to support the Administration's goal of creating millions of family-supporting and union jobs.*** *This includes establishing a new Climate*

*Conservation Corps Initiative to put a new generation of Americans to work conserving and restoring public lands and waters, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate.*

This project will require contracting both services and significant building materials for wildlife water developments, thus supporting business growth and job creation or retention. The project is designed to protect biodiversity, including desert bighorn sheep and a suite of other desert wildlife that will make use of the new or restored water developments. The project will also result in a smaller carbon footprint as the new guzzlers will require less frequent maintenance due to improved functionality and fewer instances of emergency water hauling during dry periods due to increased capacity and rain collection efficiency.

- ***Working to conserve at least 30% each of our lands and waters by the year 2030.*** *We will work to protect biodiversity, slow extinction rates, and help leverage natural climate solutions by conserving 30% of America's lands and waters by 2030. This relies on support for local, state, private, and tribally led conservation and restoration efforts that are underway across America.*

Yes, the Refuge support a wealth of biodiversity. This project will stabilize populations of desert bighorn sheep and a wide variety of other wildlife, including rare and migratory birds. This project improves the oval habitat quality and suitability to native species and mitigates some effects of climate change by providing reliable water sources, especially critical prolonged drought periods and during hot summer months with ever increasing temperatures, thereby slowing help slow population declines and ultimately extinction rates on America's lands.

- ***Centering equity and environmental justice.*** *The impacts of the multiple crises in the United States are not evenly distributed in our society. Communities of color, low-income families, and rural and indigenous communities have long suffered disproportionate and cumulative harm from air pollution, water pollution, and toxic sites. At every step of the way, Interior will engage diverse stakeholders across the country, as well as conduct formal consultation with Tribes in recognition of the U.S. government's trust responsibilities.*

Yes, we will follow policy and when possible use the U.S. Small Business Administration's 8(a) Business Development Program. The program is designed to benefit firms that are minority-owned and controlled by socially or economically disadvantaged individuals. Disadvantaged businesses have priority to compete for any contracts connected to this project to ensure a diverse group of contractors will have the ability to bid.

The Refuge involve the local tribes to and complete consultation for this project. This will ensure that cultural significance of desert bighorn sheep and the mountain ranges within DNWR to the cultural heritage of tribal partners is recognized and highlighted.

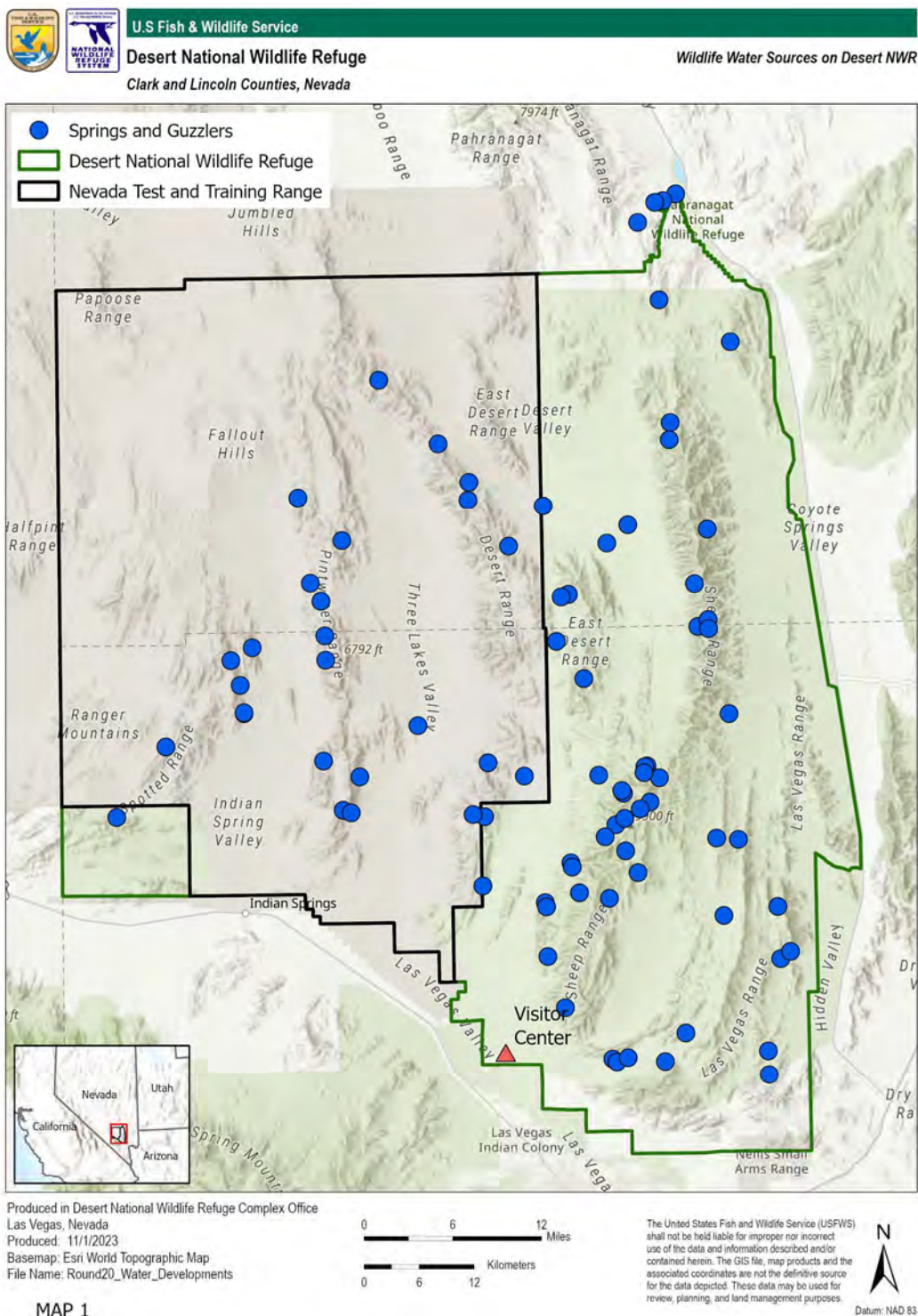
D. USDA Forest Service Priorities: n/a

- *Controlling the COVID-19 pandemic*
- *Providing economic relief*
- *Tackling climate change*
- *Advancing racial equity*
- *Improving our workforce and work environment*

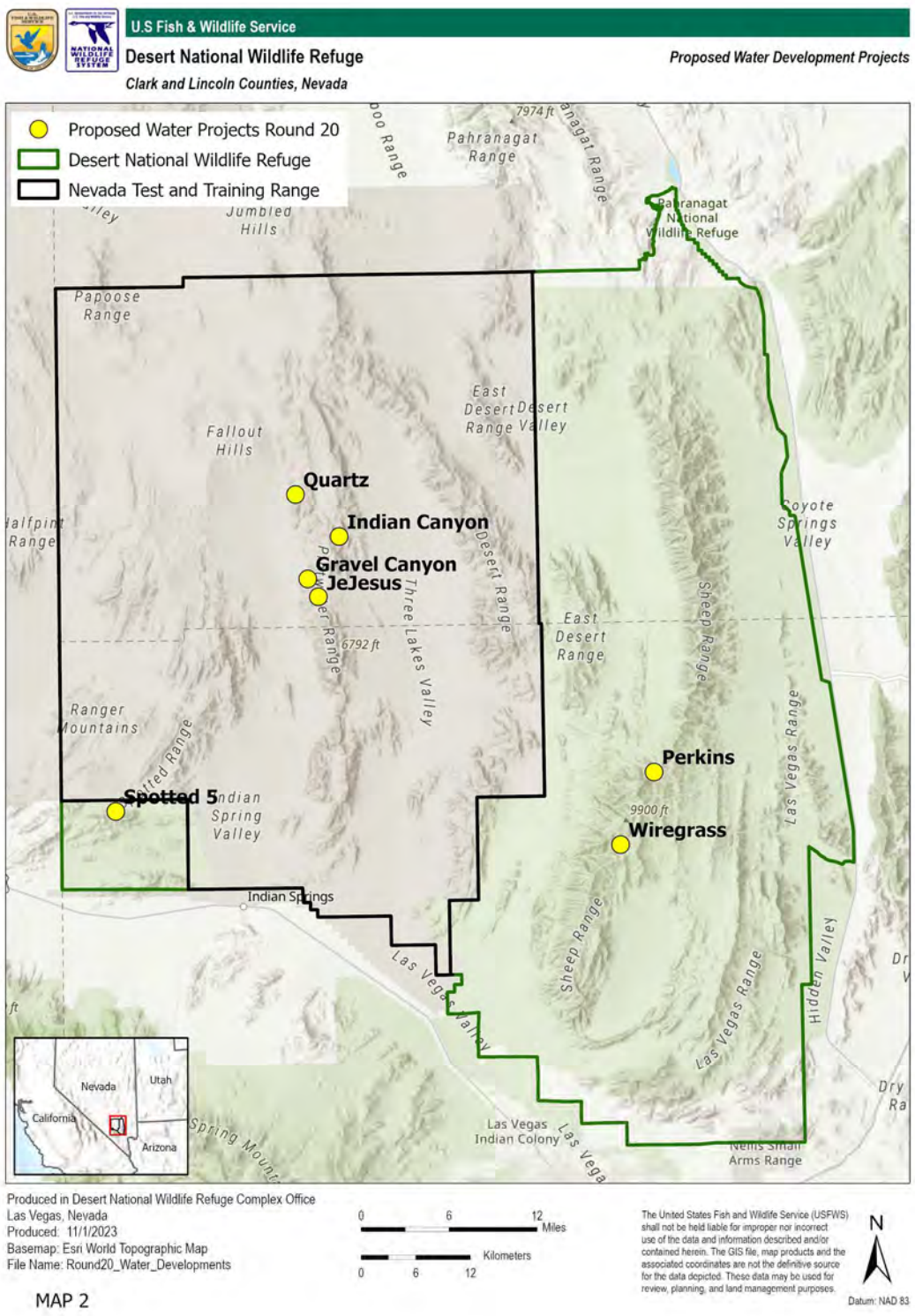
**M. MAPS**



Map 1: Illustrates USFWS Management Area DNWR and the over 60 wildlife waters scattered across the Refuge.

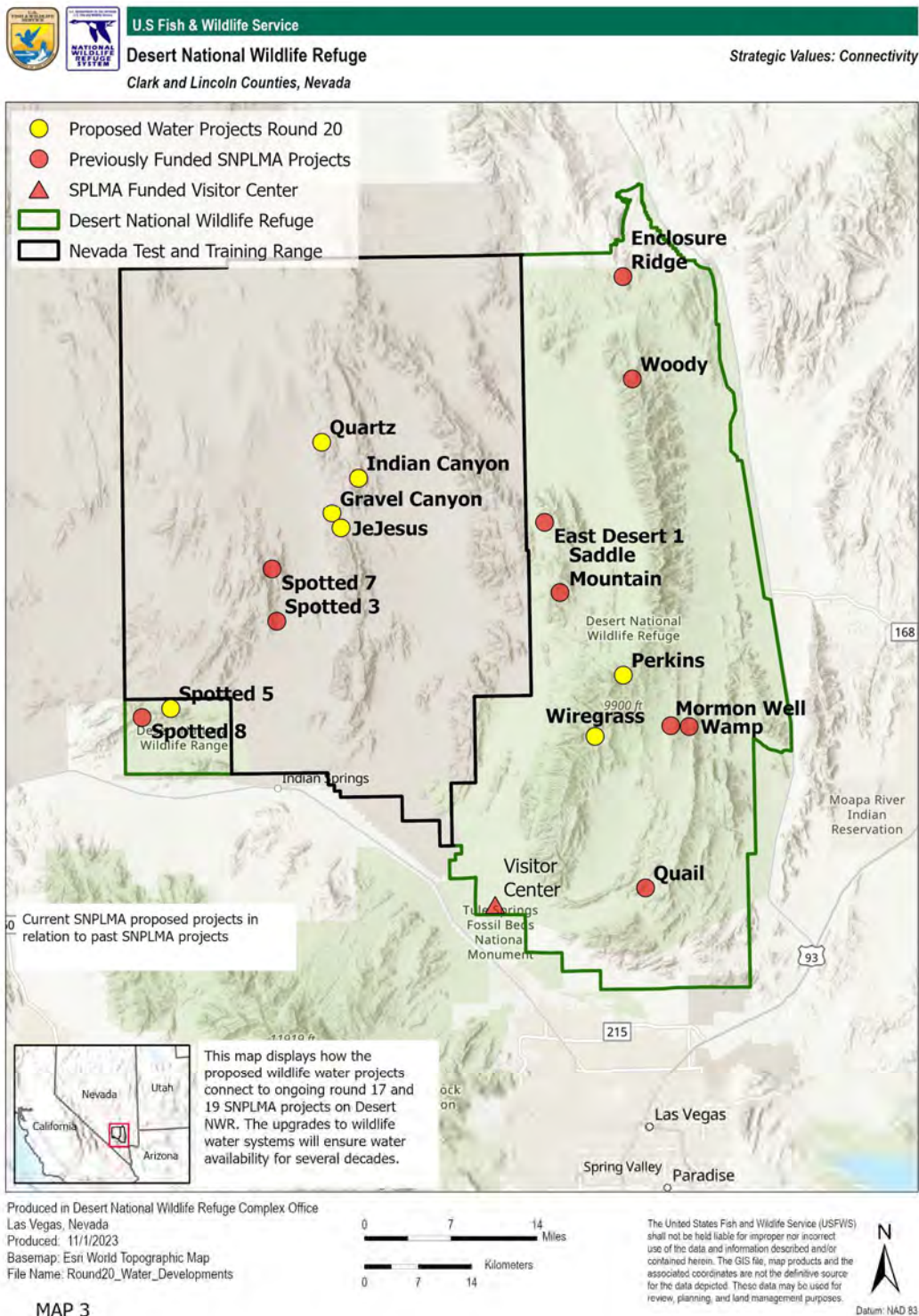


Map 2: Shows locations of the seven proposed projects restoring or improving wildlife waters within three mountain ranges on DNWR.



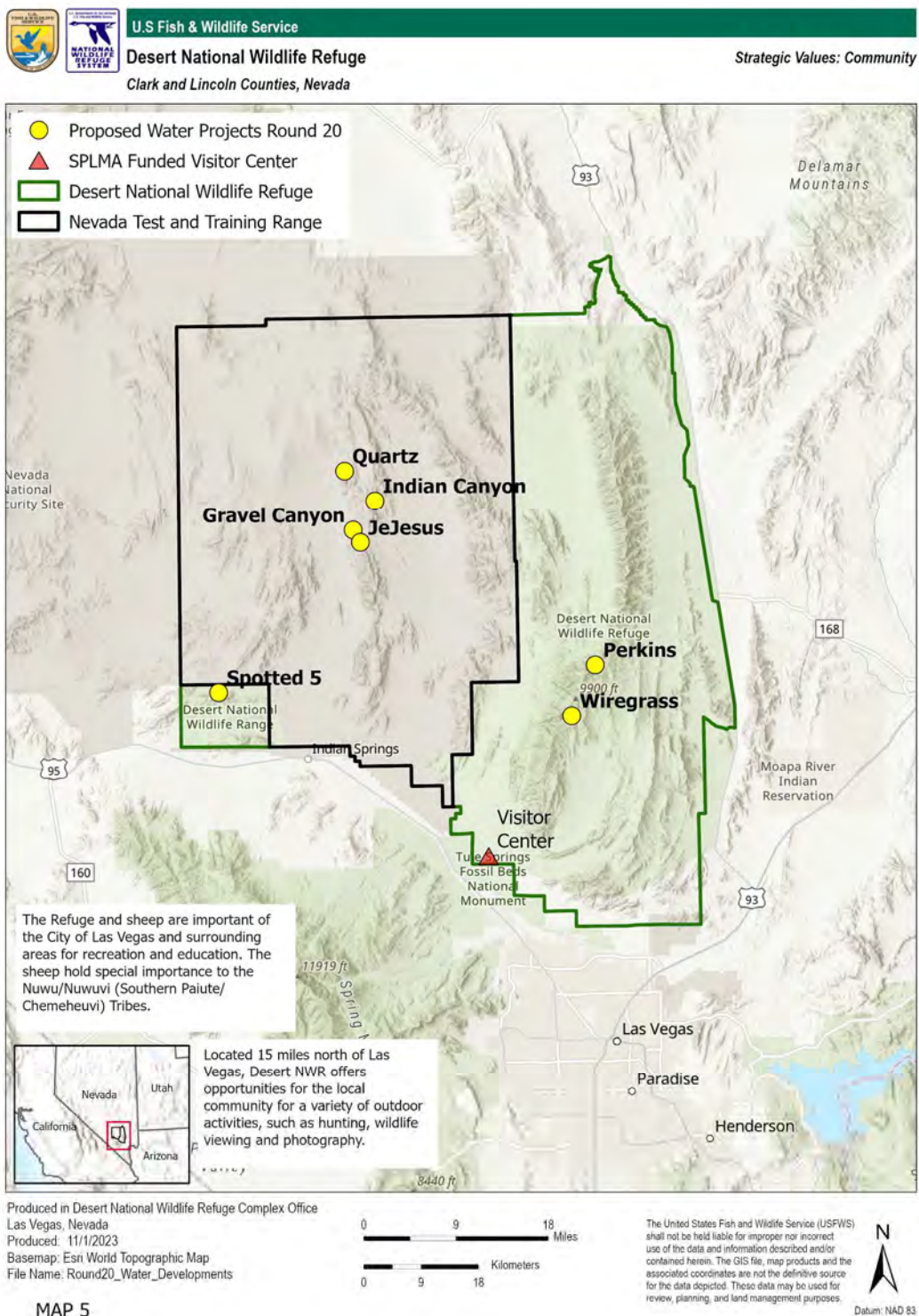
MAP 2

Map 3: SNPLMA Round 17 and 19 approved and the Round 20 requested wildlife water projects and the habitat connectivity these projects are designed to improve.





Map 5: Shows the vicinity of the project area to Las Vegas and the recreation opportunities it provides to locals and tourists.



**N. PHOTOS**

Figure 1: Example of newly rebuilt guzzler with new, camouflaged metal apron in the foreground and new camouflaged flat storage tanks and self-leveling drinker in the background. This Saddle Mountain guzzler rebuild was funded by SNPLMA Rd. 19



Figure 2: Mostly dysfunctional Quartz Spring hybrid system with old storage, empty float valve drinker, small apron and non-functioning connection to spring



Figure 3: Degraded and cracking old hyperlon apron



Figure 4: Degraded storage tank and plumbing



Figure 5: Failing Gravel Canyon Spring with staff and volunteers completing emergency temporary drinker relocation.





Figure 6: Wiregrass Spring, unreliable and in need of complete refurbishment to provide reliable water source with wildlife drinker.

## SNPLMA ROUND 19 NOMINATION Conservation Initiatives

### Performance Measures

<b>SNPLMA STRATEGIC PLAN GOAL 1: Sustain the Quality of the Outdoor Environment by Conserving, Preserving, and Restoring Natural and Cultural Resources</b>		
<b>Performance Measures for Habitat Enhancement</b>	<b>Definition of Performance Measure</b>	<b>Quantity</b>
H1 - Acres of Land Identified for Withdrawal from Multiple Use	<p>Report the number of acres of land identified for withdrawal or withdrawn from multiple use management (e.g., as the result of a cultural or biological survey, etc.).</p> <p>Report the number of acres of specially designated areas such as a wilderness area, national recreation or conservation area that are automatically withdrawn from multiple use or where use is limited as a consequence of acquisition using SNPLMA funds. Land acquired in an ACEC is not automatically withdrawn from multiple use and should be reported under L1 only.</p> <p>Report to the nearest whole acre.</p>	
H2 - Miles of Riparian Stream or Shoreline Habitat Treated, Enhanced, or Restored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the miles have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as those should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as those should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole mile.</p>	
H3 - Miles of Riparian Stream or Shoreline Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of miles of riparian stream and/or shoreline vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole mile.</p>	
H4 - Acres of Upland Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of upland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland</p>	

	<p>fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	
H5 - Acres of Upland Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of upland vegetation and/or wildlife habitat surveyed, inventoried, or monitored.</p> <p>Report to the nearest whole acre.</p>	
H6 - Acres of Wetland / Riparian Habitat Treated, Enhanced, or Restored	<p>Report the number of acres of wetland vegetation and/or wildlife habitat treated, enhanced, or restored. This can include retreatment and/or maintenance treatments only if the initial treatment was not funded through SNPLMA and the acres have not been accounted for in the performance measures for another SNPLMA project. Include acres treated by fire rehabilitation projects or by fire for resource benefits, but not other types of wildland fire. Do not report treatments targeting invasive vegetation, as these should be reported under the H9 performance measure. Do not report hazardous fuels reduction projects, as these should be reported under either the F1 or F2 performance measures.</p> <p>Report to the nearest whole acre.</p>	
H7 - Acres of Wetland / Riparian Habitat Surveyed, Inventoried, or Monitored	<p>Report the number of acres of wetland vegetation and/or wildlife habitats inventoried or monitored.</p> <p>Report to the nearest whole acre.</p>	
H8 - Number of Water Developments Constructed or Improved for Wildlife	<p>Report the number of water developments for use by wildlife constructed or improved/repared within all habitat types. Existing projects may be counted under this performance measure if functional improvements/repairs are made as defined in the project nomination.</p> <p>Report each development constructed or improved as one unit (e.g., one project may have three water developments).</p>	7
H9 - Acres of Invasive Plant Species Treated or Restored	<p>Report the number of acres of weed infestation treated with chemical, mechanical, physical, or biological control agents for the purpose of weed control. Include acres treated by fire when fire is used as a physical control agent for weed control rather than as a hazardous fuels treatment. Each acre treated is counted only once during the life of the project, no matter how many re-treatments occurred during the project.</p> <p>Report to the nearest whole acre.</p>	
H10 - Acres of Invasive Plant Species Surveyed, Inventoried, or Monitored	<p>Report the number of acres of weed infestation inventoried or monitored. Include monitoring of weed treatment projects reported under performance measure H9.</p> <p>Report to the nearest whole acre.</p>	

H12 - Acres of Herd Management Areas Surveyed, Inventoried, or Monitored	Report the number of acres of wild horse and burro herd management areas or herd areas surveyed, inventoried, or monitored. Report to the nearest whole acre.	
H13 - Number of Conservation or Protection Actions Taken within a Herd Management Area	Report the number of actions taken within a wild horse and burro herd management area to conserve or protect the area for the benefit of the herd (e.g., fences, water developments, vegetative treatments). Report each action as one unit.	
H14 - Number of Threatened and Endangered Species Recovery Actions Implemented	Report the number of individual recovery actions performed for threatened or endangered species recovery as identified in recovery plans, conservation management plans, or land use planning documents. Include surveys, inventories, and monitoring as recovery actions. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same recovery action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	
H15- Number of Conservation Actions Implemented for Non-Listed Species	Report the number of individual conservation actions for species not listed under the Endangered Species Act. Note: One distinct action repeated 5 times over the course of the project would report as 1 action, not 5. The same conservation action conducted at distinct sites can be counted once for each site (this does not apply to individual plots within one single project site). The number of acres over which the actions were taken are reported under either H4 or H6. Report each action as one unit.	7
H16 - Miles of Roads or Trails Decommissioned and/or Rehabilitated	Report the number of miles of roads and/or trails decommissioned and/or rehabilitated within all habitats (urban, upland, riparian, stream, trails in caves, etc.). Closure may include designation, signing, blockage by physical means, obliteration, etc. Report to the nearest whole mile.	
H17 – Miles of Roads or Trails Surveyed, Inventoried, or Monitored	Report the number of miles of roads and/or trails inventoried or monitored. Report to the nearest whole mile or linear foot. Report to the nearest whole mile.	

Performance Measures for Wildland Fire Management	Definition of Performance Measure	Quantity
F1 - Acres of Hazardous Fuels Treated – Non-Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency outside the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	
F2 - Acres of Hazardous Fuels Treated – Wildland Urban Interface (WUI)	Report the total number of acres of hazardous fuels treated, enhanced, or restored to reduce wildland fuels hazards and to restore or maintain ecosystem resiliency within the WUI. Where multiple treatments are necessary to meet vegetation management objectives, such as hand thinning followed by re-seeding, each treatment is counted individually. Report to the nearest whole acre.	

Performance Measures for Cultural / Paleontological Resources	Definition of Performance Measures	Quantity
C1 - Number of Cultural or Historic Sites or Structures Stabilized or Protected	Report the number (one unit for each site or each structure) where work is completed to protect, stabilize, restore, excavate, and/or manage cultural features. For sites receiving multiple treatments, count each site only once, but if multiple structures are on a site, count each structure separately. For example, an archeological dig site would be counted as one although multiple excavations may take place on the site, whereas a site having remnants of three separate dwellings would be counted as three. Report installation of interpretive signs and structures (e.g., kiosk displays) under O6. Report administrative actions such as mineral withdrawals, closures, or special designations under H1. Report each site or structure as one unit.	
C2 - Number of Cultural or Paleontological Artifacts Protected	Report the number of cultural and/or paleontological artifacts protected, stabilized, or catalogued. Report one unit for each repatriation or transfer of custody of Native American human remains, funerary objects, sacred objects, and/or objects of cultural patrimony (cultural items) held in collections, pursuant to Title 43 CFR Part 10.10.; each instance in which all requirements of Title 43 CFR Part 10.10 have been met but where actual repatriation has not been completed because of decisions made by lineal descendants or Indian tribes or lack of a valid claim; and reburial of repatriated cultural items on BLM public lands. Report the number of accessions cataloged, inventoried, rehoused and/or otherwise	

	<p>upgraded. Materials from several sites or localities that are accessioned and cataloged under a single accession number should be considered one unit. An accession for which any one or more of the tasks of cataloging, inventorying, or upgrading has been completed should be reported as one unit.</p> <p>Report each artifact as one unit.</p>	
C3 - Acres of Cultural / Paleontological Resources Surveyed, Inventoried or Monitored	<p>Report the number of acres of land surveyed, inventoried, or monitored for cultural and/or paleontological resources. Include acres surveyed using Class I study of existing information inventory, Class II probabilistic field survey, or Class III intensive field survey and resultant inventory as required by Section 14 of the Archaeological Resources Protection Act (ARPA) or Section 110 of the National Historic Preservation Act (NHPA).</p> <p>Report to the nearest whole acre.</p>	

<b>SNPLMA STRATEGIC PLAN: Other Performance Measures that Also Support the Three Values for SNPLMA Implementation of Sustainability, Connectivity, and Community</b>		
<b>Other Performance Measures</b>	<b>Definition of Performance Measures</b>	<b>Quantity</b>
O1 - Number of Hazardous Sites Remediated	<p>Report the number of hazardous sites where remediation actions are completed. Actions to be included are: removal of safety hazards, clean-up operations, restoration actions, and water quality remediation actions. Do not report temporary remediation measures.</p> <p>Report each site as one unit. When applicable, also report total weight of trash removed during clean-up operations.</p>	7
O3 - Number of Law Enforcement Patrols, Incident Reports, Investigations	<p>Report the number of law enforcement patrol actions, incident reports taken, and investigations conducted.</p> <p>Report each item as one unit.</p>	
O4 - Number of Scientific / Technical Reports Produced	<p>Report the number of scientific technical reports produced.</p> <p>Report each report as one unit.</p>	
O5 - Number of Outreach Contacts Made	<p>Report the number of education and outreach contacts made through interpretation and environmental education, such as number of teachers trained, number of participants in workshops, etc.</p> <p>Report each participant as one unit.</p>	150
O6 - Number of New Interpretive or Education Publications/Signs/ Kiosks/Displays/etc. Produced	<p>Report the number of new interpretive or education publications produced, signs produced and installed, public informational websites or other electronic media presentations designed and implemented, and</p>	

	informational or interpretive kiosk displays produced and installed. Report each item produced as one unit.	
O7 - Number of Interpretive or Education Presentations Given and/or Community Events Participated in or hosted	Report the number of interpretive or educational presentations given. Report each presentation as one unit.	5
O9 – Number of GIS Databases Generated and/or Map Layers Produced	Report the number of GIS databases created and/or the number of map layers produced to identify the location of natural resources within the environment and provide mapping for use in educational programs. Report each database or map layer as one unit.	1
O10 – Number of Volunteers Used	Report the number of volunteers used in educational or interpretive programs and for surveying, monitoring, or restoration activities. Report each volunteer as one unit.	85
O11 – Number of Databases, Reports, and Other Electronic Means of Documenting Activities	Report the number of new databases, electronic reporting tools, mathematical/statistical models, websites, or reports developed and implemented to document project and/or program work. Report each electronic document or method developed as one unit.	1
O12 – Number of Management Plans/Handbooks/Manuals/Guides for Activity on Public Lands Completed (formerly under H11, F3, C4, and R1)	Report the number of new or revised ecosystem restoration, hazardous fuels reduction, recreation, cultural, resource management, or other activity plans when the decision document for the plan is signed. Revisions include modification of a significant portion of the decisions in the activity plan. Do not report minor amendments or changes in these plans. Report each plan as one unit.	

### **Glossary**

**Accession** – One or more objects and/or specimens acquired in the same manner from one source at one time for the museum property collection. Accessioning is the process of formally accepting and establishing permanent legal title (ownership) and/or custody for an object or specimen or group of objects and/or specimens. An accession can consist of materials and associated archives from a single site or fossil locality, or materials from several sites or fossil localities.

**Biological Treatments** – Treatment of vegetation using domestic animals, insects, etc.

**Chemical Treatments** – Treatment of vegetation with herbicides, etc.

**Inventory** – Collection and analysis of baseline information; counting number of a given species, cultural feature, etc.

**Mechanical Treatments** – Treatments using hand or motorized tools for mowing, chaining, ripping, thinning, seeding, etc.

**Monitoring** – Establishment of current status and/or trends in environmental variables

**Riparian Habitat** – Riparian habitat includes the interface between upland habitat and a river, stream, or lake, regardless of whether it is intermittent or perennial. Riparian habitats are characterized by vegetation adapted to growing in water or saturated soils. Includes riparian woodlands, forests, buffer zones, or strips.

**Survey** – Observing an area to determine if a species or resource exists after which an inventory may or may not be performed.

**Upland Habitat** – Upland habitats include Mojave Desert, grassland, shrub lands, pinyon juniper forests, and woodland sites.

**Wetland Habitat** – Wetlands are saturated areas, either permanently or seasonally, with characteristic vegetation adapted to its unique soil conditions.



**2023-2024 Officers**

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Vice President: Matt Blackburn  
Treasurer: Michelle Mercer  
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Eddie Pribyl, Honorary Lifetime

October 27, 2023

Mr. Robert Wandel  
Assistant District Manager  
SNPLMA Division  
Bureau of Land Management  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

Dear Mr. Wandel,

The Fraternity of the Desert Bighorn is a 501-C-3 volunteer organization that works with Land Management Agency's installing and maintaining big game water developments (guzzlers) and springs for wildlife and in particular bighorn sheep use. We wholly support the request from the Desert National Wildlife Refuge for their request for funding from SNPLMA Round 20 for "Wildlife Water Reestablishment for Desert Bighorn Sheep Conservation".

We would be supplying volunteer labor for these installations with between 35 and 55 volunteers per project with an average of approximately 500 hours plus travel for each project.

We have been assisting the Refuge with installations for over 40 years and look forward to working with them for the next 40 years. If you have any questions, please feel free to contact me at the number below.

Sincerely,

*Patrick J. Cummings*

Patrick J. Cummings  
President, Fraternity of the Desert Bighorn  
702-286-6437



JOE LOMBARDO  
Governor

STATE OF NEVADA

**DEPARTMENT OF WILDLIFE**

6980 Sierra Center Parkway, Suite 120

Reno, Nevada 89511

Phone (775) 688-1500 • Fax (775) 688-1595

ALAN JENNE  
Director

JORDAN GOSHERT  
Deputy Director

CALEB MCADOO  
Deputy Director

MIKE SCOTT  
Deputy Director

October 25, 2023

NDOW-SR #: 24-054

Bureau of Land Management  
SNPLMA Division  
ATTN: Program Manager of Conservation Initiatives  
4701 N. Torrey Pines Drive  
Las Vegas, NV 89130

Re: SNPLMA Round 20 Project Proposal – Wildlife Water Reestablishment for Desert Bighorn Sheep Conservation on the Desert National Wildlife Refuge

To Whom This May Concern,

The Nevada Department of Wildlife (Department) would like to take this opportunity in stating support of the U.S. Fish and Wildlife Service's Round 20 funding proposal to rebuild existing water developments and upgrade/maintain previously developed springs on the Desert National Wildlife Refuge (DNWR). Wildlife water developments ("guzzlers") and developed springs provide reliable water sources to wildlife, playing an essential role in sustaining desert bighorn sheep and many other wildlife species. At least 50 species of mammals and over 350 species of birds within the DNWR benefit.

The U.S. Fish and Wildlife Service and the Department have a strong collaborative working relationship coordinating desert bighorn sheep and wildlife water management on the DNWR. The Department's Southern Region water development team is responsible for managing water developments and developed springs throughout central and southern Nevada, inclusive of those within the DNWR. Specific to the DNWR funding proposal, the Department will be contributing usage of state-owned equipment, vehicles, experienced personnel (~5 staff) to perform the maintenance, upgrades, and replacement of select guzzlers and service developed springs as appropriate. Historically, these types of projects have been very popular volunteer events, and the Department and DNWR anticipate up to 50 volunteers from Non-Governmental Organizations (NGO's) such as the Fraternity of Desert Bighorn and Team Rubicon contributing their time, labor, and equipment to assist with construction needs.

Wildlife water developments and developed springs are critical tools for managing and sustaining desert bighorn sheep in Nevada and on the DNWR. The Department fully supports the U.S. Fish and Wildlife Service's proposal and commits to assisting wherever necessary to complete DNWR project work.

Sincerely,

A handwritten signature in blue ink that reads "Brad Hardenbrook".

D. Bradford Hardenbrook  
Supervisory Habitat Biologist  
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Instructions: Put project cost estimates in Tabs 1-8. The values from those tabs will roll-up to this summary worksheet. The Non-Federal Contribution can be entered in Tabs 1-8 as a whole amount, it does not need to be broken out by unit cost.

**PROJECT BUDGET**

<b>Project Name:</b>		<b>Date:</b>	
<b>Project Manager:</b>		<b>Agency:</b>	
<b>Cost Categories</b>		<b>SNPLMA</b>	<b>Non-Federal Contribution</b>
1. Personnel (labor plus benefits)		\$ 475,129.70	\$ 312,664.80
2. Travel		\$ -	\$ -
3. Training		\$ -	\$ -
4. Equipment		\$ -	\$ -
5. Supplies/Materials		\$ 241,077.70	\$ -
6. Contracts and/or Agreements		\$ 1,141,909.60	\$ -
7. Vehicle Use		\$ -	\$ 42,182.00
8. Other Necessary Expenses		\$ -	\$ -
<b>9. TOTAL PROJECT BUDGET</b>		<b>\$ 1,858,117.00</b>	<b>\$ 354,846.80</b>

Notes:

## 1. PERSONNEL

Include labor costs for all aspects of project implementation where agency labor will perform the work, e.g. planning and environmental documentation, section 106 compliance, labor to perform implementation, project management, interdisciplinary team (ID team), engineering, etc. Labor expense documentation must correlate the individual labor expense with the deliverable, task, or subtask. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total labor costs.

Description of Role	Unit	Unit of Measure	Unit Cost*	SNPLMA	Non-Federal Contribution
Project Leader - planning, execution, and monitoring of project	520	Hours	\$ 109	\$ 56,881	\$ -
Deputy Project Leader - planning, execution, and monitoring of project	520	Hours	\$ 93	\$ 48,137	\$ -
Refuge Manager - planning, NEPA, execution, monitoring, controlling, reporting, and closeout of project	2080	Hours	\$ 72	\$ 148,774	\$ -
Wildlife Biologist - planning, NEPA, execution, coordinating, reporting of project	2080	Hours	\$ 60	\$ 124,146	\$ -
Maintenance Mechanic- technical expertise, planning, execution	300	Hours	\$ 82	\$ 24,486	\$ -
Administrative Officer- budget management, SMART database assist, project close-out	500	Hours	\$ 68	\$ 34,226	\$ -
Park Ranger - project implementation support, volunteer coordination	336	Hours	\$ 49	\$ 16,574	\$ -
Biological technician - project support	336	Hours	\$ 40	\$ 13,550	\$ -
Archaeologist- Section 106, survey and consultation	140	Hours	\$ 60	\$ 8,356	\$ -
Nevada Department of Wildlife- technical expertise and labor (average staff; 5staff x 4 days x 7 projects for staging and construction; +350 hours for planning and design	2030	Hours	\$ 59		\$ 120,338.40
Fraternity of Desert Bighorn labor (30 volunteers x 12 hours x 2 days x 7 projects)	5040	Hours	\$ 32	\$ -	\$ 160,272.00
US Fish and Wildlife Service volunteer labor (average 3 volunteers/project x 12 hours x 4 days)	1008	Hours	\$ 32		\$ 32,054.40

<b>Total</b>	<b>\$ 475,130</b>	<b>\$ 312,664.80</b>
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\* Unit cost = hourly pay including benefits plus 20% inflation based on projected 5.2% federal pay raise for 2024

**2. TRAVEL**

Travel expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total travel costs.

Description of Travel and Purpose	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
(ex) Travel to National Operations Center to participate in pre-award contract meeting for Deliverable# 2.	0	Trip	\$ -	\$ -	\$ -
(ex) Travel to Palm Springs, CA, to attend training for desert tortoise monitoring	0	Trip	\$ -	\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
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		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -
		Trip		\$ -	\$ -

<b>Total</b>	\$	\$	\$	\$	\$
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### 3. TRAINING

Training expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Example, contracting officer representative or program officer/assistance agreement training, training for chainsaw use, training for pesticide application, visual resource management, etc. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total training costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
(ex) Project Manager - contracting officer's representative training in Colorado.	0	Each	\$ -	\$ -	\$ -
(ex) Wildlife Biologist - training for desert tortoise monitoring protocol in Palm Springs, CA.	0	Each	\$ -	\$ -	\$ -
		Each		\$ -	\$ -
		Each		\$ -	\$ -
		Each		\$ -	\$ -
		Each		\$ -	\$ -
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		Each		\$ -	\$ -
		Each		\$ -	\$ -

<b>Total</b>	\$	-	\$	-
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### 5. SUPPLIES AND MATERIALS

Supplies and materials necessary to complete the project. Supplies/materials must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Supplies/materials must be the minimum amount necessary to accomplish the project; purchasing extra supplies/materials to "stock the cache" for post project management activities is prohibited. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total equipment costs.

Description of Role	Unit	Unit of Measure	Unit Cost	SNPLMA	Non-Federal Contribution
Galvanized steel decking	250	ea	\$ 218	\$ 54,450	\$ -
C-channel purlins, 19ft long	260	ea	\$ 98	\$ 25,454	\$ -
40' gutters	5	ea	\$ 1,200	\$ 6,000	\$ -
Galvanized flashing	204	ea	\$ 5	\$ 1,020	\$ -
Storage tanks	24	ea	\$ 4,224	\$ 101,376	\$ -
Driscoll pipe (average 500ft/per project)	3500	ft	\$ 3	\$ 10,500	\$ -
pipe fittings, pipe compound, hose clamps, rebar, bolt, U-bolts, misc. hardware	7	ea	\$ 2,500	\$ 17,500	\$ -
Rhino tank adaptor	30	ea	\$ 230	\$ 6,900	\$ -
Johnson filtration screen	16	ea	\$ 400	\$ 6,400	\$ -
Pre-mixed cement, 60#bags	240	ea	\$ 6	\$ 1,320	\$ -
6'x6' steel self-leveling drinker	5	ea	\$ 851	\$ 4,257	\$ -
Paint (to camplage storage tanks and metal aprons)	10	ea	\$ 135	\$ 1,350	\$ -
Trail camera to monitor water use after restoration (including memory card and python lock)	7	ea	\$ 650	\$ 4,551	\$ -
				\$ -	\$ -

<b>Total</b>	<b>\$ 241,078</b>	<b>\$ -</b>
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## 6. CONTRACTS AND AGREEMENTS

Contracts and/or agreements (grants, cooperative agreements, assistance agreements, stewardship agreements, interlocal or state agreements, etc.) necessary to implement the project's purpose and deliverables (including tasks and subtasks, as appropriate). Extra or more robust documentation may be necessary if the contract and/or agreement is for multiple projects (e.g. a Master Agreement or CESU agreement). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total grant and agreements used to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
Helicopter- initial and follow-up site assessments, transporting tools and personel (8 hours x 2 days x 7 wildlife water projects)	112	Hours	\$ 2,700	\$ 302,400	\$ -
Helicopter- construction/restoration, staging/transportating materials and personnel (8 hours x 2 days x 7 wildlife water projects)	112	Hours	\$ 2,700	\$ 302,400	\$ -
Helicopter - fuel service vehicle 5 days x 7 guzzler projects)	35	days	\$ 540	\$ 18,900	\$ -
Cooperative Agreement hired Project Manager, GS11 equivalent (coordination, purchasing, compliance, monitoring)	4	years	\$ 123,302	\$ 493,210	\$ -
Cooperative Agreement to facilitate tribal coordiantion and cultural compliance	1	task	\$ 25,000	\$ 25,000	\$ -

<b>Total</b>	\$ 1,141,910	\$ -
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**7. VEHICLE USE**

Use of an agency/entity vehicle, purchase of a new vehicle, rental of vehicle, or any other vehicle use not covered under Equipment. If possible, use the agency/entity fixed operation rate (FOR) multiplied by the unit (miles or hours) over the life of the project. The FOR includes depreciation and wear and tear on the vehicle tires, wiper blades, routine vehicle maintenance, etc. If special tires or replacement tires or other vehicle equipment is necessary, please show it under "Equipment." Vehicle expenses must make a direct and logical contribution to the project's purpose and deliverables (including tasks and subtasks, as appropriate). Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total vehicle use to implement the project.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
Fraternity Volunteer Personal Vehicle Use (7 roundtrip projects of 200 miles x 15 vehicles (30 volunteers,2 people per vehicle) times 2 days of work on each project	42000	Miles	\$ 1		\$ 27,510.00
NDOW staff Vehicle Use (4 roundtips roundtrips to each of 7 projects average of 200 miles x 3 vehicles)	16800	Miles	\$ 1		\$ 11,004.00
US Fish and Wildlife Service volunteer Vehicle Use (2 roundtips x 7 projects average of 200 miles x 2 vehicles)	5600	Miles	\$ 1		\$ 3,668.00
				\$ -	\$ -

<b>Total</b>	\$	-	\$	42,182
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**8. OTHER NECESSARY EXPENSES**

Other Necessary Expenses are time and materials necessary for project implementation but are not specific to any one deliverable (including tasks and subtasks, as appropriate). If you included the labor, equipment, and/or supplies and materials in the other sheets, do not include them here. Please round to the nearest whole number. Add as many lines as necessary. This form is only to help estimate the total other necessary expenses to implement the project. This is not a complete list. Contact the SNPLMA Division for guidance on other necessary expenses.

Description of Role	Unit	Unit of Measure	Unit Cost	Subtotal	Non-Federal Contribution
(ex) Construction site security	0	Hours	\$ -	\$ -	\$ -
(ex) NEPA, Section 106	0	Hours	\$ -	\$ -	\$ -
(ex) Financial audit support		Hours		\$ -	\$ -
(ex) Supervision and oversight of SNPLMA-funded staff and/or contractors (not directly billed under Tab# 1 - Personnel)		Hours		\$ -	\$ -
(ex) Rental/temporary trailer/employee workspace		Hours		\$ -	\$ -
(ex) IT services to install hardware, software, or service SNPLMA-funded computer equipment		Hours		\$ -	\$ -
(ex) Cell phones for project staff (not included under Tab# 4 - Equipment)		each/month		\$ -	\$ -
(ex) Furniture and fixtures for SNPLMA-funded employee workspace		each		\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -

<b>Total</b>	\$	-	\$	-
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