

**Southern Nevada Public Land Management Act
Multi-Species Habitat Conservation Plan
Round 19**

Clark County Desert Conservation Program



Mark Recapture Surveys on Demography Plots

Amount Requested: \$888,000.00

A. BACKGROUND INFORMATION

The Mojave population of desert tortoise was listed as Threatened on April 2, 1990 based on population declines due to many identified causes including illegal collection, vandalism, release of captive tortoises, spread of disease, agricultural development, urban growth, landfills, livestock grazing, road construction, and irresponsible off-road travel. A recovery plan for the desert tortoise was developed and published by the U.S. Fish and Wildlife Service (USFWS) in 1994 and revised in 2011, with the ultimate goal of recovery and eventual delisting of the desert tortoise. However, because desert tortoises require 13 to 20 years to reach sexual maturity, have low reproductive rates during a long period of reproductive potential, and juveniles experience relatively high mortality, recovery of the species is very challenging. Even moderate downward fluctuations in adult survival rates can result in rapid population declines. Thus the recovery plan specifies a rigorous, long-term monitoring protocol to accurately determine population trends.

Monitoring progress toward recovery is one of the six strategic elements in the 2011 Revised Recovery Plan and a strategic monitoring plan is necessary to achieve the recovery criteria and adaptively manage the population. The Revised Recovery Plan specifies that, under recovery criterion 1, that consideration of delisting should only proceed when populations of desert tortoises in each recovery unit have increased for at least one generation (25 years). Per the Revised Recovery Plan demography plots are a critical component to delisting of the desert tortoise:

- Recovery Objective 1 (Demography). Maintain self-sustaining populations of desert tortoises within each recovery unit into the future.
 - Recovery Criterion 1. Rates of population change (λ) for desert tortoises are increasing (i.e., $\lambda > 1$) over at least 25 years (a single tortoise generation), as measured
 - a. by extensive, range-wide monitoring across tortoise conservation areas within each recovery unit, and
 - b. *by direct monitoring and estimation of vital rates (recruitment, survival) from demographic study areas within each recovery unit [emphasis added].*

Monitoring and estimation of vital rates gives insight into determining the rate of change in populations in the near and long term. Data can be correlated with recovery actions to determine and provide the greatest benefit for the species which can then be applied in other management areas. More specifically, monitoring vital rates through demographic plots is important to make sure populations maintain their size and trajectory. Demographic rates describe mortality rates as a whole and in each size class, as well as juvenile to adult transition. This looks at the problem from a different angle than the standard range-wide monitoring protocol and is a necessary component in understanding the population structure and change over time while also being a required component for delisting of the species. Therefore, the Clark County Desert Conservation Program (DCP) is proposing to assist the USFWS Desert Tortoise Recovery Office (DTRO) in

monitoring and estimating vital rates by conducting demographic sampling within long-term monitoring plots established across Clark County, Nevada.

This project will consist of mark-recapture surveys at permanent demography plots. Six of the plots to be surveyed, Piute Valley, Christmas Tree, River Mountains, Gold Butte, Mormon Mesa, and Trout Canyon have been surveyed in previous years, where Cactus Springs and Desert National Wildlife Refuge (DNWR) have not. Bird Springs Valley is an alternate site that will only be completed if there is a problem with one of the other sites or we have adequate funds to complete it as an anticipated deliverable. Each plot is 1 square kilometer (km²) and each survey will consist of three consecutive passes walked as 5 meter belt transects to cover the entire area of the plot before a new pass begins. Two to three plots will be completed each year during the course of the project.

The primary output from surveys will consist of a database for each year that includes the survey results and tortoise encounter information. It will indicate the marked individuals so that tortoises can be followed over time, which is the information necessary to analyze demographic statistics. The database will also include information on when and where tortoises were found, sex, size class, and general health information. The final product, which would indicate project success, would be a database with a full set of information for each of the three surveys conducted at eight 1-km² plots. If the anticipated deliverable is completed for this project, the database would increase to include information from nine plots instead of eight.

This project is being submitted under the MSHCP category. The MSHCP category is one of four original funding categories included in the Southern Nevada Public Land Management Act (SNPLMA). The MSHCP is a critical part of SNPLMA's success because it allows the Bureau of Land Management (BLM) to streamline their Endangered Species Act and National Environmental Policy Act compliance associated with disposal of federal lands. Through this streamlined process, the MSHCP provides necessary compliance and helps facilitate orderly disposal of federal land throughout Clark County. Through SNPLMA, Congress determined that it was appropriate that proceeds resulting from the disposal of federal land be directed to the MSHCP to mitigate for impacts associated with development of disposed land.

1. Describe relationship to prior approved phases or related SNPLMA projects and anticipated future phases:

This project does not relate to any prior or currently approved SNPLMA funded projects. It is anticipated that a minimum of two future phases will be needed for the USFWS DTRO to accurately estimate vital rates over time. As stated below, it is understood that those phases are not guaranteed to any funding through the SNPLMA program.

2. **Acknowledgement of stand-alone project and no guarantee of funding for future phases:**

DCP acknowledges that this is a stand-alone project and that the funding of this project does not have an effect on any future phases that may be associated with this project.

B. SNPLMA STRATEGIC PLAN VALUES

MSHCP 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 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.

1. Sustainability:

A better understanding of tortoise vital rates, what they are, how and why they fluctuate, will allow us to better manage the tortoise and create sustainable populations. It will also allow us to design more resilient restoration projects that will help create a healthy landscape that promotes tortoise recovery and its eventual delisting.

2. Connectivity:

Connectivity is a very important issue right now in desert tortoise recovery. Separating habitat areas through disturbance and/or development can cause issues when a population declines as there is no connection to allow new animals in to repopulate. Little is known about tortoise immigration to and from areas, which is a useful component in understanding connectivity. This project could help fill in some of these information gaps by looking at immigration within demography plots, which can be used to better understand connectivity as a whole.

3. Community:

Desert tortoises are an indicator species for health of Mojave Desert communities. Many species rely on desert tortoises and their burrows for survival in the harsh desert climate. Continued decline of this species could have large negative impacts across biological communities. As an indicator species it is vital to monitor population trends to better understand health of an ecosystem and the species. Recovery of the species could help to restore functionality and resiliency to the desert community. This project would also be

used to inform the local community and policy makers on the current status of the species and what actions may be necessary for improvement. The results can be used as an aid in public education regarding the perils of the desert tortoise and what is being done to progress species recovery.

C. PURPOSE STATEMENT

Clark County DCP, in coordination with the USFWS DTRO, aim to implement desert tortoise monitoring using mark-recapture sampling on demography plots within Clark County, Nevada. Direct monitoring and estimation of vital rates from demographic study areas is a component of the recovery objectives outlined in the 2011 Revised Recovery Plan. While data was collected from 1979 to 2003, no data has been collected since 2003 in Clark County, Nevada. Since this data is necessary for delisting of the tortoise, the DCP is proposing to renew these surveys at 8 plots throughout Clark County, Nevada. This project will aid in determining sustainability of desert tortoise over time and help to determine how the recovery process is progressing.

D. PROJECT DELIVERABLES

1. Primary Deliverables:
 - a. Survey results from the following sites: Piute Valley, Christmas Tree, River Mountains, Gold Butte, Mormon Mesa, Trout Canyon, Cactus Springs, and the Desert National Wildlife Refuge (DNWR).
2. Anticipated Deliverables:
 - a. Survey results from Bird Springs Valley.
3. Standard Deliverables:
 - a. Ongoing administration of financial instrument.
 - b. Pre-award planning, scoping, and budgeting activities and award of contract(s).
 - c. Issuance of project completion notice from DCP to BLM/SNPLMA.
 - d. Issuance of final payment made to Contractor(s).
 - e. Final report to BLM/SNPLMA.
 - f. Notice of project completion to BLM/SNPLMA for site visit scheduling.

E. PROJECT LOCATION

Site Name	Latitude	Longitude	Congressional District
Piute Valley	35.294425	114.928717	District 3
Christmas Tree	35.287881	114.822597	District 3

River Mountains	36.016147	114.871844	District 4
Gold Butte	36.425156	114.223053	District 4
Mormon Mesa	36.776228	114.372461	District 4
Trout Canyon	36.116503	115.729836	District 4
Cactus Springs	36.539428	115.859614	District 4
DNWR	36.458147	114.989275	District 4
Bird Springs Valley	35.981094	115.358756	District 3

Latitude and Longitude:

- Refer to table above

Congressional District(s):

- Refer to table above

F. PROJECT TIMEFRAME

The timeframe for this project is 5 years.

G. LEVEL OF PROJECT READINESS FOR IMPLEMENTATION

Is this a shovel-ready project (explain if “Yes”): Yes -or- No

This project would require no land disturbance or any other activities that might trigger a NEPA review, and therefore would be ready to begin once it’s approved.

H. FUTURE OPERATION AND MAINTENANCE

Not applicable.

I. PROJECT BUDGET

The DCP is requesting \$888,000.00 to complete this project. This project is intended to maximize productivity while minimizing associated costs and represents the best value for the proposed project.

Partnership and/or Contributed Funds:

There are no partnership or contributed funds for this project; the project would be 100 percent funded through the SNPLMA program.

J. KEY CONTACTS

Authorized Officer: Kimberley Jenkins, Principal Environmental Specialist

Email: Kimberley.jenkins@clarkcountynv.gov

Phone Number: 702-455-5529

Project Manager: Scott Cambrin, Senior Biologist

Email: scott.cambrin@clarkcountynv.gov

Phone Number: 702-455-3859

Budget Officer: Daniel Hoover, Senior Management Analyst

Email: DHoover@clarkcountynv.gov

Phone Number: 702-455-3637

K. ORDERS AND PRIORITIES

A. Executive Orders (EO):

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

Answer: Not Applicable

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

Answer: All work for this project will be performed by American companies. We also make all companies aware that materials purchased for this project should be sourced from other American businesses.

B. Secretarial Orders

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

Answer: Not Applicable

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

Answer: This project is important to wildlife conservation in the desert southwest. A better understanding of the current vital rates will inform management on tortoise populations which may lead to an increase in conserved lands for tortoises that can also be used for other recreational purposes. These results will be shared with all partners at the federal, state and local levels for use in land management decisions.

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

Answer: Not Applicable

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

Answer: Not Applicable

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

Answer: Not Applicable

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

Answer: 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)).***

Answer: Not Applicable

- ***SO No. 3374: Implementation of the John D. Dingell, Jr. Conservation, Management and Recreation Act.***

Answer: Not Applicable

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

Answer: Not Applicable

C. Department of the Interior Priorities:

1. **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.*

Answer: One of the biggest impacts of renewable energy development in the desert southwest is its impact to tortoise populations in and around the project footprint. Knowing more about the current trends in survivorship and reproduction rates will give a better understanding on how the loss of habitat that results from this type of development effects the continued decline of the species.

2. **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: Not Applicable

3. **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 will give insight into the current rate of decline for the tortoise species and help to understand what actions need to be taken in order to slow the extinction rate over time. This will lead to greater protection of the species and biodiversity in general.

4. **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.*

Answer: Not applicable.

5. **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.

Answer: Not Applicable

D. Forest Service Priorities:

1. ***Controlling the COVID-19 pandemic***

Answer: Not Applicable

2. ***Providing economic relief***

Answer: Not Applicable

3. ***Tackling climate change***

Answer: Not Applicable

4. ***Advancing racial equity***

Answer: Not Applicable

5. ***Improving our workforce and work environment***

Answer: Not Applicable

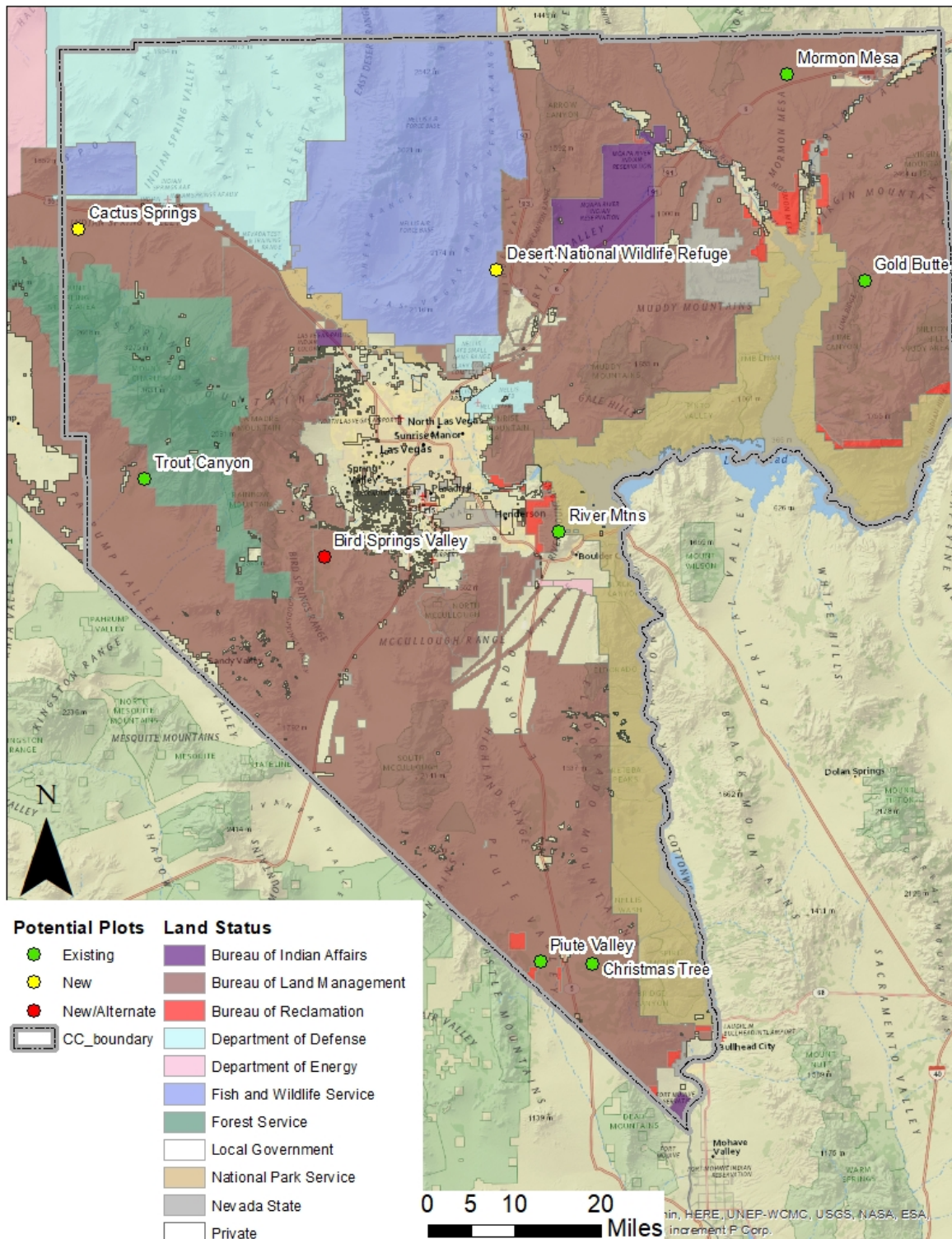


Figure 1. Map of demography plots where green represents plots that were previously surveyed in the past, yellow are new plots, and red are new plots that are anticipated deliverables.