Categorical Exclusion Desatoya Wild Horse Radio Transmitters DOI-BLM-NV-C010-2020-0002-CX 1. Background

Project Lead: Stillwater Field Office (SFO)

Lead Office: LLNVC01000

Lease/Serial/Case File No.:

Proposed Action Title/Type: Desatoya Wild Horse Radio Transmitters

Location of Proposed Action: Mount Diablo Meridian, Lander County, Nevada, T.18N., R.39 E., sec31. Eastside of Desatoya Mountain Range, north of Highway 722, and south of Highway 50.

Description of Proposed Action:

For research purposes, the United States Geological Survey (USGS) staff would braid small lightweight radio transmitters (tags) into the tails of wild horses in conjunction with the Desatoya Gather planned for December 2019. The telemetry study would allow the Bureau of Land Management (BLM) to learn movement patterns and interactions with Greater Sage grouse and overlapping habitat selection. This work leverages data collection efforts from existing and longterm USGS led research in the Desatoyas on sage-grouse demographics, movements and habitat selection. This project would closely build upon new and concurrent studies in cooperation with BLM, Nevada Department of Wildlife, and University of Nevada Reno (Stringham Lab) examining: 1) patterns of large-herbivore utilization (using camera traps), sage-grouse brood use, invertebrate community, and plant phenology in high elevation wet meadows (Desatoyas: Haypress Meadows); and 2) spatial dynamics of cattle and sage-grouse at another Results Oriented Grazing for Ecological Resilience project site at the Winecup-Gamble Ranch in northeast Nevada (with no free-ranging equids). Prior to setting up a trap or temporary holding facility, BLM specialists will conduct all necessary inventories and/or surveys.

Because large herbivores do not move uniformly, empirically derived models of spatial utilization of rangeland resources across seasons are critical information needed to assess ecological impacts of horses (including those on sage-grouse) that currently do not exist broadly, and are entirely absent from the Desatoyas. To bridge this gap, the first of a planned multi-year telemetry study of free-ranging horses in the Desatoyas would be conducted using global Positioning System (GPS) telemetry. During roundups, USGS would tag not-to-exceed 50 horses with GPS units (< 60 g) programmed to collect multiple (\sim > 20) locations per day using an approved tail-braid attachment design that minimizes negative impacts to horse welfare and will ultimately detach from the tail. These units are solid-battery powered and will be fitted with a companion very-high frequency transmitter (\sim 5 g) to allow unit recovery and location download.

Refer to Attachment 1 of this document for further details on similar horse radio transmitter studies and research. This study would follow the Standard Operating Procedures in Appendix D of the Desatoya Mountains Habitat Resiliency, Health, and Restoration Project (DOI-BLM-C010-2011-0513).

2. Land Use Plan Conformance

Land Use Plan Name:

Carson City Field Office Consolidated Resource Management Plan

Date Approved/Amended:

May 2001

The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s):

WHB-2, Administrative Actions.4.:

"Monitoring of wild horse and burro populations will be conducted in accordance with Nevada State Office Manual Supplement 4730." 4730 superseded by BLM Manual 4710 dated 7/7/2010.

Land Use Plan Name:

Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment

Date Approved/Amended:

September 2015

The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s):

The proposed action is in conformance with the Goals, Objectives, and Management Decisions (MD) for Special Status Species (SSS), Vegetation (VEG), from Section 2.2.5 of the Approved GRSG Plan.

Section 2.2.5 Management Decision, Wild Horse and Burros (WHB) 2: "Manage herd management areas (HMAs) in GRSG habitat within established AML ranges to achieve and maintain GRSG habitat objectives (Table 2-2)."

3. Compliance with NEPA:

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance under paragraph 46.205(b), unless any of the extraordinary circumstances in section 46.215 apply:

Code of Federal Regulations § 46.210 (e) Nondestructive data collection, inventory (including field, aerial, and satellite surveying and mapping), study, research, and monitoring activities.

This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. The proposed action has been reviewed, and none of the extraordinary circumstances described in 516 DM 2 apply.

I considered: The studies provided by USGS and the no effect on wild horses for far in behavior, eating, or movement.

4. Categorical Exclusion –Screening for Extraordinary Circumstances

IMPORTANT: Appropriate staff should review the circumstances listed below, comment and initial for concurrence. Rationale supporting the concurrence should be included where appropriate.

Impacts on Public Health and Safety

1. Does	s the prop	posed action have significant impacts on public health and safe	xty?
YES	NO	REVIEWER/TITLE	INITIALS & DATE
	V	John Axtell, SFO Rangeland Management Specialist	fle
	1	Stacy Sylvester, SFO Rangeland Management Specialist	Yhan 11-12.

Rationale:

Impacts on Natural Resources or Unique Geographic Characteristics

2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness or wilderness study areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds (Executive Order 13186); and other ecologically significant or critical areas?

YES	NO	REVIEWER/TITLE	INITIALS & DATE
	×	Melanie Cota, SFO Wildlife Biologist	WCAn-
	X	Kenneth Collum, Stillwater Field Manager	KRC 11/15

Rationale:

Level of Controversy

 3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)]?

 YES
 NO
 REVIEWER/TITLE
 INITIALS & DATE

 ✓
 Kenneth Collum, Stillwater Field Manager
 KU II JS

Rationale:

Highly Uncertain or Unique or Unknown Environmental Risks

4. Have unknow	highly unce n environm	ertain and potentially significant environmental effects ental risks?	or involve unique or
YES	NO	REVIEWER/TITLE	INITIALS & DATE
	V	Kenneth Collum, Stillwater Field Manager	Kacilislig
Rational	le:		, where

Precedent Setting

5. Estab actions,	lish a preced with potentia	ent for future action, or represent a decision in princip ally significant environmental effects?	ple about future
YES	NO	REVIEWER/TITLE	INITIALS & DATE
	V	Kenneth Collum, Stillwater Field Manager	Kec 11/15/19

Rationale:

Cumulatively Significant Effects

6. Have signification	a direct relation, environ	ationship to other actions with individually insignificant mental effects?	nt, but cumulatively
YES	NO	REVIEWER/TITLE	INITIALS & DATE
	~	Kenneth Collum, Stillwater Field Manager	KPL 11/15/19

Rationale:

Impacts on Cultural Properties

7. Have significant impacts on properties listed or eligible for listing, on the National Register of Historic Places as determined by either the Bureau or office?

YES	NO	REVIEWER/TITLE	INITIALS & DATE
	1	Jason Wright, SFO Archaeologist	Jan 11/10/19

Rationale:

Impacts on Federally Listed Species or Critical Habitat

8. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?

YES	NO	REVIEWER/TITLE	INITIALS & DATE
	×	Kenneth Collum, Stillwater Field Manager	KRE ubstra

Rationale:

Compliance with Laws

9. Viola protectio	te a Federal on of the en	law, or a State, local, or tribal law or requirement imposed vironment?	l for the
YES	NO	REVIEWER/TITLE	INITIALS & DATE
	X	Melanie Hornsby, SFO Planning & Environmental Coordinator	MMH 11-7-19

Rationale:

Environmental Justice

10. Hav (Execut	e a disprope ive Order 1	ortionately high and adverse effect on low income or minor 2898)?	rity populations
YES	NO	REVIEWER/TITLE	INITIALS & DATE
	X	Melanie Hornsby, SFO Planning & Environmental Coordinator	MMH 11-7-19

Rationale:

Sacred Sites

11. Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners, or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)?

YES	NO	REVIEWER/TITLE	INITIALS & DATE
	/	Jason Wright, SFO Archaeologist	for 1/12/17

Rationale:

Noxious and Non-Native Invasive Species

12. Contribute to the introduction, continued existence, or spread of noxious weeds or nonnative invasive species known to occur in the area, or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)?

YES	NO	REVIEWER/TITLE	INITIALS & DATE
	X	Kenneth Collum, Stillwater Field Manager	19161., 284

Rationale:

Approval and Contact Information

Field Manager Stillwater Field Office Date 11/15/19

Contact Person *Melanie Hornsby, Planning and Environmental Planner*

DOI-BLM-NV-C010-2020-0002-CX Attachment 1

K.A. Schoenecker (USGS) and S.R.B. King (CSU) 10/20/19

Several studies have been conducted using small lightweight radio transmitters braided into the tails of feral horses (Figure 1, 2, 3) with no impact to horses. In 2016, tails "tags" (as they are referred to) were braided into the mane and tails of n=5 horses at a BLM adoption facility in Oklahoma. Behavioral observations of horses with and without tail tags were recorded for 1 year, with the first 3 months of observations conducted intensely each week. There was no effect of tail tags on the behavior of mares or stallions in any parameters measured, which included feeding, resting, standing, agonistic & affiliative behaviors, as well as body condition score (Schoenecker, K.A., S.R.B. King, and G.H. Collins. 2019. Testing fit and wear of radio collars on feral horses and burros in a captive setting. Human-Wildlife Interactions. *In review*.).

In two other studies of free-roaming horses in Utah, horses are currently equipped with tail tag transmitters and have been since August 2016 at two independent herd management areas (King, S.R.B. and K.A. Schoenecker. CSU and USGS, 2019. Unpubl. data). These two studies are still ongoing, but to date there are no changes in behavior or body condition score, of any horses wearing transmitters in their tails. The weight of the transmitters has been approximately 70g previously, but this study of "Effects of cattle and horses on sagebrush ecosystems" will use transmitters that weigh <40 g, because the duration in the horse's tail is longer if the transmitter is lighter.

Figure 1. Photo of transmitter being braided and then epoxied onto horse tail.



Figure 2. close-up of fully affixed tail transmitter.



Figure 3. Free-roaming stallion equipped with a tail transmitter.



Results of "Effects of tail transmitters on free-roaming feral horses" (citation: King, S.R.B., and K.A. Schoenecker. 2019. Unpublished data.)

Tail tags were placed on 29 stallions in August 2016. Nine of these were replaced in May 2017, with an additional 6 deployed, resulting in 35 horses with tail tags in the 2017 summer field season. In December 2017, 21 of these tags were replaced and 13 new tags were deployed, resulting in 34 horses with tail tags in the 2018 summer field season. Tags were deployed on both bachelor and harem stallions, with almost all harem stallions tagged.

We gathered behavioral data on 26 stallions across 2017 and 2018 (848 animal-hours of observations on bachelors and harem stallions; Table 1). This included observations on 1 individual who was never tagged, and 15 who were observed both with and without tags in their tails. We ran a Linear Mixed Model to examine any effect of wearing a tail tag on the stallion's behavior. The behavioar, year, month, birth year, tag (in the tail or not), and status (bachelor or harem stallion) were included as fixed effects, with study individual ID as a random effect. We then ran a Wald test to produce a P value to give an indication of confidence in the effect of the fixed effects on the behavior.

Stallion status	Number of individuals	Observation hours with no tag	Observation hours with tag
Bachelor	15	129	317
Harem	11	56	346

Table 1. Number of hours of observations on stallions with and without tail tags.

There was no effect of wearing a tail tag on feeding (P = 0.6173), standing (P = 0.05073), or moving (P = 0.05073; Figure 1), although there was an effect of year and month on both standing and moving. There was no effect of wearing a tail tag on aggressive behavior (P = 0.81309) or affiliative behavior (P = 0.06220; Figure 2). There was an effect on reproductive behavior (P = 0.0437132), but this is highly likely due to reproductive behaviors being exhibited by harem stallions (P = 0.0001289) rather than bachelor stallions that had no mares. The number of observations of harem stallion *without* tail tags was very small (Table 1), which influenced statistical results. Figure 1. Feeding, standing, and moving behavior of bachelor and harem stallions with and without tags.







