U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment
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Centennial, Panamint and Slate Range Herd Areas
Wild Burro Gather Plan
FY2021-FY2031

U.S. Department of the Interior
Bureau of Land Management
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This document analyzes the site-specific impacts of gathering and removing wild burros from Centennial, Panamint and Slate Range Herd Areas. This project is part of the Bureau of Land Management's continuing effort to provide public safety and manage wild burro populations under the land use plan decisions of the California Desert Conservation Area Plan of 1980 and associated amendments. The gathers will primarily implement the helicopter assisted drive trap method of capture and will utilize helicopter assisted roping and bait trap methods of capture when the drive trap method would not be feasible. The project areas were reviewed by Bureau of Land Management staff specialists, with respect to the proposed action and alternatives.

TABLE OF CONTENTS

1.0 Purpose of and Need for the Proposed Action 3

1.1 Introduction 3
1.2 Background 3
1.3 Purpose of and Need for the Proposed Action 9
1.4 Land Use Plan Conformance 10
1.5 Relationship to Laws, Regulations, and Other Plans 11
1.6 Conformance with Rangeland Health Standards and Guidelines 14
1.7 Decision to be Made 14
1.8 Scoping and Identification of Issues 14

2.0 Proposed Action and Alternatives 18

2.1 Introduction .....
2.2 Description of Alternatives Considered in Detail 18
2.3 Alternative 1 (Proposed Action) 20
2.4 Alternative 2 (Proposed with No Helicopter in Wilderness) 30
2.5 No Action Alternative 30
2.6 Alternatives Considered but Rejected 31

3.0 Affected Environment and Environmental Consequences 32

3.1 Introduction
3.2 Soils 35
3.3 Vegetation 36
3.4 Water 40
3.5 Wilderness 42
3.6 Wildlife 49
3.7 Wild Burros 52

4.0 List of Preparers 62

5.0 Consultation and Coordination 62

5.0 List of References 63

7.0 Appendices 64

1.0 Purpose of and Need for the Proposed Action

1.1 Introduction

An Environmental Assessment (EA) is a site-specific analysis of the potential impacts that could result with the implementation of the Proposed Action or alternatives to the Proposed Action. Preparation of an EA assists the BLM authorized officer to determine whether to prepare an Environmental Impact Statement (EIS) if significant impacts could result, or a Finding of No Significant Impact (FONSI) if no significant impacts are expected.

This EA has been prepared to analyze the Bureau of Land Management's (BLM) Ridgecrest Field Office (RFO) proposal to implement the 1980 California Desert Conservation Area Resource Management (CDCA) Plan, as amended, to remove all wild burros within the Centennial, Panamint and Slate Range Herd Areas (HAs) and adjacent lands within Searles Valley and Highway 395 along the Eastern Sierras. The wild burro gather plan would allow for an initial gather and follow-up maintenance gathers to be conducted over the next 10 years from the date of the initial gather operation to meet the objectives in the CDCA Plan as amended and to reduce the risk of burro/vehicle collisions. If new, relevant information or changes affecting the Wild Horse and Burro Element in the CDCA Plan occur, then additional NEPA analysis would occur as appropriate.

This document is tiered to the California Desert Conservation Area Resource Management Plan/Final EIS as amended (CDCA Plan, 1980) and falls under the new National Environmental Policy Act (NEPA) Regulations. (https://beta.regulations.gov/document/CEQ-2019-0003-720630 or https://ceq.doe.gov/laws-regulations/regulations.html)

1.2 Background

In 1971, Congress established the parameters for management through the Wild Free Roaming Horses and Burros Act (WFRHBA), as amended by the Federal Land Policy and Management Act of 1976 and the Public Rangelands Improvement Act of 1978.

The WFRHBA (Public Law 92-195) defines Herd Areas (HAs) as the geographic area used by a herd of wild horses and or burros as its habitat at the time the Act was passed in 1971, on lands administered by the U.S.D.I. - Bureau of Land Management and the U.S.D.A. – Forest Service. Wild horses and burros are all unbranded and unclaimed horses and burros that use public lands as all or part of their habitat. A designation of the whole or sub-part of an HA would be evaluated under the land use planning process to identify the suitability for establishing Herd Management Areas (HMAs) as described under CFR 43 CFR 4710.3–1 … Herd management areas shall be established for the maintenance of wild horse and burro herds. In delineating each herd management area, the authorized officer shall consider the appropriate management level for the herd, the habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands, and the constraints contained in § 4710.4. Appropriate Management Level (AML) – is the number of wild horses or burros to be managed within a designated HMA which results in a thriving natural ecological balance and avoids deterioration of the range. A decision may be made through resource management planning not to manage wild horses and burros in a herd area because of resource limitations or conflicts. These areas would still be recognized as herd areas for one or both species, but are to be managed for other resources to the exclusion of wild horses and burros. Therefore, the AML identified for these herd areas would be zero and BLM would have to make excess determinations.

In the California Desert Conservation Area (CDCA) Resource Management Plan of 1980, the Bureau of Land Management (BLM) identified the Centennial, Slate Range and Panamint HAs to be managed as HMAs for burros. At that time, the appropriate management levels were established for these HMAs based upon managing the vegetation on a sustained-yield basis. The AML for the Centennial HMA was established for the management of 1,137 burros and 168 wild horses; for the Slate Range HMA, 408 burros; and for the Panamint HMA, 240 burros.

The following table reflects the Centennial, Slate Range and Panamint HAs and CDCA Plan decisions and associated amendments designating their appropriate management level (AML) for burros.

Herd Area	1980 CDCA Plan AML - Burros	CDCA Plan Amendment Year and Amendment Number	Amended/Current AML - Burros
Centennial	1,137	1981 Amendment 24	0
Slate Range	408	1981 Amendment 24	0
Panamint	240	1983 Amendment 12	0

In 1981, Amendment 24 to the CDCA plan removed the Centennial and Slate Range HMAs designation for burros, because of the conflicts with the Naval Air Weapons Station China Lake (NAWSCL). Those areas were designated as HAs, and the appropriate herd management level for these two HAs is now zero burros.

The majority of the land base for the Centennial and Slate Range HAs (60-70%) are within the NAWSCL administered by the U.S. Navy. NAWSCL has historically had conflicts with burros. Burros damaged remote tracking systems and instrumentation sites, wandered onto rocket sled railways, caused vehicle accidents, and created a high potential for aircraft accidents on runways. An increasing population of wild burros was detrimental to the proper management and operation of the NAWSCL test ranges. The potential for interference with NAWSCL operations and personnel safety problems is already problematic to the station's mission. They have also been detrimental to the management and protection of significant biological and cultural/archeological resources located on the NAWSCL lands.

The BLM coordinates management of the Centennial and Slate Range HAs under a Memorandum of Agreement Between Commander, Navy Region Southwest and Bureau of Land Management, Ridgecrest Field Office.

In 1983, Amendment 12 to the CDCA plan removed the Panamint HMA designation for burros, because the Panamint HMA borders the NAWSCL to the south and the west and Death Valley National Monument to the east, which have management prescriptions for zero burros. Burro movement patterns overlap all three jurisdictions, making it unfeasible to maintain a population on BLM lands when removals would be conducted in adjacent jurisdictions. As a result of this land use plan amendment, the area is designated as the Panamint HA, with an AML of zero burros.

The 1994, California Desert Protection Act (Public Law 103-433), designated the Department of Navy to manage for wild horses and burros on NAWSCL administered lands. NAWSCL Wild Horse and Burro Management Plan (2005) identified and authorized the total removal of burros from their administered lands.

The 1994, California Desert Protection Act, upgraded Death Valley National Monument to a National Park and transferred to the Park, 197,496 acres from the Panamint HA (48% of the land base for the Panamint HA); 6,328 acres of the Centennial HA (< 1% of the land base for the Centennial HA); and 18,429 acres of the Slate Range HA (< 4% of the land base for the Slate Range HA). While the Wild Free-Roaming Horses and Burros Act of 1971 gives special status to horses on western public land, NPS lands were specifically excluded from that Act and NPS is not required to manage for wild horses and/or burros. The Death Valley National Park General Management Plan (2002) identified and authorized the removal of feral burros and horses from the Park, in order to achieve the National Park Service mission of managing the unit for native desert species.

The 2019 John D. Dingell, Jr. Conservation, Management, and Recreation Act (Public Law No: 116-9), transferred approximately 4,800 acres to Death Valley NPS and 10,240 acres to NAWSCL within the Slate Range HA. The Act also changed the designation of the Great Falls Basin Wilderness Study Area (WSA) within the Centennial HA to a Wilderness Area and designated the Surprise Canyon Creek within the Panamint HA as a Wild and Scenic River.

The long-term decision from the CDCA Plan, as amended, was to remove all burros from the Centennial, Slate Range and Panamint Herd Areas.

The following table reflects the current acres by land status for the herd areas.

Land Status	Centennial HA Acres	Slate Range HA Acres	Panamint HA Acres
BLM	348,678	51,411	163,055
Forest Service	0	0	0
National Park Service-Death Valley*	(6,328)	(23,229)	(197,678)
Fish and Wildlife Service	0	0	0
Bureau of Reclamation	0	0	0
Bureau of Indian Affairs	620	0	0
Department of Defense	937	3,069	0
- Army (Fort Irwin)	0	57,826	0
- Navy (NAWSCL)	609,697	372,124	44,933
Other Federal	0	0	0
State	15,108	2,447	7,592
Local Government	1,197	0	0
Private	0	737	95
Other/Undetermined	46,122	2,535	1,614
TOTAL	1,022,359 (6328)	490,149 (23,229)	217,349 (197,678)

*Lands Acquired by the NPS-Death Valley through the California Desert Protection Act (1994) and the John D. Dingell, Jr. Conservation, Management, and Recreation Act (2019). The herd area boundaries are Congressional records, but for the purposes of this document, these lands will be considered excluded by the HA to be managed under the guidance of the Death Valley National Park General Management Plan (2002).

2021 Population Estimates:
It appears that wild burro numbers in the region have increased by an approximate average of 14 % per year since the HAs were last gathered. BLM typically assumes that wild burro herds have an annual growth rate of ~15%; average growth rates for feral burros were 19% as reported in a review of wild equid demography (Ransom et al. 2016).

A simultaneous double observer helicopter population inventory (Griffin et al. 2020) for burros was conducted in June 2020 in cooperation with NAWSCL for the Centennial and Slate Range HAs, and with the National Park Service – Death Valley for the Panamint HA. The population estimates below reflect estimated abundance values from the surveys, additional local knowledge, and projected growth of the herd up through early summer 2021. See Table 1 below with results of the survey.

Table 1. Estimated abundance (Estimate) are for the numbers of burros in the surveyed portions of each HA at the time of survey. 90% confidence intervals are shown in terms of the lower limit (LCL) and upper limit (UCL). The coefficient of variation (CV) is a measure of precision; it is the standard error as a percentage of the estimated abundance. Number of burros seen (No. Seen) leads to the estimated percentage of burros that were present in the surveyed area, but that were not recorded by any observer (% Missed).

Area	Age Class	Estimate (No. Burros)	LCL[1]	UCL	Std Err	CV	No. Burros Seen	% Missed	Estimated No. of Groups	Estimated Group Size	Foals per 100 Adults[2]	Est. No. Burros Outside
Slate Range HA	Total	358	287	523	73.5	20.5%	276	22.9%	47	7.5	20.5	0
	Foals	61	41	87	14.4	23.6%						
	Adults	297	236	442	60.2	20.3%						
Centennial HA	Total	278	255	334	26.6	9.6%	251	9.7%	59	4.7	19.6	0
	Foals	46	40	60	6.3	13.8%						
	Adults	233	212	277	21.0	9.0%						
Panamint HA[3]	Total	269	244	320	26.8	10.0%	255	5.0%	46	5.9	8.9	212[4]
	Foals	22	18	29	6.9	31.6%						
	Adults	247	225	293	21.1	8.5%						

[1] 90% confidence interval based on percentiles of bootstrap simulation results. The lower 90% confidence interval limit (LCL) is less than the number of burros sighted during the survey for many of these estimates. This is a normal statistical result and reflects the fact that a confidence interval expresses what would likely happen if the survey were repeated. If repeated many times, some surveys would miss more burros and produce lower estimates, even after corrections, than were actually observed during this survey. Clearly, I conclude that there are at least as many burros as were observed during this survey, rather than using the lower confidence limit as a minimum number.

[2] The estimated ratio of foals to adults reflects what was observed during this June survey and may not represent the full cohort of foals for this year.

[3] Alex Niebergs, BLM (personal communication 26 Feb 2021) reports that 57 of these burros were observed on BLM administered lands.

[4] For the Panamint HA the burros identified as "Outside" are within the National Park Service (NPS) – Death Valley.

Referenced from: Statistical analysis for 2020 surveys of wild burro abundance in Slate Range HA, Centennial HA, and Panamint HA, CA B. Lubow-PhD

The statistical analysis of the population survey data recorded in Centennial HA in 2020 resulted in a wild burro abundance estimate of 278 burros there at that time (90% confidence interval = 255-334; Lubow 2021). That value reflects 46 foals and 233 adults and yearlings estimated to be present then. However, in light of caveats from the statistician, and based on helicopter flight constraints that led to poor sighting conditions in some areas

of Centennial HA, the BLM Ridgecrest FO has reason to expect that the true number of wild burros was likely to be much higher than the June 2020 estimates that were derived from the observed data alone. Lubow (2021) noted a number of reasons why the true number of burros present may be higher than his estimates, including that, "... if the helicopter was flying at an altitude or speed that precluded animal detection..." the estimates could have been negatively biased [low] compared to the true number of animals present in the surveyed areas. In fact, there was an area of very rugged, mountainous terrain in the northeastern portion of the Centennial HA in which the pilot flew at high speeds, and at a height above ground level (AGL) of around 400 – 600 feet, due to high and gusty winds, and turbulent downdrafts that day. Recommended conditions for helicopter-based burro survey include a speed of 50-60 knots and a height of 150-400 feet AGL (Griffin et al. 2020). The poor flight conditions were over the same area where, in a previous aerial survey in May 2015, a high concentration of wild burros was recorded. More specifically, in 2015, 76 burros were seen in that specific area in the northeast of the HA, while only 4 burros were detected there in the June, 2020 inventory. Ground-based observations around and after the time of the 2020 survey substantiated that there was abundant fresh sign of burro activity within the canyons of this area, despite the low numbers of burros seen in the June 2020 flights (BLM Ridgecrest FO staff, unpublished data). As a result, the Ridgecrest FO Wild Horse and Burro Specialist has added approximately 70 burros to the statistically estimated results of the 2020 burro inventory, so that the interpolated estimated herd size as of June 2020 was likely to have been 348 burros. Using the June 2020 values as an approximation of the March 2020 herd size, and applying a 14% herd growth rate to project the number of additional burros in the Centennial HA in 2021, it is reasonable to expect that there will be approximately 396 wild burros in the surveyed areas of the HA by approximately late June 2021. As is almost always the case for burro population estimates, the precise number of burros present in the Centennial HA is not known. If there are helicopter-based gather operations, BLM will gain additional information about the specific numbers present at the time of those gathers, from associated helicopter crews.

The expected number of burros that will be present by mid-2021 in the Slate Range HA is 408 burros. The burro population estimate for the Slate Range HA in June 2020 was 358 burros (90% confidence interval = 287-523; Lubow 2021). That value reflected 61 foals and 297 adults and yearlings estimated present at the time. All burros observed in the Slate Range HA during the June 2020 survey were located within NAWSCL. Using the June 2020 values as an approximation of the March 2020 herd size, and applying a 14% herd growth rate to project the number of additional burros in the Slate Range HA in 2021, it is reasonable to expect that there will be approximately 408 wild burros in the surveyed areas of the HA by approximately late June 2021. There is a potential of 152 burros located in the northwestern portion of the Slate Range HA within NAWSCL moving onto BLM administered lands in their seasonal movements.

The expected number of burros that will be present by mid-2021 in the Panamint HA and adjacent NPS-Death Valley is 306 burros. This value is based on the June 2020 abundance estimate of 269 burros in the surveyed area (90% confidence interval = 244-320; Lubow 2021). That value reflected 22 foals and 247 adults and yearlings estimated present at the time. Using the June 2020 values as an approximation of the March 2020 herd size, and applying a 14% herd growth rate to project the number of additional burros in the Slate Range HA in 2021, it is reasonable to expect that there will be approximately 306 wild burros in the surveyed areas of the HA by approximately late June 2021. The June 2020 survey analysis led to an estimated 57 individual burros whose locations suggest that they were living exclusively on BLM administered lands. Another 62 burros were estimated to be living in areas close to the common BLM-NPS boundary with Death Valley National Park, based on the June 2020 survey. Those 62 burros had the potential to move frequently between BLM and NPS administered lands, such that they would be protected by the Wild Free Roaming Horses and Burros Act. Thus, the total estimated number of burros living exclusively or partly on BLM lands of the Panamint HA was 119 at

the time of the June 2020 survey. Assuming a 14% herd growth rate, this number is expected to be approximately 135 burros by June 2021. These ~135 animals would be potentially subject to gather and removal by the BLM under the proposed action. At the time of the June 2020 survey, the remaining 150 burros estimated to be present in the surveyed areas of the Panamint HA were at locations in the park, where those animals are considered likely to be animals entirely residential within NPS-Death Valley, and would therefore fall under the management of NPS-Death Valley.

For the three herd areas, the following table lists the estimated wild burro abundance in June 2020, the expected abundance of wild burros under BLM management as of June 2021, and the expected number of excess wild burros subject to removal as of June 2021. The AML for wild burros is zero for all three herd areas.

Herd Area	Estimated Population June 2020	Estimated Population June 2021	Estimated Excess Burros to Remove as of June 2021
Centennial (Burro)	348	396	396
Slate Range (Burro)	358	408	408
Panamint (Burro)	119	135	135

The Centennial HA was last gathered in January 2016, mainly for wild horses. At that time, 3 wild burros were gathered and removed. The Slate Range HA was last gathered in February 2016. At that time 64 burros were gathered and removed. The Panamint HA was last gathered in September 2009. At that time 42 burros were gathered and removed.

1.3 Purpose of and Need for the Proposed Action

The purpose of the proposed action is to, over the next 10 years, gather and remove all excess wild burros from the Centennial, Slate Range and Panamint Herd Areas and remove nuisance burros when applicable. Excess animals are defined as those animals which must be removed from an area to preserve and maintain a thriving natural ecological balance (TNEB) and multiple-use relationship in that area. This definition includes wild horses or burros located outside the HMA in areas not designated for their long-term maintenance (BLM Manual 4720.1.12). Nuisance burros are those animals which create public health and safety concerns.

During the winter months of December through March, burros typically move off from Death Valley National Park and NAWS China Lake, going into Searles and Panamint Valleys because of cold and snow in the higher elevations and the available water and forage on the valley floor. The California Highway Patrol (CHP) reported two vehicle/burro collisions in Panamint Valley on Highway 178 and Nadeau Road, occurring 1/28/2010 and 2/01/2010, respectively. Although no injuries to occupants were reported, three burros were killed. Damage to both vehicles (sedan and semi-tractor) was significant. In January, 2021, two separate incidences were reported by the Public of a vehicle/burro collision in Panamint Valley near the ghost town of Ballarat and another off of Highway 190 near Panamint Springs Resort. BLM believes there have been other incidents or near misses that it is not aware of. The BLM Ridgecrest Field Office continues to receive reports from their staff and from the public about burros on and near the roads of Panamint and Searles Valleys and Highway 190. Inyo county has placed burro crossing signs along highway 178 to warn drivers of the possibilities of burros on the highway. There have been reports of burros near Highway 395 near the Coso Junction Rest Area, which may also pose risks to public roadway safety. Highway 178 is the major access road through Searles and Panamint Valleys, and has historic

and current public safety concerns, since many local residents and tourist use this highway to access Death Valley National Park. The town of Darwin has also, on occasion, contacted the BLM Ridgecrest Field Office regarding nuisance burros in the town. On March 4, 2021 the BLM Ridgecrest Field Office received a report from a Trona resident regarding nuisance burros coming into town and becoming a safety issue. The BLM is currently investigating the issue.

The need for the action is based on the BLM's obligations established by the provisions of the Wild Free-Roaming Horses and Burros Act) which mandates management of wild burros in a manner that is compliant with the land use plan decisions, and which will lead to a thriving natural ecological balance. The CDCA plan as amended (1981, Amendment 24 and 1983, Amendment 12) identified these three HAs as areas from which all burros should be removed, due to the conflicts with the NAWSCL and the unfeasibility to maintain a population on BLM lands when removals would be conducted in adjacent jurisdictions on NAWSCL and NPS-Death Valley National Park. Public safety concerns and protection of wildlife habitat resource values further necessitate removal of all burros from the HAs. All three of these Herd Areas encompass numerous ACECs created for wildlife and an essential movement corridors which link these wildlife habitats in the China Lake Naval Air Weapons Station and Argus Wilderness to those protected by the Death Valley National Park.

Other considerations of excess burros, is due to the limited areas where BLM lands can support a population due to the surrounding NAWSCL and NPS Death Valley administered lands where burro movement patterns overlap, making it unfeasible to maintain a population on BLM lands when removals would be conducted in adjacent jurisdictions. The primary focus of this action would be on gathering burros from areas where public safety is a concern (such as roadways where burro-vehicle collisions have occurred), heavily concentrated areas within the HAs with the most severe resource impacts, nuisance burros on private lands within and outside the HAs. The potential for interference with NAWSCL operations and personnel safety problems is already problematic to the station's mission, and the removal of all wild burros is necessary to prevent conflicts with military operations and to ensure public safety.

The State of California Natural Resources Agency Department of Fish and Wildlife (CDFW) Final Land Management Plan for Indian Joe Springs Ecological Reserve (2018) identified one of the primary threats to the riparian habitat and riparian dependent species at the Ecological Reserve are habitat destruction by burros. The Ecological Reserve is located within the Centennial HA and approximately 10 miles south of the designated Centennial HMA for wild horses. Burros are more common than horses on the eastern side of the Argus range and adjacent Panamint and Slate HAs. In 2010 a Cooperative Management Agreement (CMA) for the Inyo California towhee was completed by BLM, NAWSCL, U.S. Fish and Wildlife Service, and CDFW for the purpose of "provide[ing] an administrative framework for the Parties to continue their respective on-going, long-term conservation efforts for the benefit of the federally listed (threatened) Inyo California towhee". Under this CMA the parties have agreed to work together to implement the Recovery Plan for the bird. Specific recovery actions noted in the CMA include management of burros and horses. CDFW has limited control over the management of these animals, however, they have a consultation role regarding the burro management activities (Indian Joe Springs Ecological Reserve Land Management Plan, 2018).

Burros were recently identified as contributing factors for not achieving and/or not allowing for progress towards achieving the proper function condition of some springs and water sources (Great Falls Basin Wilderness Springs Report, Appendix E) which is critical for the recovery of the Inyo California towhee (Recovery Plan for the Inyo California towhee (*Pipilo crissalis eremophilus*), USFWS, 1998). See Section 3 for more detail.

1.4 Land Use Plan Conformance

This proposal is in conformance with the California Desert Conservation Area Management Plan of 1980 as amended (CDCA Plan) (BLM 1980), West Mojave Plan of 2006 (WEMO) and the Desert Renewable Energy Conservation Plan (DRECP), approved on September 14, 2016 (BLM 2016). The DRECP is a land use plan amendment (LUPA) to the CDCA Plan. Each subsequent plan amendment supersedes previous plans and plan amendments where it has made changes. Specific Conservation Management Actions (CMAs) are required as part of the DRECP. The project will adhere to applicable CMAs (see Appendix C- Applicable CMA Table).

CDCA Plan:

Wild Horse and Burro Element, Goal 3 is to remove all wild horses and burros from areas not designated for retention. Federal Laws and BLM policies outlined in the CDCA Plan identify that populations of wild burros will be managed, so that critical resources are protected.

Table 2- Planned Management Areas for Fish and Wildlife (Updated February 1999) identified the need for removal or reduction of wild horses and burros in the following areas due to resource concerns.

Centennial HA- special management concerns: Darwin Falls Canyon (Special Wildlife Habitat); Argus Mountains (Bighorn Sheep - State listed); and Argus Range (Inyo California towhee – State and Federally listed).

Panamint HA special management concerns: Panamint Lake (Special Wildlife Habitat); West Panamint Mountains Canyon (Special Wildlife Habitat); and Surprise Canyon (Special Wildlife Habitat).

WEMO:

Volume 1-

2.4.6.1 Bighorn Sheep

(Mam-4) Removal of burros in the Argus Mountains would continue because of damage to springs.

2.4.8.3 Inyo California Towhee

BLM would continue its habitat improvement program by taking the following additional protective measures:

(B-10) Enhance habitat by excluding burros at Peach Spring. Because Peach Spring is within the Argus Mountains Wilderness, fencing of the area would only be undertaken if the burro removal program were shown to be ineffective. Monitoring at this site would determine what actions are necessary.

(B-12) Continue removal of feral burros from the Argus Mountains with a goal of zero

Volume 2, Appendix J Desert tortoises Threat Analysis-

Available literature presents many threats that are known or suspected to affect tortoises and their habitats. Dr. William Boarman (2002) identified 22 impacts that may affect tortoises throughout the listed population, including wild horses and burros.

DRECP:

Appendix D-ACEC Worksheets

1. Panamint-Argus ACEC- created as Big-horn sheep and other Sensitive Species wildlife corridor. Management Action- Removal of wild burros and the area to attain the management goals.

This and other plans are publicly available at the California BLM website for land use planning at https://eplanning.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do.

1.5 Relationship to Laws, Regulations, and Other Plans

Statutes and Regulations

The Action Alternatives are in conformance with the following:

I. Wild Free Roaming Burro and Burro Act of 1971 (Public Law 92-195), as amended

II. Federal Land Policy and Management Act of 1976 (Public Law 94-579)

III. Public Rangelands Improvement Act of 1978 (Public Law 95-514)

IV. California Desert Protection Act of 1994

V. JOHN D. DINGELL, JR. CONSERVATION, MANAGEMENT, AND RECREATION ACT (S.47) of 2019

VI. Codes of Federal Regulations (43 CFR 4700 - Protection, Management, and Control of Wild Free-Roaming Burros and Burros)

43 CFR 4710.1 Land use planning.
Management activities affecting wild horses and burros, including the establishment of herd management areas, shall be in accordance with approved land use plans prepared pursuant to part 1600 of this title.

43 CFR 4710.4 Constraints on management.
Management of wild horses and burros shall be undertaken with the objective of limiting the animals' distribution to herd areas. Management shall be at the minimum level necessary to attain the objectives identified in approved land use plans and herd management area plans.

43 CFR 4720.1 Removal of excess animals from public lands.
Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burro exists, the authorized officer shall remove the excess animals immediately.

43 CFR 4720.2–1 Removal of strayed animals from private lands.

Upon written request from the private landowner to any representative of the Bureau of Land Management, the authorized officer shall remove stray wild horses and burros from private lands as soon as practicable…...The request shall indicate the numbers of wild horses or burros, the date(s) the animals were on the land, legal description of the private land, and any special conditions that should be considered in the gathering plan.

43 CFR 4740.1 Use of motor vehicles or aircraft.

Motor vehicles and aircraft may be used by the authorized officer in all phases of the administration of the Act, except that no motor vehicle or aircraft, other than helicopters, shall be used for the purpose of herding or chasing wild horses or burros for capture or destruction. All such use shall be conducted in a humane manner.

43 CFR 4770.3 Administrative remedies.

(a) Any person who is adversely affected by a decision of the authorized officer in the administration of these regulations may file an appeal. Appeals and petitions for stay of a decision of the authorized officer must be filed within 30 days of receipt of the decision in accordance with 43 CFR part 4.

(c) Notwithstanding the provisions of paragraph (a) of § 4.21 of this title, the authorized officer may provide that decisions to remove wild horses or burros from public or private lands in situations where removal is required by applicable law or is necessary to preserve or maintain a thriving ecological balance and multiple use relationship shall be effective upon issuance or on a date established in the decision.

VII. The National Historic Preservation Act (16 USC 470) requires federal agencies to consider the effect of federal undertakings (including federal authorizations) on sites that may be eligible for inclusion in the National Register of Historic Places (NRHP).

VIII. The Endangered Species Act (ESA) (16 USC 1536) requires federal agencies to ensure that federally authorized actions are not likely to jeopardize the continued existence of any threatened or endangered species.

IX. The Wilderness Act (1964), the California Desert Protection Act (1994), and the Dingle Act (2019)

X. Codes of Federal Regulations (43 CFR Parts 6300 and 8560, Wilderness Management; Final Rule (12/14/2000)

XI. BLM Manual 6340 Management of BLM Wilderness (7/13/2012)

XII. X. BLM Manual 6330 Management of Wilderness Study Areas (7/13/2012)

Other Plans or NEPA

- Recovery Plan for the Inyo California towhee (*Pipilo crissalis eremophilus*), USFWS, 1998

- Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*), USFWS, 2011

- Environmental Assessment for the Centennial, Slate Range and Panamint Herd Areas (CA-650-2002-099).
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- Indian Joe Springs Ecological Reserve Land Management Plan -2017, CDFW

- Management Plan for the Great Falls Basin ACEC (A Sikes Act Plan) (1987)

- A Sikes Act Management Plan for the Surprise Canyon ACEC and the western Panamint Mountains Canyons Wildlife Habitat Management Area (1982)

1.6 Conformance with Rangeland Health Standards and Guidelines

BLM CA Desert District follows the Standards and Guidelines for Grazing Administration outlined in the 43 Code of Federal Regulations (CFR) Subpart 4180. Range improvements may be implemented in accordance with regulations requiring achievement of Rangeland Health Standards (subpart 4180.1 and 4180.2 Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration). Exclosure fences have been installed at some spring locations within the Centennial HA to minimize damage by burros and maintain lush riparian habitat that serves as breeding ground for the federally threatened, California state endangered Inyo California towhee.

An important aspect of Rangeland health assessments includes Proper Functioning Condition assessments. In January – February 2020, assessments of springs and water sources within the Centennial HA as part of an inventory for the Great Falls Basin Wilderness Character report, resulted in a determination that excess wild burros were contributing factors for not achieving and/or not allowing for progress towards achieving the proper function condition of some springs and water sources (See Appendix E: Springs Report).

1.7 Decision to be Made

The authorized officer would determine whether to implement removals of all burro populations in Wilderness and Non-Wilderness lands within the Centennial, Slate Range, and Panamint Has through gathers undertaken over a 10-year period to achieve the goal of zero burros. The decision will not set or adjust AML or modify the designation of these HAs as those decisions were set through previous planning and implementation-level decisions.

1.8 Scoping and Identification of Issues

A Notice of Proposed Action (NOPA) was mailed out to interested members of the public, predominantly wilderness interest groups in early March 2021. A NOPA is sent to interested parties when an action affecting a Wilderness Area is proposed.

An environmental resources analysis was conducted through coordination with the BLM Ridgecrest Interdisciplinary Team. Substantive issues discussed and potential impacts resulting from the Proposed Action and alternatives are summarized in Table 1.7 below. Resources present with the potential for significant impact

are analyzed in detail in this EA. Resources either not present or present but not affected to a degree requiring detailed analysis, were not carried forward in this EA and the rationale for determination for each resource is included Table 1.8.

Resources determined to be present with the potential for significant impact, which have been carried forward in this EA, are:

1. Impacts to individual wild burros and the herd. Measurement indicators for this issue include:

- Projected population size and annual growth rate
- Expected impacts to individual wild burros from handling stress
- Expected impacts to herd social structure
- Potential impacts to animal health and condition

2. Impacts to vegetation/soils, riparian/wetland, and water resources. Measurement indicators for this issue include:

- Expected forage utilization;
- Potential impacts to vegetation, including riparian vegetation, from trap and holding sites associated with wild burro gather activities,
- Potential impacts to the distribution and density of non-native or noxious plants,
- Potential impacts to soil resources at trap and holding sites, and
- Potential impacts to functionality of springs and water availability.

3. Impacts to wildlife, migratory birds, and threatened, endangered, and special status species and their habitat (*as applicable*). Measurement indicators for this issue include:

- Potential for temporary displacement, trampling or disturbance
- Potential competition for forage and water over time.

4. Wilderness, Wilderness Study Areas (WSAs), and Lands with Wilderness Characteristics (LWCs)
   - Potential impacts to values associated with Wilderness lands.

Table 1.8: Resources identified but eliminated from further analysis

Supplemental Authorities	Present	Affected	Rationale for not Needing Detailed Analysis
Area of Critical Environmental Concern (ACECs) and National Conservation lands (NCL) excluding Wilderness areas and	**YES**	**NO**	There would be minimal impacts to the ACECs and NCLs during the gathering process. Gathering activities conducted within any ACEC will be limited to herding the animals via helicopter back to the proposed

Lands with Wilderness Character (LWCs)			capture sites and temporary corrals that will be set up outside or along the boundaries of the ACEC. Motorized vehicle travel within any ACEC or NCL will be limited to existing roads. Therefore, further detailed analysis is not warranted. Long-term benefits would be realized by reducing ongoing environmental degradation associated with the current population of wild burros.
Air Quality	**YES**	**NO**	Implementation of the Proposed Action would result in small and temporary areas of disturbance and stipulations have been added to lessen any potential affects. Therefore, Air Quality would not be negatively affected to the degree that detailed analysis will be needed.
Cultural Resources	**YES**	**NO**	There are no known cultural resources located at any of the proposed trap sites. Thus, No Adverse Effects will occur to National Register of Historic Places Historic Properties. Any sites that were not surveyed, will be surveyed prior to trapping. Long term benefits would be realized in reducing the risks from wild burros adversely affecting archeological sites through trampeling, etc. Exempt Undertaking CA-650-EX-2021-09; Issuance of permits, leases, and rights-of-way where no surface disturbance is authorized, that has no potential for adverse effects, and that do not have the potential affect access to or use of resources by American Indians. BLM-SHPO Heritage Protocol Agreement, May 2019.
Environmental Justice	**YES**	**NO**	Not Affected to the degree detailed analysis is needed.
Fish Habitat	**NO**	**NO**	Not present.
Fire Management	**NO**	**NO**	Not Affected to the degree detailed analysis is needed
Floodplains	**YES**	**NO**	Not present.
Livestock Grazing	**YES**	**NO**	Present but not affected to the degree that further analysis is warranted: **A. <u>Centennial Herd Area</u>:** The Lacey-Cactus-McCloud (L-C-M) Allotment falls within the Centennial HA on BLM lands. The area where burros are located and being removed is in the far northeast corner of the allotment which has been identified as an area not permitted for grazing in Environmental Assessment Livestock Grazing Authorization EA Number: CA-650-2008-27. No grazing allotments occur within the East side of the Centennial HA where the main burro populations are located.

			B. <u>Slate Range Herd Area</u>: The southern portion of the Slate Range HA on BLM lands is within the Superior Valley Allotment (ephemeral sheep allotment). Grazing in this allotment has been suspended. **C. <u>Panamint Herd Area</u>:** No grazing allotments are present within this HA.
Health and Human Safety	**YES**	**NO**	Human Safety would positively benefit from the proposed reduction in burro numbers as risks to motorists are expected to decrease as a result of reduced incidences of burros on roadways and reduce the incidents of nuisance burros within towns located within these HAs.
Land Use Authorizations	**YES**	**NO**	Lands and realty authorizations would not be affected as existing roads would be utilized. Coordination with NAWSCL would be required gathering the Centennial and Slate Range HAs to coordinate gathers and use of airspace. Coordination would be required with NPS-DV for the use of their airspace and potential use of their approved gather sites.
Mineral Resources	**YES**	**NO**	Mining/minerals actions would not be impacted by the alternatives as no gathers would occur in active mining areas.
Native American Religious Concerns	**NO**	**NO**	Based upon past 15 years (2005-2020) of consultations by the BLM with Tribes within the region, there are no known important Tribal resources, sites, locations nor Traditional Cultural Properties located within any of the proposed work areas associated with this gather.
Prime or Unique Farmlands	**NO**	**NO**	Not present.
Recreation and Access	**YES**	**NO**	The Proposed action would not impact recreational opportunities such as off-highway vehicle use, hunting, non-motorized uses and other recreation and access to the areas, as the gathers will be temporary and dispersed in isolated locations throughout the HMA which is large in area. Recreation and access will not be negatively affected and, therefore will not need to be analyzed in detail.
Paleontology	**NO**	**NO**	This proposal has no potential to cause impacts to important vertebrate fossil remains or deposits.
Visual Resources	**YES**	**NO**	The proposed action ground disturbance and visual impacts would be short-term and minimal and would not impact the landscape and therefore would comply with visual resources management classes and objectives and does not need further analysis in this document.
Waste (Hazardous or Solid)	**NO**	**NO**	Not present.

Wild and Scenic Rivers	**YES**	**NO**	The Panamint HA includes the Surprise Canyon Creek Wild and Scenic River. The proposed activities would not occur within the W&S River corridor.

2.0 Proposed Action and Alternatives

2.1 Introduction

This section of the EA describes the Proposed Action and alternatives, including any that were considered but eliminated from detailed analysis. Three alternatives are considered in detail:

- Alternative 1: Proposed Action – Helicopter Assisted Wild Burro Gather and Removals in Wilderness and Non-Wilderness Lands; including water/bait trapping.
- Alternative 2: Helicopter-Assisted Wild Burro Gather and Removals in Non-Wilderness & Non Helicopter-Assisted Wild Burro Gather and Removals in Wilderness Lands; including bait trapping.
- No Action Alternative— Defer gather and removal.

The Centennial Herd Area was designated in part for a HMA for wild horses with an AML of 168 horses. The population estimate from the June, 2020 wild horse and burro survey is 763 horses (final report pending). The majority of the HMA and most of the wild horse population resides within the NAWSCL North Range complex and west of the Argus Mountain Range. The majority of the burro population resides on the eastern side of the Argus Mountain Range and north to the town of Darwin which rarely intermixes with the wild horses (See Map 6, Appendix B). There are burros on the western side of the Argus Mountain Range which are more likely to mix in with a group of horses.

The capture of wild horses by using a helicopter to herd the animals is prohibited during the foaling period, which is defined as six weeks on either side of the peak of foaling to assure that young foals are mature enough to be able to remain with their band during gather activities. This period is generally March 1 to June 30 for most wild horse herds. Helicopters may be used year-round in the removal of burros (BLM Handbook H-4700-1) because burros do not have a defined foaling season. This capture plan / environmental assessment is only addressing the removal of burros. No horses would be authorized to be captured or removed under this plan.

No burros would be attempted to be removed utilizing helicopter assisted gather methods from the designated HMA during the prohibited foaling period from March 1 to June 30. If horses are encountered outside the HMA during the foaling season, the pilot will fly the helicopter to avoid them, thus any burro(s) that are with the horses would not be gathered.

2.2 Description of Alternatives Considered in Detail

The BLM would utilize all approved gather methods, including bait trapping, helicopter drive trapping, and roping if necessary, to gather wild burros. The BLM would follow the Standard Operating Procedures (SOPs) found in Appendix A, BLM Handbook 4700-1 Wild Horses and Burros Management Handbook, BLM Manuals 4720 (Removal) and 4740 (Motor Vehicles and Aircraft). Gather methods would be determined on a case-by-case basis depending on access, time of year, funding, personnel availability and the difficulty of gathering the burros (due to terrain, weather, water and forage availability, and/or number of burros to be gathered).

For logistical planning purposes, and to assess potential effects of federal actions in this environmental assessment, it can be useful to approximate the numbers of burros in each HA. Knowing the exact number of burros in each HA is not necessary to make a determination that burros present are in excess of AML based on the findings described in the Purpose and Need section and that their removal is necessary to achieve a thriving natural ecological balance with the resource values identified. Because the AML for burros in each of the three HAs is zero, removal of any and all burros present would be consistent with the CDCA Plan, as amended. Various factors make it impossible to remove all of the excess burros at one time. As a result, multiple gathers would need to occur over several years. The National Gather Schedule is developed annually based on the need to remove excess wild horses and burros to achieve or maintain AML and the available funding, gather prioritization and facility space. Situations that may require adjustments to the National Gather Schedule are: (1) Emergencies and (2) Escalating Problems. The time spent between gathers would allow the burro population grow with additional foals born into the herds over time.

The most efficient gather technique would be chosen as determined by the gather needs of the specific area. Helicopter Drive Trapping method of capture would likely be the most used gather method. Any trapping activities would be scheduled in locations and during time periods that would be most effective to gather sufficient numbers of animals to achieve management goals for the areas being gathered. Helicopter gathers would be conducted in areas where bait trapping is not feasible due to access, location of burros in the mountain ranges or where other environmental conditions exist that make it difficult to bait trap. Helicopter gathers may also occur in all areas to increase gather efficiencies, as determined by the BLM. Typically, bait traps are used to try and address nuisance burros which are impacting local communities. The primary focus under all action alternatives would be on gathering burros from areas where public safety is a concern (such as roadways where burro-vehicle collisions have occurred), heavily concentrated areas within the HAs with the most severe resource impacts, nuisance burros on private lands within and outside the HAs.

Management Actions Common to Alternatives 1 and 2

- ❑ The initial gather would begin in or around May 28, 2021 for the Centennial HA for the removal of up to 300 burros. Several factors such as horse foaling season, animal condition, herd health, weather conditions, or other considerations, such as which alternative for gather operations is selected, would result in adjustments in the schedule.

- Gathers occurring within the Centennial and Slate Range HAs would be coordinated with NAWSCL. Any gather that occurs when operating in NAWSCL and/or utilizing their restricted airspace, must happen when NAWSCL provides access and security clearances. These dates are specific and would be coordinated with NAWSCL. Any gathers occurring within NAWSCL would be under their planning documents and environmental clearances.
- Gathers in the Centennial and Panamint HAs would be coordinated with NPS-Death Valley to utilize their airspace and to possibly utilize approved trapping locations on their administered lands.
- The primary gather (capture) methods would be the helicopter drive method with occasional helicopter assisted roping (from horseback).
- In 2015 (IM2015-151), BLM initiated a Wild Horse and Burro Comprehensive Animal Welfare Program (CAWP) which updated wild horse and burro gather standard operating procedures (SOPs), both of which are displayed in Appendix A.
- Burro gather SOPs which incorporates the CAWP, and operational standards identified in BLM Handbook 4700-1 (Wild Horses and Burros Management Handbook), BLM Manuals 4720 (Removal) and 4740 (Motor Vehicles and Aircraft) are identified in Appendix A.
- Gather operations would be conducted in accordance with the Environmental SOPs described the Proposed Action below.
- Trap sites and temporary holding facilities will be located in previously used sites or other disturbed areas (Map, Apppendix B) whenever possible. Undisturbed areas identified as potential trap sites or holding facilities would be inventoried for cultural resources. If cultural resources are encountered, these locations would not be utilized unless they could be modified to avoid impacts to cultural resources.
- An Animal and Plant Inspection Service (APHIS) or other veterinarian may be on-site during helicopter-assisted gather operations, as needed, to examine animals and make recommendations to BLM for care and treatment of wild burros. During non helicopter-assisted gather operations, a veterinarian would be available on call, as needed.
- Decisions to humanely euthanize animals in field situations will be made in conformance with BLM policy (Washington Office Instruction Memorandum 2015-070).
- Data including sex and age distribution, condition class information color, size and other information may also be recorded, along with the disposition of that animal (removed or released).
- Excess animals would be transported to the BLM Ridgecrest Regional Wild Horse and Burro Holding and Adoption facility where they will be prepared (freeze-marked, vaccinated, microchipped, and de-wormed) for adoption or sale (with limitations).
- The BLM would coordinate with National Park Service (NPS) staff if helicopter activity would be occurring over NPS administered lands and if burro trapping occurs within the Darwin Falls area of Death Valley National Park. Burro removal is consistent with the NPS's 2002 General Management Plan (GMP) and a GMP amendment completed in 2018. In 2019, the NPS completed the statutory and regulatory compliance necessary to remove burros from the Darwin Falls area of the park. The area designated for the burro traps is outside of wilderness. NPS analyzed the impacts of using helicopters to locate burros on wilderness character in a minimum requirements decision guide (MRDG). The analysis indicated that while using helicopters would have impacts on wilderness character at Death Valley National Park, the benefits of removing the burros from the park would provide greater benefit.

2.3 Alternative 1 (Proposed Action) Helicopter Assisted Wild Burro Gather and Removals in Wilderness and Non-Wilderness Lands; Including Bait/Water Trapping.

The proposed action will implement the National Wild Horse and Burro Gather Contracts or the use of BLM in house gather crews over the next 10 years to capture and remove all wild burros from the Centennial, Slate Range and Panamint HAs utilizing helicopter assisted drive trapping (primary), roping methods and the use of bait trap methods of capture and will follow the Standard Operating Procedures (SOPs) and CAWP (IM 2021-002) for wild burro gathers described in Appendix A. This method and technique for capture and removal has been utilized in the past, as part of the continuing efforts by the BLM to manage wild burro populations in ways that are compatible with the existing laws, regulations, policies, and land use plans. Burro removals may be conducted any time during the year to address resource and public safety issues (burro/vehicle collisions) and to achieve the goal of zero burros for the Centennial, Slate Range and Panamint HAs. The actions will be ongoing until objectives are met or changes in land use decisions or new and pertinent information require a re-evaluation of the capture plan and associated environmental assessment. The goal is to ultimately capture all wild burros encountered in these HAs located on BLM administered lands through follow-up gathers over a 10-year period to remove burros that evaded capture and their offspring. The health and welfare of all the animals will be given the highest priority.

Coordinated efforts would occur with the NAWSCL and the National Park Service - Death Valley National Park to address burro removals along common boundaries with the BLM.

The initial effort will start with the Centennial HA utilizing helicopter assisted gather methods for the removal of 300 burros with an anticipated start date of May 28, 2021. Helicopter assisted burro captures must not be conducted when ambient temperature is above 100 degrees Fahrenheit without approval of the COR/PI. The COR/PI will not approve captures when the ambient temperature exceeds 105 degrees Fahrenheit.

Each gather site will be selected based on the location of the animals and how the topography of the area can best be used to implement the gather. Heavy trucks pulling stock trailers will be necessary to transport panels, capture equipment, saddle horses and the captured animals. Thus, trapping locations will be limited to those areas where suitable access exists to maneuver the trucks and provide a landing area for refueling the helicopter.

In general, capture sites will be located in areas that have been previously disturbed to cause as little damage to the natural resources as possible. Temporary capture corral sites will be located on and adjacent to existing roadways and designated routes of travel. Areas of disturbed ground or washes will be used mostly, to limit the areas of disturbance and follow the protective stipulations for cultural and wildlife resources. No corral shall be set up in a BLM or NPS Wilderness or WSA. Boundary roads, cherry stems and areas excluded from wilderness or WSA's will be suitable to set trap sites and temporary corrals. Cherry stems are existing roads open for vehicle traffic that extend a spur of unprotected non-wilderness land, especially a dead-end road or trail, through a protected wilderness or Wilderness Study Area. The trap and related structures will be installed by hand using hand tools and will be removed upon completion of the gather in the area. If vehicle traffic needs access through the trap when it is positioned in the road or if the trap is going to be left over night, the end panels or jute netting will be removed. The corral will be removed after the completion of the gather in the area. A new site may then be set up according to the location of any other animals. Special care will be taken to minimize disturbance to resource values in gather areas.

All helicopter activities occurring within a designated wilderness area would be in compliance with BLM Manual 6340 Management of Wilderness A Minimum Requirements Decision Guide (MRDG) titled: "RFO Capture Plan for Wild Burro Gather & Removals for the Centennial, Slate Range, and Panamint Herd Areas" has been completed and was signed 6/16/2016.

The helicopter is used to locate and herd the targeted animals to the capture site and assist the wranglers in capturing the animals. No helicopter landings will occur in BLM designated wilderness or wilderness study areas. Refueling would involve one fuel truck, which would be restricted to existing roads. Helicopter landings would occur on flat, previously disturbed areas if available.

The pilot will fly the area prior to the start of the roundup to locate the animals, study the terrain and locate any hazards to the aircraft (i.e. power lines, cables, etc.) and to the burros while being herded (fences, cliffs, etc.). The helicopter would normally fly at 200-300 feet above ground level (AGL) to locate the burros and fly between 10 – 100 feet AGL when herding the animals to the drive trap or roping site. The helicopter could drop as low as 5 or 6 feet when turning the animals. It is expected that the number of animals herded will vary from 1 to 20 head. All attempts will be made to move and keep identified bands together.

1. Helicopter Drive Trapping Method:
The helicopter drive trapping method will be the preferred method of removal.

The helicopter drive trap utilizes a helicopter to drive animals into a temporary trap corral. The trap site typically consists of an area approximately 0.5 acre in size. The trap would be set in an area with high probability of success and ease of access by wild burros using the topography, if possible, to assist with capturing wild burros residing within the area. Multiple trap site locations would be used to gather wild burros within the Herd Areas to reduce the distance that the animals would travel.

Traps consist of a large catch pen comprised, at a minimum, 5 feet high portable panels with a diameter of 25-50 feet with a connected holding corral that leads to the loading area where the burros would be loaded for transportation. All trap, holding and loading designs will adhere to the requirements described in Appendix A. Gather Methods used in the Performance of Gather Contract or BLM Operations.

A drive trap will have two temporary wing extensions posed at an angle from two sides of the capture corral gate. A wing extension consists of jute netting supported by 6 feet steel tee-posts spaced approximately 10 to 20 feet apart for a distance as needed, pending on topographical features that the wing will tie in to. The jute-covered wings are made of material, not wire, to avoid injury to the burros. The jute provides a visible barrier that forms an alleyway used to guide the wild burros into the trap corral. Drive traps are usually placed in arroyos or immediately over the crest of a hill where the corral extensions are easily disguised or not easily seen. Once a group of animals is herded by the helicopter close to the trap corral gate, wranglers on horseback or on foot will flag the burros into the trap corral, and close the trap gate to complete the capture.

The use of roping from horseback may be used upon approval by the COR/PI when necessary to augment the helicopter drive operations. Sometimes a burro or burros become separated or escape during the gathering process. The escaped burro(s) would be roped and led into the holding area trap corral.

2. Helicopter Assisted Roping Method:
This method is utilized when there are small group of animals such that it would not be conducive to construct a drive trap or when the drive traps cannot be set up due to location or environmental sensitivity.

The helicopter - roping method involves the helicopter herding the wild burros to the wranglers on horseback. The wranglers will be positioned out of view from the oncoming animals as best as the topography and vegetation allows, and in an area that allows the wranglers to maneuver their horses when giving chase. The helicopter will bring the main herd to a holding area and will break off a smaller set of animals that the wranglers can manage, allowing at least one wrangler to be free to assist in case a missed roping attempt or assist in herding the roped burros in. The wranglers will give chase, rope by lassoing the animal around the neck, and lead the captured animal into a temporary corral that is constructed from the back end of a stock trailer. The corral consists of a panel tied to each side of the trailer and a swing gate. Additional panels are added to make a round pen, typically about 25-35 feet in diameter with 2 wing gates to allow easy access into the corral. The burro is led into the round pen and the rope is removed from its neck. The burro is then moved into the smaller pen and placed into the trailer. This is repeated until all the targeted animals are captured.

Sometimes a burro may be roped a distance away from the capture area, where it is more conducive to bring a trailer to the burro if access permits. A saddle horse is used to assist in the loading procedure, where the burro is led onto the trailer.

Water / Bait Trap Method:
In addition to BLM in house gathers, captures may be conducted by contracted gather crews.

General Methodology:
There are very few pre-existing range improvements which could be utilized, because the areas where the burros are located are not within grazing allotments. Temporary corrals and traps would have to be erected. No corral would be set up in a Wilderness area. Temporary capture corral sites would be located on and adjacent to existing roadways and designated routes of travel. Corrals may be set up within wilderness cherry stems roads or along boundary roads. Trap corrals would be constructed entirely within existing disturbed areas or in washes as much as possible. Each site would be selected based upon road access, the ability to maneuver trucks pulling stock trailers and the location of the animals. Trucks pulling horse trailers and gooseneck 5th wheel livestock trailers would be used to transport panels, equipment and the captured animals. Trapping locations would be limited to those areas where suitable access exists.

The trap and related structures would be installed by hand using hand tools and would be removed upon completion of the gather in the area. Temporary corrals would be assembled with a series of 10-12 foot long metal portable steel pipe panels (5 feet high minimum) that are self-supporting and T-posts to secure the trap. The trap could be divided into a trapping area and a holding area. Both areas would have water troughs for the animals to drink from. The dimensions of the trap and holding areas would vary with the dimensions of the corral and location where the trap would be placed.
Any objects potentially injurious to the animals would be removed or made safe. Depending on the objectives for the area, one to several sites would be needed to gather the wild burros.

Once the trigger gate is set, the traps would be checked twice daily, early morning and late afternoon for any trapped animals. In the case that other animals are trapped and it is not possible to sort the burros without harming the animals, the trigger gate or corral panels would be opened, allowing the animals to escape. If a mother and foal are separated, one in the trap and one outside the trap, that animal in the trap would be released so they could pair back up. Captured burros could be moved to a designated holding area. Burros would be loaded and transported within 48 hours of being captured to the Ridgecrest Regional Wild Horse and Burro Holding and Adoption Facility. When the traps are not in service, the trigger gate would be removed. Trapping operations would extend from a few weeks to several months.

Water/Bait trap sites are dependent upon the location of burros utilizing an area, which cannot be predicted with accuracy due to seasonal changes and unpredicted climate weather changes. Prior to establishing a water or bait trap that, each corral site would be cleared by resource staff specialists. Special care would be taken to minimize disturbance to resource values in gather areas.

1. Bait Trapping:
   Weed-free or locally grown hay would be placed on the trails for the burros to become familiar with that food source. Portable water troughs hooked up to a water tank / water trailer or would need to haul water as needed are placed in the area where the trap corral would be placed. Once the burros are keyed onto the water and feed, portable panels would be placed around the water troughs. The corrals would be approximately 30-50 feet in diameter. An opening in the corral is left open, once the animals are comfortable moving in and out of the corral, a trigger gate is set to capture the burros as they come in for the food and or water.

2. Water Trapping
   There are no range improvements in the area that supplies water. Most of all the water sources are from springs. For water trapping to be successful, other waters in the area would need to be paneled or with some other devise to force the burros to utilize the water at the trap site. The water traps themselves would not include "natural" water sites, unless the site is cleared by resource specialists first. Wildlife friendly panels would be used to close water sources from burros. These panels are specially made to allow wildlife to crawl under or jump over the barrier. The temporary fence would be as small as practical and large enough not to deter wildlife from access. The temporary barriers at water sources of prime importance to deer would be at least 60 foot long on a side and not over 60 inches tall at any point with opposite sections 42 inches or less in height for escape. Those barriers around bighorn sheep water sources would include several bighorn sheep panels to allow sheep access to the water, while excluding burros.

Capture Sites

Due to the seasonal movements of the burros throughout the HAs, several sites will be needed to gather the wild burros from the HAs. Each site will be selected based on the location of the animals and how the topography of the area can best be used to implement the gather. In general, capture sites will be located in areas that have been previously disturbed to cause as little damage to the natural resources as possible. Temporary holding corral sites will be located on and adjacent to existing roadways. No corral shall be set up in a BLM or NPS Wilderness. Boundary roads, cherry stems and areas excluded from wilderness will be suitable to set trap sites and temporary corrals. Special care will be taken to minimize disturbance to resource values in gather areas. At trap sites not covered under the Exempt Undertaking CA-650-EX-2021-09, an archeologist will conduct a field inspection for cultural resources and clearances. If the site has cultural values or sensitive species, and the trap can't be modified to avoid impacts, an alternative trap site will be selected.

POTENTIAL CAPTURE SITE LOCATIONS (All land lines are calculated using the Mt. Diablo Base Meridian and the 7.5 minute quads are listed adjacent to legal description - See Map 7, Appendix B for maps displaying past capture sites)

A. Capture Sites on public land within Centennial HA

Sites along eastern Argus Range on western side of Searles Valley

1.	T24S R43E S30 SWSW	Trona West
2.	T24S R43E S21 NWNW	Trona East
3.	T24S R43E S9 SESW	Trona East

4. T23S R43E S33 NWSE Slate Range Crossing
5. T23E R43E S21 SESE Slate Range Crossing

Sites along eastern Argus Range on western side of Panamint Valley
6A. T22S R43E S28 NWNE South End Slate Range Crossing
6B. T22S R43E S21 NESE South End Maturango Peak SE
6A&B. T18S R42E S33 SESE North End Panamint Springs

These land lines mark the end points of the Nadeau Trail that runs along the east side of Argus Range and west side of Panamint Valley.

Sites at areas adjacent to the Nadeau Trail
7. T22S R43E S4 SWNE Maturango Peak SE
8. T21S R43E S8 SWSE Maturango Peak SE
9. T20S R43E S7 SESW Maturango Peak NE
10. T19S R43E S31 NENW Matarango Peak NE

Sites north of NAWS and south of Route 190
11. T19S R41E S31 SWSW China Gardens
12. T19S R41E S31 NESE China Gardens
13. T19S R41E S17 NESW Darwin
14. T19S R40E S4 NESW Talc City Hills
15. T19S R39E S25 NESE Talc City Hills
16. T19S R39E S3 SWNE Talc City Hills (Private)

Roads in Lower Centennial Flat
17. T18S R39E S35 SWNE Start Talc City Hills
17A. T19S R39E S10 SWNW End-Start Talc City Hills
17B. T19S R39E S3 SWNE Start Talc City Hills
17A&B. T19S R39E NESE End Talc City Hills

Roads in Darwin area
18. T19S R40E S5 NWNW Start Talc City Hills
18A. T19S R40E S24 SENW End-Start Darwin (Private)
18B. T19S R41E S31 SWSW End China Gardens
18C. T19S R41E S31 NESE End China Gardens
18D. T19S R41E S17 NESW End Darwin

Sites west of NAWS in the vicinity of Cactus Flat and east of Haiwee Reservoirs
19. T20S R37-1/2E S13 NENE Haiwee Reservoirs
20. T20S R38E S19 NWSW Haiwee Reservoirs
21. T20S R38E S31 NESE Haiwee Reservoirs

Roads in Cactus Flat area
22. T20S R37E S2 SENW Start Haiwee Reservoirs

22A. T20S R38E S31 NESE	End	Haiwee Reservoirs
23. T22S R38E S30 NWNW		Little Lake

B. Capture Sites on public land within the Panamint HA

Indian Ranch Road runs roughly north-south from near the Wild Rose cut-off on Route 178 to the settlement of Ballarat

1. T22S R44E S3 NWSW	South End	Ballarat
1A. T20S R43E S27 NESE	North End	Maturango Peak NE

Sites off Indian Ranch Road

2. T21S R44E S34 NWSW	Ballarat
3. T20S R44E S32 SWSW	Jail Canyon

Site of Route 178

4. T21S R43E S13 SESW	Maturango Peak SE

C. Capture Sites on public land within the Slate Range HA

P103 runs north-south on the west side of the Slate Mtn. Range and generally east of Highway 178 through the north end of Searles Valley and across the pass.

1. T24S R43E S22 NWNE	South End	Trona East
1A. T22S R43 S33 NENE	North End	Slate Range Crossing

Sites on the west side of the Slate Mtn. Range and the east side of Searles Valley

2. T24S R44E S18 SWNW	Trona East
3. T24S R43E S12 NESW	Trona East

Sites on the east side of Panamint Valley and the west side of Panamint Mtns. along Wingate Road.

4. T24S R44E S12 NWSE	Copper Queen Canyon
5. T23S R44E S14 NWSW	Manly Fall
6. T22S R44E S22 SWSW	Manly Fall & Ballarat
7. T22S R44E S10 SWSW	Ballarat

Wingate Road runs north-south on the west side of the Panamint Mtn. Range on the east side of Panamint Valley.

8. T22S R44E S3 NWSW	North End	Ballarat
8A. T24S R44E S12 NWSE	South End	Copper Queen Canyon

Design Features and Operating Measures

1. **Area of Critical Environmental Concern and NCL:**

No cross-country travel by vehicles in these areas is permitted.

2. Air Quality:

.a. Continue to follow applicable state and federal guidelines i.e. reasonably available control measures (RACM) to control PM-10 emissions from unpaved roads including the following:

Source category	Control Measure
Unpaved road	Control vehicular traffic speed (20 MPH on dirt roads)

b. Use water as necessary to limit fugitive dust blowing off the site during the work if fugitive emissions exceed state and/or GBUAPCD standards.

c. Curtail activities when wind speeds exceed 30 MPH.

3. Cultural Resources:

All work areas associated with the gather's activities will be confined to previously disturbed areas where the occurrence of important National Register Historic Properties are not located. However, when gathering activities on BLM administered lands cannot be confined to previous disturbances, a BLM archaeologist will examine the proposed gather site to ensure that no cultural resources are present. If cultural resources are identified within a proposed gather site, an alternate gather site will be selected.

4. Native American and Religious Concerns:

There will be no capture sites located upon nearby Timbisha Shoshone Tribal lands. Helicopter and herding activities would be conducted outside their parcel of land located in Centennial Flats.

5. Surface Hydrology:

Do not allow discharge of oil or other petroleum products on site.

6. Wild Burros:

The operating measures and procedures are described in Appendix A will be adhered to.

7. **Wild Horses:**

No burros would be attempted to be removed utilizing helicopter assisted gather methods from the Centennial Horse HMA during the prohibited foaling period from March 1 to June 30. If horses are encountered outside the HMA during the foaling season, the pilot will fly the helicopter to avoid them, thus any burro(s) that are with the horses would not be gathered.

8. Wildlife Protection:

All actions will follow the conservation measures of the federally protected Inyo California towhee and Desert Tortoise:

1. All gather crews shall be made aware of the status of the Inyo California towhee. Crews shall be made aware the penalties for "take", and the stipulations to be followed for this project. The crew may contact the BLM biologists for clarification and additional information.

- LaBerteaux (2011) found that towhees begin nesting from late March to early April and conclude in early August. Gathers occurring during the nesting season will be conducted in the following manner:

(a). The helicopter will not fly below 200 feet over the riparian/spring areas in the Argus Mountain Range that may be habitat for the Inyo California towhee (i.e. Great Falls Basin, Austin Spring, and Bento Springs, etc.) to prevent the rotor wash from disturbing any potential nesting sites.

(b). If burros are located in the Inyo California towhee designated critical habitat areas, a hazer will hike or horseback into the area to try to push burro(s) out into the open a minimum of 300 feet away from the riparian/spring area, before the helicopter begins herding the burro(s) to the capture site. If the burro(s) cannot be hazed away from the riparian/spring area, they will be left behind.

2. Each proposed capture site within desert tortoise habitat will be inventoried by a biologist or designated BLM representative who has done field work with desert tortoises for tortoise burrows. Temporary structures, vehicles, equipment, helicopter landing sites and other activity shall be located in areas free of tortoise burrows. The following guidelines will be followedin desert tortoise habitat:

(a) All gather crews shall be made aware of the status of the desert tortoise. Crews shall be made aware the penalties for "take", and the stipulations to be followed for this project. The crew may contact the BLM biologists for clarification and additional information.

(b) One member of the team conducting the gather shall be responsible for overseeing compliance with protective stipulations for the desert tortoise and for coordination on compliance. This individual shall have the authority to halt all activities that are in violation of the stipulations. The person may be a BLM employee.

(c) The gather crew shall be aware of the following types of information concerning the desert tortoise:

- general behavior and ecology of the tortoise
- sensitivity to human activities
- legal protection
- penalties for violations of State or Federal laws
- reporting requirements
- project protective mitigation measures

The crew may contact the BLM biologist for clarification and additional information.

(d) Only individuals authorized by the U.S. Fish and Wildlife Service shall handle desert tortoises

(**e).** The Ridgecrest office shall receive a brief report on the effectiveness of the stipulations.

(**f).** Upon locating a dead or injured tortoise, the gather crew is to notify the Ridgecrest Office. The BLM must then notify the appropriate field office (Carlsbad or Ventura) of USFWS by telephone within three days of the finding.

(**g).** No dogs shall be allowed on site during the operation.

(**h).** All trash and food items shall be promptly contained within closed, raven-proof containers. These shall be regularly removed from the project site to reduce the attractiveness of the area to ravens and other tortoise predators.

(**i).** The area of disturbance shall be confined to the smallest practical area, considering topography, placement of facilities, locations of burrows, public health and safety, and other limiting factors. To the extent possible, previously disturbed areas within the site shall be utilized. The project lead shall ensure compliance with this measure.

9. Wilderness, any future Wilderness Study Areas (WSAs), and Lands with Wilderness Characteristics (LWCs)

Wilderness and any future Wilderness Study Areas (WSAs):
No trap sites, temporary corrals, helicopter landings or transport of personnel, animals, or materials and no ground motorized vehicle travel would occur within any wilderness or wilderness study area. Trap sites and temporary corrals along wilderness and wilderness study area boundaries will be confined to the surface extent of the boundary roads themselves, cherry stems or areas otherwise excluded from wilderness and wilderness study areas. In addition, during gathers, BLM will:

a. Advise helicopter pilot of location of wilderness and wilderness study area boundaries and provide maps.
b. Minimize helicopter use over wilderness and wilderness study areas.
c. Prohibit motorized vehicle travel or helicopter landings or transport of personnel, animals, or materials in wilderness or wilderness study areas, except for emergencies as authorized under BLM regulations and policy.

Lands with Wilderness Characteristics
Aircraft may fly, land, and transport personnel, animals, and materials within units found to have wilderness characteristics. Trap sites, corrals, and helo-spots may be located within these units but should be restricted to already disturbed sites or to sites that can be easily reclaimed upon conclusion of the activity. Vehicle travel off of the open, designated route system in support of herd management activities should be discouraged. Should such vehicle travel need to occur, it should be limited to what can be effectively reclaimed and closed to subsequent vehicle use by brushing out tracks at the conclusion of the activity.

New road construction and/or maintenance of existing open vehicle routes in support of herd management activities should not occur within these units without additional review.

10. Invasive, Non-Native Species:

To prevent the spread of invasive, non-native species, all contractors would be required to power-wash their vehicles and equipment, including body and undercarriage, personal protective equipment, as well as inspect, remove, and dispose of weed seed and plant parts found their clothing, prior to entering BLM-administered lands.

11. Spill Prevention, Control, and Countermeasures Plan for Remote Fueling for Helicopter Project Work.

Burro capture would be planned so as not to result in the release of solid, hazardous, or special wastes. Releases of any hazardous or special waste (petroleum, etc.) material would be reported immediately in accordance with the Hazardous Materials Emergency Response Contingency Plan (24 hours a day, 7 days a week) to the Federal Interagency Communications Center (FICC) at (909) 383-5651. An Initial Report would be faxed to the authorized officer within 24 hours of the incident's discovery (760) 326-7099. Incident reports that are due over a weekend and/or holiday period must also be faxed to the FICC concurrently at (909) 383-5587. The authorized officer would receive a comprehensive follow-up report within 7 calendar days of the incident's discovery. All Environmental Protection Agency, Office of Safety and Health Administration and California Office of Safety and Health Administration regulations, and Bureau Policy will be complied with. Material Safety Data Sheets for all chemicals used on site will be available on site, and will be reviewed by users prior to use. All decontamination equipment and supplies will be provided according to MSDS and product label instructions. See Appendix F for the Spill Prevention, Control and Countermeasures for Remote Fueling for Helicopter Project Work for the Panamint, Slate Range and Centennial Wild Horse and Burro Herd Areas. Refueling would not occur within 0.25 miles from any open surface waters.

2.4 Alternative 2: Helicopter-Assisted Wild Burro Gather and Removals in Non-Wilderness & Non Helicopter-Assisted Wild Burro Gather and Removals in Wilderness Lands; Including Water/Bait Trapping.

Alternative 2 is identical to Alternative 1 except that all capture attempts in Wilderness Lands shall be accomplished utilizing wranglers on horseback to locate and herd groups of burros into the trap sites or rope and lead the animals to portable corrals without the assistance of a helicopter.

All capture attempts outside of Wilderness Lands shall utilize helicopter-assisted gathers.

Design Features and Operation Measures are the same as proposed action and the following:

1. **No** helicopter use in wilderness or WSA's.
2. Limit number of new group overnight campsites or base camps established within wilderness and WSAs for wrangler and stock use in support of gathers. Advise wranglers of minimum impact camping methods. Plan to clean-up and reclaim sites as needed at the conclusion of the gather.
3. Require use of weed-free feed in wilderness and Wilderness Study Areas.

No Action Alternative:

The No Action Alternative forms the basis from which all impacts and alternatives are measured from.

Under the No Action Alternative, no gather would occur, and no additional management actions would be undertaken to control the size of the wild burro population at this time. The wild burro population would likely continue to increase at an approximate rate of 14% per year. Within five years, the wild burro population could exceed 762 burros in the Centennial HA, 785 burros in the Slate Range HA and 260 burros in the Panamint HA. Wild burros residing located outside the HAs would continue to increase. Increasing numbers of excess and wild burros would result in intensifying impacts to National Park and Military lands, and there would be an increase in nuisance burros/public safety concerns, with more burros crossing highways and entering towns.

This alternative does not meet land management objectives and is inconsistent with the Bureau's mission, the WFRHBA, and the California Desert land use plan and objectives, which calls for all burros to be removed from these HAs.

2.5 Alternatives Considered but Dismissed from Detailed Analysis

1. Non Helicopter-Assisted Wild Burro Gather and Removals- Wranglers Only:
This alternative was identical to 2, except that all capture attempts would be accomplished utilizing wranglers on horseback to herd groups of burros into the trap sites or rope and lead the animals to portable corrals without the assistance of a helicopter. This would involve the wranglers traveling on horseback up to several miles from the corral to herd or rope burros and bring them to the corral locations. This operation would require 4 to 15 wranglers and 8 to many horses to not tire them out. Among other things, it is not feasible because it does not address the purpose and need to remove enough burros to reduce the impacts to Inyo CA Towhee habitat.

2. Bait and Water Trapping as Sole Gather Method:
The "bait trapping" method involves using hay, water and other supplements to lure burros into traps. Water trapping involves placing traps around existing water sources. The location of the concentration of burros are located in mountainous areas within wilderness areas. Trapping in these areas would be very limited due to the lack of access for trucks pulling trailers and transportation of animals from the trap sites. Burros could be attempted to be bait trapped when and if they left the wilderness areas. Additionally, bait trapping requires specific conditions (limited forage and water sources on the range) that are conducive to capturing burros via trap. If these conditions do not exist, or are impacted by rains, the trapping success rate is significantly reduced. Bait and water trapping, while effective in specific conditions, would not be cost-effective or practical to meet gather criteria relative to meeting the CDCA plan objectives for burro management. This alternative would not succeed in reducing the number of excess burros in the area and thus would not meet the purpose and need for action.

3. Field Darting PZP Treatment to Reduce Population:
Field Darting PZP treatment to reduce population would not meet the purpose and need to remove all the burros from the Centennial, Slate Range and Panamint HAs. BLM would administer PZP in the one year liquid dose inoculations by field darting the jennies. This method is currently approved for use and is being utilized by BLM in other HMAs. The method is not expected to be practicable or effective in achieving the goal of removing all burros from the HAs. This alternative was dismissed from detailed study for the following reasons:

1. It is expected to be virtually impossible to dart 100% of the jennies located in the HA;
2. Annual darting of nearly all jennies would need to be accomplished in order to prevent new foals from entering the herds;

3. Even if most jennies could be darted annually, such a program would only very gradually decrease the population, through attrition and would be unlikely to zero out the population even after several decades. During the intervening time, the hazards and resource use associated with burro presence would continue;
4. Accessibility and human safety is a concern because a large portion of the HAs is inaccessible, with no roads or access to some of the water sources and areas where burros reside, as would be required to be able to successfully dart them.

For the above reasons, field darting PZP treatment to reduce population alternative was determined to be unreasonable for these HAs and it was not analyzed in detail.

4. Control of Wild Burro Numbers by Natural Means:
This alternative would rely on natural means, such as natural predation and unfavorable weather, to control the wild burro population. The alternative of using natural controls to achieve a desirable AML has not been shown to be feasible in the past so is unlikely to achieve complete removal of wild burros from the HAs. Wild burro populations in the HAs are not substantially regulated by predators, as evidenced by the ~14% annual increase in the wild burro populations. This alternative would allow for a steady increase in the wild burro populations which would continue to exceed the carrying capacity of the range and would cause increasing and potentially irreversible damage to the rangelands until severe range degradation or natural conditions that occur periodically – such as extreme drought – cause a catastrophic mortality of wild burros in the HAs (NAS 2013).

For the above reasons, the control of wild burro numbers by natural means alternative was determined to be unreasonable for these HAs and it was not analyzed in detail.

3.0 Affected Environment and Environmental Consequences

3.1 Introduction

This section presents a concise assessment of changes to the human environment that are reasonably foreseeable and have a close causal relationship to the proposed action and alternatives and may include effects that are later in time or farther removed in distance from the proposed action and alternatives. Reasonably foreseeable future actions are those for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends. This section also presents the environmental consequences relative to the issues warranting further analysis identified in Sec. 1.8. The following information regarding past, present, and future relevant actions for effects applies to all alternatives, and for all resource impacts discussed below:

Past and Present Relevant Actions

Past actions include establishment of wild burro HAs and HMAs, establishment of AML for wild burros, wild burro gathers, mineral extraction, livestock grazing, range improvement projects such as water sources and fencing, and recreational activities. Some of these activities have increased the presence of invasive plants and noxious weeds.

The actions which have influenced today's wild burro population are primarily wild burro gathers implemented, from 1981 to the present, which have resulted in the capture, removal and placement through the BLM's Adoption and Sale Program of 5,933 excess burros from the Centennial HA; 4,996 excess burros from the Slate Range HA; and 2,822 excess burros from the Panamint HA.

The current overpopulation of wild burros is continuing to contribute to areas of heavy vegetation utilization, trailing and trampling damage and is contributing from delisting the Inyo California towhee

Reasonably Foreseeable Relevant Actions Not Part of the Proposed Action •
Over the next 10 year period, reasonably foreseeable future actions include gathers about every 1-3 years alternating between the three HAs removing excess wild burros in order to reduce the population of burros to the established management level of zero burros. The excess animals removed would be transported to the Ridgecrest Regional Wild Horse and Burro Holding and Adoption Facility where they would be prepared for adoption, or sale (with limitations).

General Description of the Affected Environment
The Centennial, Slate Range and Panamint HAs are located in the upper western Mojave Desert of southern California. The town of Ridgecrest borders the south end of the Centennial HA, is approximately 20 miles to west of the eastern boundary of the Slate Range HA and is approximately 21 miles west from the southern end of the Panamint HA.

The weather is typical of the Mojave Desert. Temperature for summer highs average 98 degrees Fahrenheit with 65 degrees Fahrenheit for average lows. Extreme summer high temperatures reach 118 degrees Fahrenheit. Winter highs average 62 degrees Fahrenheit, with lows of 32 degrees Fahrenheit. Extreme winter low temperatures reach 0 degrees Fahrenheit. Precipitation over the area is usually quite variable, averaging 3.81 inches per year. June is on the average the driest month, with 0.02 inches, while January and February are the wettest, each averaging 0.49 inches. Winds predominately are from the southwest. Wind speeds of 15-25 mph in the spring and fall is typical with gusts up to 40 mph. The vegetative communities are characterized by two major floristic zones, the Great Basin and Mojave Deserts.

1. Centennial Herd Area (See Map 3, Appendix B):
The upper two-thirds of the HA is within Inyo County. The southern one-third is divided between two counties. The west half is located in Kern County and the eastern half is in San Bernardino County. There are approximately 1,022,359 acres in the HA which includes approximately: 348,678 acres BLM; 15,108 acres State; 46,122 Other/Undetermined; 1,197 acres Local Government; 620 acres Bureau of Indian Affairs; 937 acres Department of Defense; and 609,697 acres NAWSCL lands. The Death Valley National Park administered by the NPS, acquired approximately 6,328 acres of the HA through the CDPA and is no longer recognized as part of the HA.

The northern boundary of the HA is Highway 190. The upper western boundary follows close to Highway 395. The lower western boundary follows the western boundary of the NAWSCL down to Highway 178 and beyond about 3 miles. The southern boundary parallels Highway 178 up to Poison Canyon where it follows Highway 178 up through Trona to the northern tip of Searles Lake. The HA boundary follows the shoreline to the southwest where it ties into the west boundary of the Slate Range HA. The eastern boundary of the HA follows the western boundary of the Slate Range HA northward up Searles Valley to the northern slopes of the Slate Mountain Range.

The Boundary then deviates away from the Slate Range HA northward up Panamint Valley, tying into Highway 190 about 2 miles west of Panamint Springs.

In the northwest quarter of the HA is the Coso Mountain Range. The Coso Range Wilderness is located in this area. The Coso Mountain Range is primarily volcanic in origin, with deeply cut steep faults in basalt forming a series of mesas on the western side. The elevation ranges from 4,000 feet near the Haiwee Reservoir to 8,160 feet at Coso Peak, where a small forest of pinyon pine and juniper is found. Freshwater springs are few. Along the western edge of the Cosos is a geothermal area with active hot springs and live fumaroles, known as the Coso Hot Springs/Devil Kitchen region. This area has been developed for energy production and currently generates approximately 240 megawatts of electric power. Coso Basin and Indian Valley Wells makes up the majority of the southwest quarter of this HA. This area has an interbedded strata of clay, sand and gravel.

The Argus Mountain Range makes up the majority of the eastern half of the HA. The north end of the range extends into the Nelson Range and the south end terminates at Poison Canyon. This range is primarily of volcanic origin. Major faults traverse the range forming steep, jagged ridges, sharp peaks and deep, steep-faced canyons with numerous drainages and extensive series of mesas. Elevations range from 1,847 feet in the Salt Wells Valley to 8,839 feet at the summit of Maturango Peak. The Darwin Wilderness and Darwin Falls are located at the northern end of this mountain range. This area includes the extreme southern end of Darwin Plateau and portions of the Darwin Hills area near the town of Darwin. Riparian areas are associated with China Garden Spring and Darwin Falls located in Darwin Canyon. The hills and surrounding bajadas have Joshua tree woodland and sagebrush scrub communities. Towards the southern end of the mountain range is the Great Falls Basin Wilderness Area. This area is unique with its riparian attributes. The Argus Range Wilderness extends from the Darwin Wilderness down to the Great Falls Basin Wilderness Area. Vegetation is primarily mixed creosote desert scrub on the lower elevations and sparse to non-existent (with an occasional pinyon-juniper) on the higher elevations.

2. Slate Range Herd Area (See Map 4, Appendix B):

The Slate Range HA is located within San Bernardino County. There are approximately 490,149 acres in the HA comprising: 51,411 acres of BLM; 2,447 acres State; 737 acres Private; 2,535 acres Other/Undetermined; 57,826 acres Fort Irwin Military Reservation; 3,069 acres Department of Defense; and 372,124 acres NAWSCL lands. The Death Valley National Park administered by the National Park Service (NPS) acquired approximately 18,429 acres of the HA through the CDPA and 4,800 acres through the Dingell Act and is no longer recognized as part of the HA.

The Slate Mountain Range is located in the northwest quarter of this HA. Two major valleys run parallel to the mountain range. Panamint Valley to the east and Searles Valley to the west. The elevation ranges from 1900 feet up to 5,578 feet at Straw Peak on the southern tip of the range. The western boundary extends south of the NAWSCL boundary near Slocum Mountain (elevation 5,124) about 5 miles before heading east towards Superior Lake. In the southern portion of the HA is the Eagle Crags. This is a small range of volcanic mountains ranging in elevation from 3,000 feet to 4,835 feet. From Superior Lake the HA boundary heads northeastwardly to Goldstone Lake which is 2 miles east of the NAWSCL-Fort Irwin Military Reservation boundary. From Goldstone Lake the eastern boundary of the HA extends past the northern boundary of the Fort Irwin Military Reservation at the Quail Mountains into the Olwshead Mountains just before long valley. The HA boundary then runs down to the south end of Brown Mountain within the NAWSCL and then runs northwestwardly up through Panamint Valley, terminating at the northern slopes of the Slate Mountain Range.

3. Panamint Herd Area (See Map 5, Appendix B):

The Panamint HA is located within Inyo and San Bernardino Counties. There are approximately 217,349 acres within the HA comprising 163,055 acres BLM; 44,933 acres NAWSCL; 7,592cres State; 1,614 acres Other/Undetermined; and 95 acres Private lands. The Death Valley National Park administered by the National Park Service (NPS) acquired approximately 197,496 acres of the HA through the CDPA and is no longer recognized as part of the HA.

The Panamint HA includes the Panamint Mountain Range from Cottonwood Springs south to Wingate Wash. Within the HA is the Surprise Canyon Wilderness Area encompassing 29,180 acres and the Manly Peak Wilderness encompassing 16,105 acres. The Panamints are noted for their alluvial slopes rising to steep, jagged ridges, sharp peaks and deep canyons. This Area has an elevational variance of over 8,500 feet going from 1,100 feet in Panamint valley to over 9,600 feet at Sentinel Peak and from 2,000 feet in northern Panamint Valley to over 7,500 feet at Pinto Peak. Due to this great difference, the vegetative make up is very diversified changing with altitude, slope and aspect. Creosote bush scrub, desert holly and other low desert alkali type communities at the lower elevations; pinyon-juniper woodlands and great basin sagebrush communities at the higher elevations; and strips of riparian vegetation (cottonwood, desert willow and cattails) in the lower canyons with intermittent spring-fed streams. *Brickellia knappiana* is found in the Middle Park Canyon area, this is a BLM sensitive plant species. The Panamint Daisy is a BLM sensitive plant species found in rocky areas between the 1200 and 1400 foot level in Surprise Canyon. Two rare plant species are found in the Wildrose Canyon area: *Eriogonum intrafractum* (jointed buckwheat) and *Eriogonum hoffmanii* ssp. Hoffmannii (Hoffman's buckwheat). Most burro use appears on the more gentle slopes and valleys. Even though the concentrations are as mentioned, the burros will search for food and move with the seasonal weather patterns leaving prominent trails on many of the steep slopes increasing soil erosion with rainwater being channeled down the trailing system.

3.2 Soils

3.2.1 Affected Environment

Soils develop very slowly in the conditions of a desert ecosystem. Two soil categories generally found in these HAs are Entisols and Aridisols. Aridisols are found on playas, alluvial fans and bajadas. Aridisols of alluvial fans and bajadas are usually stable, being only infrequently disturbed by running waters. The majority of desert soils is entosolic in nature and is sometimes protected by desert pavement.

Burro trails occur throughout the HAs and are concentrated near water locations. Trails are typically void of vegetation and depending on type of soil surface (sandy loam, gravel, cobbles and rock), may have exposed soil substrate. The majority of the trails have a width, approximately 14 inches. Upland water holes are typically associated with exposed or very shallow bedrock in dry washes. Desert washes are generally sandy. Sandy soils are not susceptible to compaction. They are, even under pristine conditions, susceptible to erosional forces.

Dust wallows (dust baths) created by burros are evident throughout the HAs as areas cleared of gravel and cobbles on flat areas. An adult animal may create a dust bath measuring an area of 6 feet by 6 feet. Field observations have not recorded any areas where dust baths have shown to attribute to erosion.

Trailing and wallowing can increase soil erosion and compaction which can lead to decreased precipitation infiltration and increased sheet or overland flow. However, upland soils prevalently contain gravels and cobbles throughout their profile, preventing soil loss and armor against compaction.

3.2.2 Impacts Common to all Action Alternatives (1-2)

Short-term impacts are expected to occur in the gathering process mainly in the form of airborne dust created by loosening the soil surface and allowing for windblown erosion to occur. Top soil disturbances and subsurface compaction would occur with the movement of animals and the concentration of animals in and around the capture sites. Expected Long-term benefits include: 1) improved soil stability; 2) reduction in soil loss; 3) decreased soil compaction, especially in spring and riparian areas; 4) increased water infiltration rates; 5) increased water retention qualities; 6) vegetation responds positively to improved soil conditions increasing the productivity of the land and decreasing soil erosion; and 7) reduction of multiple trail systems.

3.2.3 Impacts of the No Action Alternative

Soil productivity would decline due to compaction and reduced water retention capability that would lead to increased gully and sheet erosion.

3.2.3 Mitigation

The design features and operating measures in the Proposed Action (Section 2.1) will reduce overall impacts to soils and lessen soil erosion, particularly stipulations such as parking and setting up holding and trap sites in already denuded areas.

3.3 Vegetation including Non-native species and Riparian Areas

3.3.1 Affected Environment

The vegetative communities are characterized by components derived from two major floristic zones, the Great Basin and Mojave Deserts.

A. The following 8 vegetative zones have been identified to occur in the HAs. The Forest and Woodland/Scrub-High Cover zones are found only in the Centennial and Panamint HAs. All other zones are found in all three HAs.

1. <u>Forest</u>:
The pinyon-juniper (*Pinus-Juniperus* spp.) association is found between the elevations of 6,500-8,000 feet. The pinyon grows at higher elevations and on the northern exposures at lower elevations. The juniper can tolerate drier climatic regimes and predominately is found at lower elevations and on southern exposures. Dominant and subdominant understory species in the pinyon-juniper community are sagebrush (*Artemisia tridentata* and *A. nova*), antelope brush (*Purshia glandulosa*), and a variety of perennial grasses such as galleta grass (*Hilaria jamesii)*, squirreltail (*Sitanion histrix*) and needle grasses (*Stipa* spp.).

2. Woodland/Scrub-High Cover:
An open pinyon-juniper woodland predominates between the 6,500 and 7,000 foot elevations, associated subdominate species include sagebrush, galleta grass, squirreltail and needle grass.

The Joshua-blackbrush (*Yucca brevifolia-Coleogyne ramosissima)* association is a woodland-scrub zone that is not influenced by the Great Basin floristic zone. It is found between the elevations of 4,000 and 6,000 feet. The subdominant species include spiny hopsage (*Grayia spinosa*), goldenbush (*Haplopappus linearifolius*), rabbit-bush *(Chrysothamnus nauseosus*), needlegrass, squirreltail and galleta grass, along with an occasional pinyon and/or juniper trees at the higher elevations.

3. Woodland/Scrub-Low Cover:
A low cover woodland emerges between elevations of 3,000 and 7,000 feet where moisture, temperature and edaphic regimes produce a slightly drier habitat. Vegetation includes sagebrush, shadscale (*Atriplex confertifolia*), needlegrass, galleta grass, squirreltail and cheatgrass (Bromus tectorum). Another low-cover woodland community occurs between 2,000 and 5,000 feet in elevation consisting of Joshua tree, creosote bush (*Larrea tridentat*a), needlegrass and cheatgrass.

4. Scrub-High Diversity:
The scrub community composed of sagebrush, rabbit-brush, spiny hopsage, winter fat, Ephedra spp. and grasses are scattered throughout the area between the elevations of 2,300 and 7,000 feet.

Another scrubland association is composed primarily of blackbrush with associated species of shadscale, spiny hopsage, Ephedra, winterfat and scattered Joshua trees.

5. Scrub-Moderate Diversity:
The creosote/burro bush (*Ambrosia dumosa*) scrubland association is present from playa edges up to 5,000 feet elevation. Creosote generally grows in open stands on well drained slopes, fans and valleys. Sub-dominate species includes cheesebush (*Hymenoclea salsola*), desert senna *(Senna armata*) and saltbush (Atriplex spp.).

6. Scrub-Low Diversity:
Desert Holly (*Atriplex hymenelytra*) is a dominant species in a low diversity scrub association which is found in some areas between 1,000 and 5,000 feet in elevation.

7. Scrub/Grassland:
This vegetation zone exists from playa edges up to about 3,200 feet. Dominant species include four-winged saltbush (*Atriplex canescens)*, needle grass and brome grass (*Bromus spp.*)

8. Scrub/Barren:
This vegetative zone exists near playas and at elevations below 3,200 feet. Plants are tolerant of extreme temperatures, low precipitation and high alkaline and saline soil conditions. The dominant specie is saltbush associated with subdominant species of pickleweed (*Allenrolfea occidentalis*) and inkweed (*Suaeda torreyana)*.

Non-native, Invasive Species
Invasive species are those that are non-native to an ecosystem and whose introduction causes or is likely to cause economic or environmental harm or harm to human health. A noxious weed one that is harmful to the

environment or animals, especially one that may be the subject of regulations governing attempts to control it. Non-native, invasives are found in the project area; including Russian thistle (*Salsola tragus*) and some invasive grasses such as Schismis and Bromus spp. Tamarisk (*Tamarix* spp.) are present in some lake-bed and riparian locations, too.

B. Wetlands & Riparian

Riparian areas are scattered throughout the Centennial, Slate Rangeand Panamint HAs and are generally associated wherever surface water occurs. They are generally highly productive and add considerable botanical diversity to the regional flora and fauna. The dominant plants include willows (Salix spp.), cotton woods (Populus spp.) mesquite (P*rosopis glandulosa*), squaw waterweed (*Baccharis sergiloides*) and gooseberry (*Ribes velutina*). Riparian habitat provides water, shade, protective cover, food, breeding and nesting sites for a wide variety of vertebrates.

C. Special Status – Sensitive Plant Species:

There are no Federally listed Threatened or Endangered plant species in the project area.
Sensitive plants are those considered as such by the U.S. Fish and Wildlife Service, the California Department of Fish and Game and the California Native Plant Society which are Rare, Threatened or Endangered, as well as species of limited distribution.

Nine sensitive species have been reported by Bagley,1985 to occur in the project area. None of these species are listed as Rare, Threatened or Endangered under the Federal Endangered Species Act or under the California Native Plant Protection Act, but all nine species are California Department of Fish and Game Natural Diversity Data Base Special Plants. The following is the list of these species, their life cycle, flowering period and habitat.

1. *Astragalus atratus var. mensanus* (Darwin Mesa milk-vetch)
Perennial
Flowering Period: April – June
Elevational Range: 5400 – 6050 feet
Plant Communities: Sagebrush Scrub and Pinyon-Juniper Woodland
Potential Habitat: Northern Coso and Argus Ranges on open flats and hillsides, in volcanic clay and gravel.

2. *Cordylanthus eremicus ssp. eremicus* (Panamint birds-beak)
Annual
Flowering Period: August – October
Elevational Range: 4900 – 8400 feet
Plant Communities: Sagebrush Scrub, Pinyon-Juniper Woodland
Potential Habitat: Coso and Argus Ranges on dry rocky and gravelly flats and slopes with soils derived from granite or marine sedimentary deposits.

3. *Dudleya saxosa ssp. saxosa* (Panamint live forever)
Perennial
Flowering Period: May – June
Elevational Range: 3000 – 7100 feet
Plant Communities: Creosote Bush Scrub to Pinyon Juniper Woodland

Potential Habitat: Dry stony slopes, in bedrock cracks and on cliffs.

4. *Fendlerella utahensis* (Utah fendlerella)
Shrub
Flowering Period: June – August
Elevational Range: 4,000 – 8,400 feet
Plant Communities: Shadscale scrub, Mixed desert Scrub, Sagebrush Scrub and Pinyon-Juniper Woodland
Potential Habitat: Limestone areas of the northern Argus Range.

5. *Hulsea vestita ssp. inyoensis* (Inyo hulsea)
Biennial or Perennial
Flowering Period: Late April – June
Elevational Range: 4600 – 7600 feet
Plant Communities: Mixed Desert Scrub, Sagebrush Scrub, and Pinyon-Juniper Woodland
Potential Habitat: Coso and Argus ranges on disturbed areas and unstable slopes of course soil.

6. *Lupinus magnificus var. glareola* (Coso Mountains lupine)
Perennial
Flowering Period: Late April – June
Elevational Range: 5,000 – 7,000 feet
Plant Communities: Joshua Tree Woodland, Sagebrush Scrub and Pinyon Juniper Woodland
Potential Habitat: Coso and Argus ranges on open slopes in sand or gravelly loam derived from granite rocks.

7. *Phacelia mustelina* (Weasel phacelia)
Annual
Flowering Period: March – June
Elevational Range: 3,000 – 6,000 feet
Plant Communities: Creosote bush Scrub, Mixed Desert Scrub, Sage Brush Scrub and Pinyon-Juniper Woodland.
Potential Habitat: Crevices and ledges on granitic, volcanic and limestone rock outcrops and cliffs.

9. *Sclerocactus polyancistrus* (Mojave fishhook cactus)
Cactus
Flowering Period: April – June
Elevational range: 2,000 – 7,000 feet
Plant Communities: Creosote Bush Scrub, Mixed Desert Scrub, Joshua Tree Woodland, Blackbrush Scrub, Sagebrush Scrub and Pinyon-Juniper Woodland.
Potential Habitat: Well drained soils on rocky, gravelly mesas, slopes and outcrops.

3.3.2 Impacts Alternative 1 (Proposed Action)

Traps, bait stations, or temporary holding facilities would be located in previously disturbed areas or open desert washes if possible, in order to minimize impacts. Up to one acre of vegetation could be affected at each location as a result of the installation and operation of the bait traps/stations. Impacts to vegetation could result from the trap sites, including the helicopter wing traps and bait traps.

The short-term impacts associated with the gathers would be some increase of vegetation trampling at the gathering trap sites. The long-term benefits would be: 1) decreased grazing pressure; 2) forage presently consumed by the wild burros will be made available to wildlife; 3) the potential for over-population induced shortages of forage would be reduced; 4) improvements in the plant community structure and ecosystem stability with increased species diversity (composition), vigor, reproductive potential (seed production, germination and survival); 5) improve cover, especially near water sources; 6) unpalatable species will lose community dominance as perennial grasses and forbs return; and 7) promotion of survival potential for sensitive species to due to improvement in habitat conditions.

Additionally, the bait traps would be checked twice a day; thus, animals would not be in the traps for more than a day. Areas receiving less than one month of bait trap use would not inhibit the reproductive capabilities of individual plants and vegetation would recover during the next growing season. Vegetation is expected to recover within a year. Rehabilitation may be implemented as needed at trap sites.

3.3.2 Impacts from Alternative 2

Impacts to vegetation will be same as the proposed action for those areas outside wilderness. The decreased efficiency in maneuvering the herds to the trap site in wilderness areas, would increase the potential disturbance to the vegetation from trampling and associated ground disturbance in the chase, capture and herding of the wild burros.

3.3.3 Impacts of No Action Alternative

No direct impacts from gather operations would occur to vegetative resources. There would not be a concentration of human activities or ungulates at the proposed bait/trap locations to cause the crushing or removal of vegetation.

Habitat conditions for all vegetation species would continue to deteriorate as wild burro numbers above the established AML would likely lead to over-utilization on vegetative resources, causing more decadence in plant species and increasing bare ground. Overgrazed areas would expand and the condition of the range would decline. Favored plants of wild burros would remain at reduced abundance throughout their range and would not recover from past grazing impacts. Reduced vegetation and increased bare ground would cause soil erosion and potential for more non-native invasives to take over.

3.3.4 Mitigation

The design features and operating measures in the Proposed Action (Section 2.1) will reduce overall impacts to vegetation including riparian areas and special status species to a negligible level. Specific ones include no cross-country travel by vehicles, parking and setting up holding and trap sites in already denuded areas, and washing off vehicles prior to entering public lands to assist with preventing the spread of non-native, invasive species of plants.

3.4 Water Resources

3.4.1 Affected Environment

Surface water occurs in the form of seeps, wells, springs and developed wildlife drinkers. Perennial springs are important water resources for native wildlife as well as wild burros. The daily output of some of these water sources is very small. The potential for water shortage exists if the springs and guzzlers are over utilized, or severe drought conditions occur. The riparian vegetation associated with the permanent water resources are unique and provides habitat for numerous species of wildlife. Large uncontrolled concentrations of wild burros at water sources damage the riparian vegetation; compact the soil around the water source; increase soil erosion, which contributes to increased water turbidity. During periods of drought and/or the hottest part of the year, wild burros concentrate around these water sources and fecal matter tends to accumulate, which could affect water quality through fecal matter coliform contamination. Fecal contamination has been documented at Birchum Springs and Junction Ranch on the NAWSCL in the form of fecal coliform and fecal streptococci and concluded that burro feces contributed to increased levels of fecal coliform (Phillips 1982). Water turbidity, water depletions, changes in water chemistry due to urine and feces, changes in temperature and repeated disturbances of the water surface, subsurface and the surrounding area may influence the survival of aquatic species or terrestrial species dependent on these water sources. In January – February 2020, springs and water sources within the Centennial HA were monitored as part of an inventory for the Great Falls Basin Wilderness Character report and resulted in a determination that excess wild burros were contributing factors for not achieving and/or not allowing for progress towards achieving the proper function condition of some springs and water sources (Appendix E).

Water:

The Clean Water Act (CWA Section 401; water quality certification program) gives the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) the authority to regulate through certification any proposed federally-permitted activity which may impact water quality. Among such activities are discharges of dredged or fill material permitted by the U.S. Army Corps of Engineers under CWA Section 404 (e.g., fill of wetlands or other water bodies for development, flood control channelization and channel clearing, levee construction, and navigational dredging). The State may issue, condition, deny, or waive certification for such discharges. Certification or waiver of certification must be based on a finding that the proposed discharge will comply with water quality standards. The RWQCBs take the lead role in reviewing applications. If the State conditions the certification, the conditions must be included in the federal permit or license. If the State denies certification, the federal permit or license may not be issued.

The project is within the Lahontan Region and under the jurisdiction of the Lahontan Regional Water Quality Control Board.

3.4.2 Impacts Common to all Action Alternatives (1-2)

The proposed project is not expected to have adverse impacts on water resources. In fact, the impacts are expected to be beneficial in nature. No wastewater will be generated by the project and no 401 certification would be necessary. Helicopter Drive Trap and Roping gather sites are not located in or adjacent to riparian or wetland areas. The potential of utilizing water traps is very remote due to the fact most perennial water sources has no vehicle access. If a water sources is identified for potential trap site, it would be evaluated to be paneled off with wildlife friendly panels and to utilize bait trap method of capture in the near vicinity. If a natural water source is utilized, the trap would be configured to allow access to a portion of the water source and paneling the

rest off utilizing the wildlife friendly panels. The water traps themselves would not include "natural" water sites, unless the site is cleared by resource specialists first. Reduction of wild burro population densities would benefit the water resources. The potential for over-population induced shortages of water will be reduced. Wildlife would have increased accessibility to watering areas. Soils, vegetation and cultural resources associated with water sources, will receive less trampling related impacts. The quality of the water resource would improve with less turbidity from ground disturbances and from urine and fecal contamination.

3.4.3 Impacts of the No Action Alternative

Large, uncontrolled concentrations of wild burros at water sources damage riparian vegetation, compact the soil around the water source, and increase soil erosion which contributes to increased water turbidity. During periods of drought and/or the hottest part of the year, wild burros concentrate around these water sources and fecal matter tends to accumulate, which affects water quality through fecal matter coliform contamination. Water turbidity, water depletions, changes in water chemistry due to urine and feces, changes in temperature and repeated disturbances of the water surface, subsurface and the surrounding area influence the survival of aquatic species or terrestrial species dependent on these water sources.

The rate of utilization, contamination and soil disturbance at watering sites would increase. Some springs may be rendered unusable. The availability of water for wildlife would decrease.

3.4.4 Mitigation

The design features and operating measures in the Proposed Action (Section 2.1) will reduce overall impacts to water, especially the active avoidance by the staff of the riparian and water sites.

3.5 Wilderness, future Wilderness Study Areas, and Lands with Wilderness Characteristics

3.5.1 Affected Environment

Wilderness

In October 1994, Congress passed and the President signed into law the California Desert Protection Act (CDPA). In general, the CDPA designated certain federal lands in the California desert as wilderness to be managed by the Bureau of Land Management (BLM), National Park Service (NPS), U.S. Forest Service (USFS) or the U.S. Fish and Wildlife Service (USFWS). The Act added additional acreage to Death Valley and Joshua Tree National Monuments and upgraded both to National Parks and established the Mojave National Preserve to be managed by the NPS. Acreages include: 3.6 million acres of wilderness on public lands administered by the BLM; 95,500 acres of USFS wilderness; 4 million acres of wilderness in the three NPS areas; and 9,000 acres of wilderness in two USFWS areas.

In 2019, Congress passed the Dingell Act, designating the Great Falls Basin WSA as a designated Wilderness Area and the Surprise Canyon Creek as a Wild and Scenic River.

On BLM lands, guidelines concerning wild burro management in wilderness appears in BLM policy Manual 6340 – Management of BLM Wilderness (7/13/2012). BLM "must ensure that both herd population numbers and management techniques are compatible with the preservation of the area's wilderness character." (BLM Manual 6340 C.20.a). The appropriate management level for herds within Herd Management Areas (HMAs) that are within or partially within wilderness cannot "exceed the productive capacity of the habitat … in order to maintain a thriving ecological balance and prevent degradation of wilderness character, watershed function, and ecological processes." *(C.20.b)* Wild Burro populations may or may not have exceeded these management thresholds. The Centennial, Panamint, and Slate Range Herd Areas are no longer Herd *Management* Areas. In the three Herd Areas proposed for burro capture and removal in this EA, the target herd population level is zero.

Under BLM Manual 6340 C.20.d Prohibited uses and herd management, BLM "may only employ uses prohibited by Section 4I4I of the Wilderness Act when they are necessary to meet the minimum requirements for administering the area for the purpose of the Wilderness Act or where the uses are required under the Wild Free-Roaming Horse and Burro Act of 1971." Section I(c) prohibited uses in wilderness include use of a temporary road, motor vehicles or motorized equipment, structures or installations, and landing or transport by aircraft. In such cases, a Minimum Requirements Decision Guide (MRDG) will be used to determine when such uses may be applied. In any case: "Installations associated with wild horse and burro management activities should not be built within wilderness areas where alternative non-wilderness public land locations are available." (C.20.d)

Wilderness Study Areas (WSAs)

Currently, there are no designated Wilderness Study Areas (WSAs) within the Centennial, Panamint, and Slate Range HMAs that would be affected by the proposed Action or other alternatives. Great Falls Basin WSA became a designated wilderness area in 2019 as a result of the Dingell Act. However, there are many Lands with Wilderness Character (LWCs) within these Herd Management Areas. In the event, that any one of these LWCs become Wilderness Study Areas either as a result of a Land Use Plan Amendment or Congressional legislation, the following directives regarding WSAs would apply. BLM Wilderness Study Areas are managed under the "non-impairment" standard. (BLM policy Manual 6330 – Management of Wilderness Study Areas, 7/13/2012.) Wilderness characteristics must be kept in the same or better condition as they were at the time the WSA was established. All uses and/or facilities must be temporary. New surface disturbances must not require reclamation, rehabilitation, or restoration for an area to appear and function as it did prior to the disturbance. (1.6 A, B, and C of Manual 6330.)did prior to the disturbance. (1.6 A, B, and C of Manual 6330.)

More specific guidance is provided in section 1.6 D.10 of Manual 6330, Wild horse and burro management. Wild Horses and burros are managed "to remain in balance with the productive capacity of the habitat," i.e., to prevent "impairment of watershed function and ecological processes" and "wilderness characteristics." BLM should "limit population growth or remove excess animals as necessary to prevent impairment." (10a.) Again, wild burro populations may or may not have exceeded these management thresholds. The Centennial, Panamint, and Slate Range Herd Areas are no longer Herd *Management* Areas. In the Herd Areas proposed for burro capture and removal, the target herd population level is zero, regardless.

"Traps for removal of excess wild horses and burros must be located outside of WSAs whenever possible." Only where practical alternatives do not exist can *temporary* traps be installed to reduce numbers of burros. (1.6 D.10c.iii of Manual 6330) Motor vehicles may not drive off open primitive routes except in exceptional circumstances. In such circumstances, exceptions must be exercised in a manner that is the least disturbing and least impairing to the

area. "Helicopters and fixed wing aircraft may be used for aerial surveys and for the gathering of wild horses and burros." (10c.iv.)

Lands with Wilderness Characteristics

Under Title II, Section 201 of the Federal Land Policy and Management Act (FLPMA) of 1976, BLM is required to maintain on a continuing basis an inventory of all public lands and their resources and other values, including wilderness characteristics. These inventories need to be completed and should be considered in land use planning decisions and when projects that may impact wilderness characteristics are undergoing NEPA analysis. (BLM Manual 6310 – Conducting Wilderness Characteristics Inventory on BLM Lands).

There are no special restrictions that need to be applied to Lands with Wilderness Characteristics. However, BLM may elect to avoid or mitigate certain activities within such units that may undermine their eligibility until a decision has been reached to preserve or not to preserve wilderness character through a land use planning document. Activities that could potentially undermine wilderness character include construction of new permanent roads and/or maintenance of existing, open routes (in effect, creating new wilderness inventory roads), depending upon their extent and location within the unit. Use of existing open routes and disturbed areas, use of temporary routes, holding pens or helo-spots (particularly if they are effectively closed and allowed to reclaim themselves), landing of aircraft and transport of personnel, animals, or materials by aircraft should not affect a unit's eligibility.

Wilderness character inventories for the Ridgecrest Field Office Area have been recently updated in response to the Desert Renewable Energy Conservation Plan (DRECP) and West Mojave (WEMO) Plan Amendments to the California Desert Conservation Area (CDCA) Plan.

Burros are currently found in Wilderness and in Lands with Wilderness Characteristics in the Centennial, Slate Range and Panamint HAs.

The proposed action would be occurring within the following areas:

A. Centennial Herd Area:

Death Valley National Park Wilderness Units- 2; bordering Darwin Falls and Argus Range Wildernesses

Coso Range Wilderness
Darwin Falls Wilderness
Argus Range Wilderness
Great Falls Basin Wilderness

In addition, the following BLM wilderness inventory units have been found to have wilderness characteristics: WIU CDCA #131-1 (West Cosos), #131-5 (NW Cosos), and #130 (North Cosos); #131A-1 & #131A-2 (Lower Centennial Flats); #132A-1, #132A-2, & #132A-3 (Darwin); #132B-1 (NW Argus); #132B-7A (near Panamint Springs) and #132B-8 (Ash Hill); #139, #138, and #138A (Argus Front Country between the Paved Highways and Nadeau Rd.); #132B-2 (South of Slate Range Crossing); and #132B3 (North of Homewood Cyn).

B. Slate Range Herd Area:

The following BLM wilderness inventory units have been found to have wilderness characteristics: WIU CDCA# 142-1 (Slate Range & Southern Panamint Valley).

C. Panamint Herd Area:

Death Valley National Park Wilderness Units - Panamints

Surprise Canyon Wilderness
Manly Peak Wilderness

In addition, the following BLM wilderness inventory units have been found to have wilderness characteristics: WIU CDCA #137-1 (Manly Peak); #137A-1 (No. Slope South Park to Middle Park Canyon); #140 (Northern Panamint Lake), and
#134-1(Wildrose Canyon Bajada), and WIU CDCA# 142-1 (Slate Range & Southern Panamint Valley).

3.5.2 Impacts of Alternative 1 (Proposed Action)

The proposed action proposing use of helicopter-assisted gathers in wilderness does not explicitly involve any of the 9 prohibited acts under Section 4(c) of the Wilderness Act of 1964. There would be use of aircraft (a helicopter) over wilderness to herd wild burros in wilderness, but there would be no landing or transport (dropping or picking up) by aircraft, no use of roads or motor vehicles, no use of motorized equipment (except to herd animals from the air by helicopter), and no structure or installation built inside any wilderness or wilderness study area. Use of motor vehicles would be limited to boundary roads, cherry stems, and other areas outside of wilderness or wilderness study areas. Trap sites and/or temporary holding pens would also be limited to areas outside of wilderness or wilderness study areas.

Wilderness does not extend into air space. The only activity at issue is the use of a low-flying helicopter (a form of motorized equipment) in lieu of wranglers on horseback to herd wild burros out of wilderness and wilderness study areas. Use of a helicopter to herd burros would involve use of motorized equipment over wilderness to control wildlife populations in wilderness. While there is no specific prohibition against flying aircraft over wilderness in wilderness law, regulation, or policy, use of a helicopter to locate and herd burros does appear to undermine the intent of the Wilderness Act to manage wilderness and the resources protected within wilderness (including wildlife populations) without use of motorized equipment. Manual 6340 reminds us that BLM must ensure that management techniques are "compatible with preservation of the area's wilderness character." (Manual 6340 C.20.b.) Therefore, only under special circumstances, "may" BLM employ techniques prohibited by Section 4(c) of the Wilderness Act. BLM may do so where it is "necessary" to meet the minimum requirements for the administration of the area as wilderness, and/or specifically, in the case of wild horse and burro management, where such techniques are "required" to meet the objectives of the Wild Free-Roaming Horse and Burro Act of 1971(Manual 6340 C.20.d). The determination of what is "necessary" or "required" is made by completion of a Minimum Requirements Decision Guide.

In Wilderness Study Areas, there is no comparable need to determine necessity or the minimum tool for use of aircraft to manage wild horses and burros. BLM policy concerning management of WSAs explicitly states that:

"Helicopters and fixed wing aircraft may be used for aerial surveys and for the gathering of wild horses and burros." (Manual 6330 D.10.c.iv.)

Other alternatives proposing non-helicopter-assisted (wranglers only) gathers in wilderness and wilderness study areas would not eliminate the need for aircraft support. These alternatives would still require use of a helicopter, not for herding, but for transport of food, water, feed, and other supplies to remote overnight campsites and base camps. Helicopters would be used to resupply wranglers on a bi-weekly basis over the course of the 3-month long, extended period of time required to achieve somewhat comparable results (numbers of burros removed) by wranglers only. Use of aircraft to transport materials in wilderness is prohibited under Section 4(c) of the Wilderness Act.

A Minimum Requirements Decision Guide (MRDG) has determined that wrangler-only gathers requiring bi-weekly helicopter transports of supplies to base camps in remote locations over an extended 3-month period would not be the minimum tool in this case. Instead, helicopter-assisted gathers where helicopters are used only to more effectively locate and herd burros to trap sites and temporary holding pens located outside of wilderness or wilderness study areas over a much shorter period of time (3-4 days) would be the minimum tool to achieve the necessary results (See Appendix D.)

Manipulation (the herding, capture and removal) of wild burro populations within wilderness constitutes a trammeling impact. A "trammel" is literally a net, snare, hobble, or other device that impedes the free movement of an animal. Here, used metaphorically, "untrammeled" refers to wilderness as essentially unhindered and free from modern human control or manipulation. This quality is impaired by human activities or actions that control or manipulate the components or processes of ecological systems inside wilderness. Wilderness is supposed to be "an area where earth and its community of life are untrammeled by man." It is meant to be a place that is different from all other places on earth in that it has been set aside to be free of manmade disturbances (impacts) and free of man's interference. Ideally, it is a place that is or will increasingly become a place that manages itself; a place "retaining its primeval character and influence", a place "affected primarily by the forces of nature." (Title 1, Definition of Wilderness, Section 2(C), Wilderness Act of 1964.)

Wilderness, however, is also a place that needs to be "protected and managed so as to preserve its natural conditions." (Section 2(C), Wilderness Act of 1964.) Trammeling impacts may be necessary in wilderness where management actions are needed to prevent, control, or even reverse impacts (such as the introduction of a non-native species) caused by man. BLM policy with respect to Wild Horse and Burro Management in Wilderness and WSAs acknowledges this. Herd populations must not be allowed to "exceed the productive capacity of the habitat." Populations must be managed to "maintain a thriving ecological balance" and to "prevent degradation/impairment of wilderness character/characteristics, watershed function, and ecological processes." (Manuals 6340 C.20.b and 6330 D.10.a.)

While herd populations in these herd areas may or may not have yet exceeded thresholds identified in wilderness policy, burro populations would undoubtedly grow and exceed thresholds over time in the absence of any management action or control. Naturalness would be diminished and natural conditions would suffer. Seeps, springs, and riparian areas would be trampled. Water quality would deteriorate. Critical habitat for a threatened and endangered species, the Inyo California towhee, would be compromised. Prominent saddles and shade features (large boulders and trees) would be cleared of vegetation. Mountainsides would be riddled with burro trails. Naturalness and natural values would be better preserved, protected, and improved by the burro removals.

Wilderness values of naturalness, opportunities for solitude and/or primitive and unconfined recreation, as well as scenic values, however, would be affected, albeit temporarily, by the gather activities. Helicopter-assisted herding over wilderness and wilderness study areas at altitudes below 50 feet would have some direct physical impacts on these areas. When turning burros, a helicopter may drop as low as ten feet off the ground. At these altitudes, a helicopter is no longer affecting only the air space above the ground. Probable impacts include blowing of soils, injury to plants, stress and possible injury to wildlife. Rotor wash from low-flying aircraft, the concentration and funneling of running, large hoofed animals pushed by helicopter, wranglers assisting on horseback and other wrangler activities (such as campsites and stock watering, feeding, and tethering sites) would disturb soil and vegetation. The effects of rotor wash may be comparable to a gust of strong wind or a dust devil, but would be human-caused. Vegetation would be swept clean or buried, but would not be removed, cut, or uprooted, as it would at a prepared helo-spot. Impacts would be visible, extending beyond the period of the gather, but would be expected to diminish and eventually disappear with little to no active reclamation over time. In areas already heavily-impacted by trailing and large aggregations of burros on saddles, around water sources, and in riparian areas, additional one-time impacts caused by large numbers of burros being driven out of wilderness may not be appreciably different. However, permanent removal of large numbers of burros from these areas would decrease burro impacts overall, allowing these areas to recover from long term burro usage, improving naturalness and scenic values, especially over time.

Solitude and primitive and unconfined recreation would be disrupted by the sight and sound of the helicopter over wilderness. The presence of Federal government personnel during capture activities would temporarily affect the solitude of the areas. Enjoyment of primitive and unconfined recreation opportunities would be constrained during capture activities. However, these disruptions would be temporary-- occurring over a period of only a few days (during the gather) and only within selected parts of a wilderness or wilderness study area at any given time. Overtime, opportunities for primitive and unconfined recreation would improve with reductions in burro impacts to water quality and overall naturalness.

The removal of burros is considered the minimum action for the administration of burros in the HAs and, therefore, the wildernesses and wilderness study areas within the HAs. Due to the rugged terrain and inaccessibility of several areas within the wildernesses and wilderness study areas in the HAs, the use of helicopter-assisted herding could be considered the minimum tool for herding burros out of these areas. Helicopter-assisted herding would provide the highest degree of success in the completion of the proposed gather activities. Alternatives not permitting the use of a helicopter would be more damaging, more time-consuming, and less effective. Wilderness values would be affected by the low-flying helicopter, but the effects would be temporary. Removal of wild burros would result in less damage by burros overall, and this would contribute to the management of the wilderness and wilderness study areas by maintaining a healthy ecosystem and, consequently, the naturalness of the areas.

Long-term benefits would be realized by reducing environmental degradation from uncontrolled populations of wild burros.

Lands with Wilderness Characteristics are not likely to be compromised by the use of helicopter-assisted wild burro gathers. Use of trap sites and temporary corrals or holding pens would not undermine an area's wilderness character unless such installations were made permanent. Use of open, designated vehicle routes would not affect eligibility, unless routes were mechanically improved or constructed by heavy machinery. Some limited off-route vehicle travel could occur without affecting eligibility, as long as travel was minimal, requiring little to no

vegetation removal and no route construction; and as long as the impacts could be easily and quickly remediated and effectively closed to vehicle use upon conclusion of the gather.

3.5.3 Impacts of Alternative 2

Helicopters would not be used over wilderness or wilderness study areas to locate and herd burros. Use of low-flying aircraft for these purposes would be restricted to adjacent areas only. Instead, gathers within wilderness and wilderness study areas would be conducted entirely by wranglers on horseback. This alternative would require much more extensive riding within wilderness and wilderness study areas to locate and herd animals out. This would increase the amount of ground disturbance overall and the severity of impacts to soil, water, and vegetation directly attributable to the gather. The evasiveness of the burro herds, the inaccessibility of the mountainous regions in these areas, and the limited ability of the wranglers to maneuver burros to the temporary corrals would significantly lengthen the amount of time required (3 months) for a (partially) successful gather and would reduce the number of burros that could be removed. Repeat trips into sensitive spring and riparian areas could prolong and exacerbate impacts to these areas and to towhees and other sensitive wildlife dependent on them.

The establishment of overnight campsites or base camps for wranglers and horses on extended trips into the wilderness would create several new ground disturbances, with or without minimal developments. If wranglers exercise care in choosing camping, watering/feeding and tethering sites, impacts from wrangler activities alone could be appropriately managed and minimized. Campsites could be located in previously disturbed areas. New fire rings could be dispersed. Rocks and debris could be scattered over bedding areas/tent clearings. Stock could be watered, fed, and tethered away from springs and riparian areas. Human wastes should be buried properly. Trash should be packed out.

Solitude and/or primitive and unconfined recreation opportunities within wilderness and wilderness study areas would be affected for a much longer period of time (3 months) under this alternative than under the proposed action (3-4 days). The presence of wranglers may appear to be less intrusive than the sight and sound of a helicopter. However, surface disturbances affecting the quality of the recreational experiences available (the experience of naturalness) would be more pervasive with use of wranglers on horseback to locate and herd burros than helicopter use, particularly over extended periods of time. Helicopters would still be used to locate and herd animals in adjacent areas anyway. It is probable that helicopters used for these purposes would still be audible and/or visible from many locations inside wilderness and wilderness study areas.

In addition, low-flying aircraft (helicopters) would still be used over wilderness and wilderness study areas on a regular basis to transport/sling-load supplies (food, feed, water and other articles) into remote wilderness campsites or base camps in support of wranglers and horses used for the gather. These deliveries would occur on a bi-weekly basis over an extended 3-month period.

Although not as effective as the proposed action, wilderness and wilderness study areas would still benefit from burro removals. Population levels would be checked, if not kept on target. After the removals, there would be fewer burros to damage seeps, springs, and riparian areas, degrade water quality, compromise sensitive wildlife habitat, and degrade visual resources. Naturalness and the natural values of these areas would still be better served, preserved, protected, and enhanced under this alternative than under the No Action (no burro removal) Alternative.

Impacts to *Lands with Wilderness Characteristics* would be the same under this alternative as under the Proposed Action.

3.5.4 Impacts of No Action Alternative

Under this alternative, excess numbers of wild burros would not be removed. Wilderness values would not be affected by helicopter or wrangler burro herding and capture activities. However, wilderness values would be adversely affected by an increasing number of wild burros. Overpopulation by wild burros would undermine naturalness by damaging soils, vegetation, seeps, springs, streams and riparian areas, outcompeting native wildlife, and threatening sensitive biological species and cultural resources within wilderness. A "thriving ecological balance" would not be sustainable. Wilderness character, watershed function, and ecological processes would be degraded. Water quality would be diminished. Opportunities for quality primitive and unconfined recreational experiences would be lost. Wilderness character and values would not be preserved or protected. Over time, expanding populations of burros (overpopulation) would undermine wilderness by degrading wilderness character and values.

3.5.5 Mitigation

The Design features and operating measures in Section 2.1 would reduce and mitigate any potential impact to Wilderness, future Wilderness Study Areas, and Lands with Wilderness Characteristics.

3.6 Wildlife including T & E and Sensitive Species

3.8.1 Affected Environment

General:
The activity will take place in a large area with a variety of wildlife resources. This includes two federally listed species and many BLM Sensitive Species.

1. **Mammals:**

Approximately 80 species of mammals are known to exist within the subject area. Mule deer (*Odocoileus hemionus*) are generally seen in the pinyon-juniper habitat. As deer habitat quality declines, deer become more susceptible to disease and decreased reproduction rates.

There is potential for competition with burros and the BLM SS bighorn sheep (*Ovis canadensis nelsoni*) in respect to food, water, shade and living space. Overlap in the diets of burros and bighorn sheep has been documented by several researchers. Desert bighorn sheep often occur in steeper terrain in areas inhabited by wild burros. Sheep are found in the Panamint Range, the northern Argus Range and occasionally use the Slate Range as a movement corridor. Burros are often able to use the same water sources as bighorn sheep and there may be some dietary overlap. The depletion of range resources by feral equines, especially feral burros, is considered a causative factor in the decline of bighorn sheep (Phillips 1981). The desert bighorn sheep was reintroduced to the Argus Mountain Range in the Centennial HA and the Eagle Crags area of the Slate Range HA in the 1990s.

Mountain lions, bobcats and coyotes are the only large predators sighted in the HA's. Of these, the mountain lion, is the only animal capable of any kind of significant wild burro predation. Evidently, the number of wild burros

has not been effectively limited by mountain lion predation in the region. Other predators include weasels, kit foxes, grey foxes, spotted skunks, badgers and ringtail cats (Phillips 1981).

Small mammals, especially rodents are common throughout the area. It has been documented that intensive overgrazing by domestic and feral livestock disrupts natural rodent communities in desert ecosystems, causing reductions in both density and diversity of populations (Phillips 1982). Small mammals common in the area include jackrabbits, cottontail, woodrats (Neotoma spp.), mice (Peromyscus spp.), pocket mice (Perognathus spp.) and kangaroo rats (Dipodomys spp.). Some of the species are given special attention. The Mohave ground squirrel (*Spermophilus mohavensis*) is a State-listed Threatened species.

2. Birds:

There are approximately 226 bird species found in the HA's. The majority of these birds are associated with riparian habitats that provide food, water, cover and nesting habitats. Other BLM Sensitive Species found in the area are the golden eagles, burrowing owls, and Bendire's Thrashers.

The Inyo California towhee (*Melozone* (formerly *Pipilo) crissalis eremophilus*) is a Federally and State listed species and this bird has a substantial breeding population within the Great Falls Basin Area Critical of Environmental Concern. It prefers the limited riparian areas for nesting, using the protection of the dense willow thickets.

In 1980, the California Department of Fish and Game (CDFG) listed the Inyo California towhee (ICT) as an endangered species citing the following reasons: (1) small population size; (2) very restricted range; (3) a high potential for destruction of its habitat by feral burros (Equus asinus) and horses (Equus caballus). In 1987, the U.S. Fish and Wildlife Service followed suit and designated the ICT as threatened. A USFWS Recovery Plan was implemented in 1998, citing that feral burros and horses, which damage and destroy habitat through trampling and browsing of the vegetation, are major threats to the existence of Inyo California Towhees (USFWS, 1998). In the spring of 2011, BLM contracted with EREMICO Biological Services which conducted a ICT survey in the Argus Range and Panamint Range. It was noted that extensive burro damage within the Great Falls Basin, with large denuded areas and multiple trails and wallows, was occurring at several spring/riparian areas. If left unchecked, the feral burro population will likely increase, leading to habitat degradation and destruction within the range of the Inyo California Towhee (LaBerteaux, 2011).

3. Reptiles:

There are approximately 30 reptilian species located throughout the HA's. Representative species include the side-blotched lizard, zebra-tailed lizard, western whiptail, western fence lizard, desert iguana, chuckwalla, red racer, gopher snake, sidewinder and the Mohave rattlesnake (Phillips 1981).

The desert tortoise (*Gopherus agassizii*) is a state and federally protected reptile. Tortoise habitat is generally below 4,500 feet in elevation. The Slate Range HA has tortoise habitat located within the area of the proposed action. The boundaries of tortoise habitat in this area are shown in figure 5. Tortoise burrows are crucial for the survival of the tortoise. The burrow provides protection from summer and winter weather extremes and from predators. Burrows are normally found under bushes, overhanging soil or rock formations, or in the open. Tortoises are generally active between March and June, and to a lesser extent in late summer / early fall. Tortoises are herbivorous, feeding mostly on annual forbs and grasses.

4. Amphibians:

The scarcity of amphibians reflects the scarcity of water resources. Protection of these resources is essential for the survival of the native amphibians. Representative species include the western toad, red-spotted toad and western spadefoot toad.

3.3.2 Impacts of Alternative 1 (Proposed Action)

Historically high burro numbers have impacted the recovery of the Inyo CA towhee. This Burro removal activity is proposed in the Recovery Plan for this species as well as in the Center for Biological Diversity lawsuit settlement. The activity will strive to take place away from nesting areas, and outside the most sensitive breeding season.

The activity also takes place in the northern portion of the range of the desert tortoise, but the "Wildlife Protection Measures" will be followed and therefore neither action alternative is likely to adversely affect the species.

There would be little direct impact to bighorn sheep from the use of helicopters. Helicopters would generally be working the burros down washes and over flatlands while the bighorns would be in the higher, more rugged terrain. The removal will have a highly beneficial impact on the bighorn sheep. The reduced numbers of wild burros will allow the vegetative community to remain productive, providing the important forage plants required by sheep. Springs important to bighorn sheep will remain available to sheep with reduced impacts from the burros.

There will be no long-term adverse impacts to wildlife in general. There may be transient impacts to individuals disturbed by gather activities, caused by human presence and the noise from the helicopter.

The long-term benefits to wildlife, including Sensitive and Special Status Species would be: 1) decreased competition for water, forage and cover; 2 promotion of survival potential of sensitive species due to long-term improvements in habitat conditions; 3) long-term improvement and stabilization of riparian environments; and 4) improvement in water quality for aquatic habitats. 5) animals that depend on the riparian vegetation, such as the Inyo California towhee for nesting habitat will have less disturbance to compete with.

3.3.3 Impacts of Alternative 2

Impacts to wildlife will be same as the proposed action for those areas outside wilderness. The wildlife in wilderness areas will not have the noise from the helicopter to disrupt their activity. However, the ability to remove wild burros will not be as efficient or efficacious, with the potential of not removing wild burros that would have been removed under the proposed action. The full benefits to the wildlife program will not be achieved.

3.3.3 Impacts of No Action Alternative

The No Action Alternative is not in line with the Inyo CA Towhee Recovery plan (1998) for this species, which lists removal or control of Burros in the Argus Range as a necessary management action. Furthermore, resource degradation is occuring within riparian areas in the Argus Range, of which 11 are deemed Critical habitat in that Recovery Plan. The plan listed feral Burro Impacts to habitat as the first reason for the listing of the towhee. In addition, the No Action Alternative is not in line with the Recovery Plan of the Mojave Population of desert tortoise (2011). In the WEMO (2006) tortoise threat analysis, 22 impacts were listed that may affect tortoises, including Wild Horses and Burros (Boarman, 2002).

Overcrowding these areas would occur and will degrade the site and cause declines in populations of wildlife species. Bighorn Sheep, burrowing owls, and Mohave ground squirrels are just a few examples of sensitive species that would be negatively affected. As habitat and forage decreases, there would be a potential for declines in desert tortoise and Inyo California towhee populations and eventual damages to the overall ecosystem.

3.3.5 Mitigation

Informal consultation occurred with the U.S. Fish and Wildlife Service (3/12/2010 and again on 2/23/2021) for the Inyo California towhee and the desert tortoise, with concurrence of May Affect, Not likely to Adversely Affect in relation to the proposed action. Stipulations from that concurrence and additional protective measures are found in the Proposed Action in Sec. 2.1 under Design Features.

3.8 Wild Burros

3.8.1 Affected Environment

Wild Burro (*Equus asinus*):
Wild burros (Equus asinus) was first introduced into the Desert Southwest by Spaniards in the 1500s. Small donkeys, or burros, played a major role as pack animals in opening up the western United States. These pack animals were prized for their hardiness in arid country. They are sure-footed, can locate food in barren terrain, can exploit poor quality forage and can carry heavy burdens for days through hot, dry environments. With the discovery of more gold and silver in the 1800's, miners brought more burros with them. These prospectors relied heavily on burros as they trekked long distances across the deserts in search of gold and silver. Many of these burros survived, even though their owners perished under the harsh desert conditions. Many more burros escaped or were released during the settlement of the West. Because of their hardiness, Wild Burros have thrived throughout the North American deserts. They have relatively high reproductive rates and a low incidence of disease. There are few natural predators to check the growth of wild burro populations.

Wild burros do not form breeding bands. There are no strong individual bonds other than jenny-foal relationships. Wild burros present themselves as single animals, all-male groups, all-female groups, jenny-foal groups, or mixed groups. All of the groups are variable and their composition may change at any time. This loose social structure, where all animals are potential breeding partners, maximizes genetic diversity in small or dispersed burro populations.

Some of the older jacks establish a breeding territory but do not prevent other males from entering this area unless there is an estrous female present. It is common for males to roam freely throughout their habitat and breed upon encountering an estrous female. Large male groups may form in the vicinity of an estrous female, and it is normal for the jenny to have multiple breeding partners.

In dispersed populations in a desert environment, breeding efficiency increases as the population densities increase. As daily temperatures increase and water availability decreases, more and more animals will gather around the remaining available water sources. These areas become important areas for maximizing breeding

efficiency. This temporary or seasonal increase in population density increases the chance for males to encounter estrous females. Thus, although breeding occurs year-round, increased breeding and foaling may occur during this period of time.

Over time they multiplied to the point that they were out-competing native wildlife. Uncontrolled population of burros exhibited adverse impacts upon soils, native plant communities, water and cultural resources.
Burros are a medium-sized ungulate, characterized by their large head, long ears, a lean, straight-backed, lack of a true withers, a coarse mane, a course slender tail and reach a height of up to 13 hands (1 hand = 4 inches) at the shoulders. Originally from Africa (where they were also called the wild ass) these animals are prized as domestic pack animals for their hardiness in arid country. Genetic analysis conducted by the University of Kentucky (Cothran 2002) identified burros from these areas as genetically similar to the Poitou donkey, a French breed developed for producing large mules. Such a similarity may be historically related to the mining activity that took place in these areas. Many of the burros from these HAs look similar to the Somali and African wild ass with other looking resemblance to the Poitou breed. In the Centennial, Slate Range and Panamint HAs, the burros may be typically grey, reddish brown (pink) and dark brown, but the most common color is grey. Most have a noticeable dark dorsal stripe from mane to tail, and a dark stripe across their shoulders.

Wild burros can use a variety of terrain including flat areas as well as the steep, rugged terrain usually associated with desert bighorn sheep. They have a reputation for considerable toughness and endurance, and are well adapted to survive in arid desert climates.. Across the desert southwest, mountain lions are thought to be the only predator that predates on wild burros with any frequency, but that frequency is thought to be low (reviewed in Douglas and Hurst 1993). The frequency of predation by lions has apparently not prevented the burro herd from continuing to grow within these HAs. Coyotes are not prone to prey on wild burros unless young, or extremely weak. No information exists to suggest that disease would substantially reduce burro herd growth rates now or in the future for burro populations in these HAs.

A 14% annual growth is being used for burro population growth rate projections in these, HAs based on the animals counted in the FY 2015 population survey to the results of the 2020 population estimates. For many other BLM-managed burro herds, BLM considers an annual growth rate of 15% is a reasonable expectation. This rate reflects the addition of new animals to the herd (i.e., births and immigrants) as well as mortalities and emigrants. Ransom et al. (2016) found an average growth rate of 19% for feral burro herds considered in their review of equine demography.

Similar to horses (Henneky Body Condition Scoring System), body condition scoring of donkeys can be done on a scale from 1-9 point scale; 1 being poor condition (animal markedly emaciated), 9 being extremely fat, and 5 being moderate (ideal weight). Body Condition Scores (BCS) vary within the HAs depending on annual precipitation and amount of forage production. Typically the burros from the HAs range in BCS of 3-6, with scores of 4-5 being the most common.

A burro is either a male (jack) or female donkey (jennie). A newborn is called a foal, up to the time of weaning (~6 months), at which point it may be called a weanling. During aerial surveys, it is not usually possible to differentiate yearlings from adults.
Lifespan: 13 – 20 years in the wild; 25 – 30 years in domestication
Gestation period: Female: 11 months (typical) – 14 months
Mass: 180 lbs (weanling) – 500 lbs (Adult)
Height: 2.6 – 5.2 ft. (Adult, at the withers)

Speed: Up to 15 -20 mph.
Animal Unit Month: 0.7 – The amount of forage (dry weight) an adult burro would consume a month is ~700 lbs.

The Centennial Herd Area was designated in part for a HMA for wild horses with an AML of 168 horses. The population estimate from the June, 2020 wild horse and burro survey is 763 horses (final report pending). The majority of the HMA and most of the wild horse population resides within the NAWSCL North Range complex and west of the Argus Mountain Range. The majority of the burro population resides on the eastern side of the Argus Mountain Range and north to the town of Darwin which rarely intermixes with the wild horses (See Map 6, Appendix B). There are burros on the western side of the Argus Mountain Range which are more likely to mix in with a group of horses.

Gather History:
The Centennial HA was last gathered in January 2016. At that time, 3 wild burros were gathered and removed. The Slate Range HA was last gathered in February 2016. At that time 64 burros were gathered and removed. The Panamint HA was last gathered in September 2009. At that time 42 burros were gathered and removed (see table 6 below).

Table 6: Gather History

Fiscal Year	Centennial HA Burro Removals	Slate Rang HA Burro Removals	Panamint HA Burro Removals
1980	-	-	-
1981	400	399	793
1982	1,565	1,824	326
1983	868	800	603
1984	572	350	151
1985	319	96	55
1986	216	16	11
1987	234	232	295
1988	234	221	85
1989	42	185	46
1990	33	129	-
1991	29	53	-
1992	93	40	-
1993	120	-	63
1994	96	-	4
1995	185 (73 w/in ICTCH)*	4	43
1996	-	45	-
1997	14 (14 w/in ICTCH)	31	-
1998	19 (19 w/in ICTCH)	21	-
1999	68 (23 w/in ICTCH)	11	94
2000	174 (44 w/in ICTCH)	31	90

2001	220 (55 w/in ICTCH)	26	-
2002	-	-	94 **
2003	73 (11 w/in ICTCH)	-	20
2004	77 (7 w/in ICTCH)	-	
2005	94 (63 w/in ICTCH)	86	7
2006	15 (15 w/in ICTCH)	49	--
2007	8 (8 w/in ICTCH)	-	-
2008	4 (4 w/in ICTCH)	37	-
2009	8 (6 w/in ICTCH)	58	42
2010	64 (64 w/in ICTCH)	-	-
2011	-	106	-
2012	67 (40 w/in ICTCH)	82	-
2013	-	-	-
2014	5	-	-
2015	17 (17 w/in ICTCH)	-	-
2016	3	64	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
TOTAL	5,933	4,996	2,822

ICTCH =Inyo CA Towhee Critical Habitat

Impacts Common to Action Alternatives (1-2)

Over the past 35 years, various impacts to wild burros as a result of gather activities have been observed. Under the Proposed Action, impacts would occur to both individual burros and the population as a whole.

The BLM has been conducting wild burro gathers since the mid-1970s. During this time, methods and procedures have been identified and refined to minimize stress and impacts to wild burros during gather implementation. The CAWP and SOPs in Appendix A would be implemented to ensure a safe and humane gather occurs and would minimize potential stress and injury to wild burros.

In any given gather, gather-related mortality averages only about one half of one percent (0.5%), which is very low when handling wild animals (Scasta 2019). Approximately, another six-tenths of one percent (0.6%) of the captured animals could be humanely euthanized due to pre-existing conditions and in accordance with BLM policy (GAO 2008). These data affirm that the use of helicopters and motorized vehicles has proven to be a safe, humane, effective, and practical means for the gather and removal of excess wild burros from the public lands.

Individual, direct impacts to wild burros include the handling stress associated with the roundup, capture, sorting, handling, and transportation of the animals. The intensity of these impacts varies by individual, and is indicated by behaviors ranging from slight nervous agitation to physical distress. When being herded to trap site corrals by the helicopter, injuries sustained by wild burros may include bruises, scrapes, or cuts to feet, legs, face, or body

from rocks, brush or tree limbs. Rarely, wild burros will encounter barbed wire fences and will receive wire cuts. These injuries are very rarely fatal and are treated on-site until a veterinarian can examine the animal and determine if additional treatment is indicated. During the roping process the burros have the possibility of tripping and falling when roped, and the process of being led into the holding pen. Water/Bait trapping removes the stress of the animals being herded, but the same physical distress factors are displayed when the animals are trapped in the capture pen.

When burros are being gathered within the Centennial HA on the western side of the Argus Mountain Range, the burros are more likely to be in the same areas as horses. During the wild horse foaling season from March 1 through June 30, no burros would be attempted to be removed utilizing helicopter assisted gather methods from the designated HMA. All burro removal activity would occur to the east of the HMA and down in the lower elevations where the wild horses typically are not found. If by chance horses are encountered, the pilot would fly away as best to avoid them. If a burro is seen in with a group of horses, the pilot will not try to break the burro(s) form the group. When burros are located with a group of horses outside the foaling season, the pilot would try to separate the burro(s) from the group. If initial attempts fail, the burros would be left behind. The only time burros would be gathered with a group of horses is if an authorized wild horse gather was occurring. The stress on the horses if the helicopter is trying to separate the burros form the herd would be to take flight and run away from the helicopter. The burro(s) may take flight with the horses. Burros are typically not as fast and when they fall behind the group would be when the helicopter would then try to cut off the burro(s) from the horses. The stress associated with this event would be short term for the horses and as described above for the burros.

Other injuries may occur after a burro has been captured and is either within the trap site corral, the temporary holding corral, during transport between facilities, or during sorting and handling. Occasionally, burros may sustain a spinal injury or a fractured limb but based on prior gather statistics, serious injuries requiring humane euthanasia occur in less than 1 burro per every 100 captured (Scasta 2019). Similar injuries could be sustained if wild burros were captured through bait and/or water trapping, as the animals still need to be sorted, aged, transported, and otherwise handled following their capture. These injuries may result from kicks and bites, or from collisions with corral panels or gates.

To minimize the potential for injuries from fighting, the animals are transported from the trap site to the temporary (or short-term) holding facility where they are sorted as quickly and safely as possible, then moved into large holding pens where they are provided with hay and water. On many gathers, no wild burros are injured or die. Burros typically calm down quickly after the helicopter drive trap method or roping method is completed. Overall, direct gather-related mortality averages less than 1%.

Indirect individual impacts are those which occur to individual wild burros after the initial event. These may include miscarriages in jennies, increased social displacement, and conflict in jacks. These impacts, like direct individual impacts, are known to occur intermittently during wild burro gather operations. An example of an indirect individual impact would be the brief 1-2 minute skirmish between older jacks which ends when one jack retreats. Injuries typically involve a bite or kick with bruises which do not break the skin. Like direct individual impacts, the frequency of these impacts varies with the population and the individual. Observations following capture indicate the rate of miscarriage varies, but can occur in about 1 to 5% of the captured jennies, particularly if the jenny is in very thin body condition or in poor health.

The most important social groups for burros are mother-foal pairs. More transient burro social groups may be split when female burros and their foals are separated from males with whom they were temporarily associating.

Regarding separating burros from temporary social groups, Boyd et al. (2016) wrote that there are "…no permanent or long-lasting bonds between any two individuals other than between an adult female and her current foal." Mothers would not be separated from their attendant foal once captured, unless for the welfare of the foal and would be reunited with the jenny at the holding facility. Stress on the males and/or the mother/foal pairs is expected to be minor and temporary.

Sometimes, foals are gathered that were orphaned on the range (prior to the gather) because the mother rejected it or died, or for other unknown reasons. These foals are usually in poor, unthrifty condition. Also depending on the time of year, reproductive cycle and the individual female, the foal may have already been weaned by its mother. A few foals may be orphaned during gathers. This may occur due to:

- The jenny rejects the foal. This occurs most often with young mothers or very young foals,
- The foal and mother become separated during trapping, and cannot be matched,
- The jenny dies or must be humanely euthanized during the gather,
- The foal is ill, weak, or needs immediate special care that requires removal from the mother, or
- The mother does not produce enough milk to support the foal.

Every effort is made to provide appropriate care to orphan foals. Veterinarians may administer electrolyte solutions or orphan foals may be fed milk replacer as needed to support their nutritional needs. Orphan foals may be placed in a foster home in order to receive additional care. Despite these efforts, some orphan foals may die or be humanely euthanized as an act of mercy if the prognosis for survival is very poor.

In private industry, domestic burros are normally weaned between four and six months of age. If a foal less than 4 months old is orphaned for some reason, BLM would immediately place the burro into foster care followed up with adoption.

Gathering wild burros during the summer months can potentially cause heat stress. Heat stress does not occur often, but if it does, death can result. Since summer gathers pose increased risk of heat stress, contractors use techniques that minimize heat stress, such as conducting gather activities in the early morning, when temperatures are coolest, and stopping well before the hottest period of the day. The helicopter pilot also brings in the burros at an easy pace. If there are extreme heat conditions, gather activities are suspended during that time. The CAWP prohibits gathering wild burros with a helicopter (unless under emergency conditions) in temperatures over 105 degrees Fahrenheit. Most temperature related issues during a gather can be mitigated by adjusting daily gather times to avoid the extreme hot periods of the day. Gathering wild burros during the fall/winter months reduces risk of heat stress, although this can occur during any gather, especially in older or weaker animals. As a result of adherence to SOPs and care taken during summer gathers, potential risks to wild burros associated with summer gathers can be minimized or eliminated.

Gathering wild burros during the winter may result in less stress as the cold and snow does not affect wild burros to the degree that heat and dust might during a summer gather. In the winter months when snow is in the higher elevations, burros are often located in lower elevations. Due to the cool weather and possible fall / winter germination of annuals, and collection of rainwater runoff, burros are less dependent on perennial water sources and are more dispersed, and sometimes harder to find in the HAs. This typically makes the burros scattered and requires more trapping locations and increases the helicopter roping method of capture. However, due to the cooler weather, burros can be herded longer distances to drive traps, but takes a little longer. The short hours of the day during winter, may increase the number of the days to capture the same number of burros in the summer, when they are more likely to be concentrated near perennial waters. While deep snow is rare in the west Mojave,

it can be present and can tire burros as they are moved to the trap. The helicopter pilot would allow the burros to travel slowly at their own pace. Trails in the snow are often followed to make it easier for burros to travel to the trap site. On occasion, trails can be plowed in the snow to facilitate the safe and humane movement of burros to a trap.

Wild burros may be able to travel farther and over terrain that is more difficult during the winter, even if snow does not cover the ground. Water requirements are lower during the winter months, making distress from heat exhaustion extremely rare. By comparison, during summer gathers, wild burros may travel long distances between water and forage and become more easily dehydrated.

Through the capture and sorting process, wild burros are examined for health, injury and other defects. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy. BLM Euthanasia Policy IM-2015-070 is used as a guide to determine if animals meet the criteria and should be euthanized (refer to SOPs, Appendix A). Animals that are euthanized for non-gather related reasons include those with old injuries (broken or deformed limbs) that cause lameness or prevent the animal from being able to maintain an acceptable body condition (greater than or equal to BCS 3); old animals that have serious dental abnormalities or severely worn teeth and are not expected to maintain an acceptable body condition, and wild burros that have serious physical defects such as club feet, severe limb deformities, or sway back. Some of these conditions have a causal genetic component and the animals should not be returned to the range to prevent suffering, as well as to avoid amplifying the incidence of the problem in the population.

Direct impacts to burros that are not gathered would consist primarily of temporary disturbance and displacement of burros moving into another area in response to human activities associated with the gather. Typically, the natural survival instinct of wild animals to this type of disturbance is to avoid the perceived danger. These impacts would be minimal, temporary, and of short duration. As a result of lower density of wild burros across the HAs following the removal of excess burros, competition for resources would be reduced among any burros that remain. Because there would be lower levels of competition for forage resources, burros that remain on the HAs would have relatively more access to preferred, quality habitat. Confrontations between jacks may also become less frequent, as would fighting among wild burros at water sources. Improving the overall health and fitness of wild burros could also increase foaling rates and foaling survival rates, compared to those rates under the current conditions. Injuries and death to all age classes of animals would be expected to be reduced as competition for limited forage and water resources would be decreased.

Transport, Off-Range Corral, and Adoption (or Sale) Preparation

All wild burros selected for removal from the range are transported to the receiving off-range corral facility in a straight deck semi-trailers or goose-neck stock trailers. Vehicles are inspected by the BLM COR or PI prior to use to ensure wild burros can be safely transported and that the interior of the vehicle is in a sanitary condition. Wild burros are segregated by age and sex and loaded into separate compartments. A small number of jennies may be shipped with foals. Transportation of recently captured wild burros is limited to a maximum of 10 hours. It is expected that transportation of burros from gather sites to the Off-Range Corral would range from 1 to 4 hours. The burros will be loaded accordingly to the CAWP standards. During transport, potential impacts to individual burros can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. The driver of the stock trailer will be responsible to check the stock trailer periodically to ensure no animals have fallen, and if a fallen burro is found, that attempts will be made to get him/her up.

Upon arrival at the off-range corral facility, the number of team members to handle the animals shall be limited to

essential personnel to alleviate stress on the animals. Captured wild burros are off-loaded by compartment, counted and observed. Handling of the animals would be kept to a minimum in order to avoid traumatizing the animals any more than necessary. The first consideration after unloading will be to determine which animals, if any, need special attention for injuries, illnesses or any other problems requiring prompt attention. A veterinarian will observe the unloaded animals and provide recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild burros. The jacks will be separated from the pairs and jennies and placed in holding pens where they are fed good quality hay and water. Most wild burros begin to eat and drink immediately and adjust rapidly to their new situation. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club feet, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association (AVMA). Wild burros in very thin condition or animals with injuries are sorted and placed in hospital pens, fed separately and/or treated for their injuries as indicated. Recently captured wild burros, generally jennies, in very thin condition may have difficulty transitioning to feed. Some of these animals are in such poor condition that it is unlikely they would have survived if left on the range. Similarly, some jennies may lose their pregnancies. Every effort is taken to help the jenny make a quiet, low stress transition to captivity and domestic feed to minimize the risk of miscarriage or death.

After recently captured wild burros have transitioned to their new environment, they are prepared for adoption or sale. Preparation involves freeze-marking the animals with a unique identification number, drawing a blood sample to test for equine infections anemia, vaccination against common diseases, microchipping, castration of jacks, and de-worming. During the preparation process, potential impacts to wild burros are similar to those that can occur during handling and transportation. Serious injuries and deaths from injuries during the preparation process are rare, but can occur.

At off-range corral facilities, a minimum of 700 square feet is provided per animal. Mortality at off-range corral facilities averages approximately 5% per year (GAO 2008; Page 51), and includes animals euthanized due to a pre-existing condition; animals in extremely poor condition; animals that are injured and would not recover; animals which are unable to transition to feed; and animals which are seriously injured or accidentally die during sorting, handling, or preparation.

From there, they would be made available for adoption or sale to qualified individuals.

Adoption or Sale with Limitations

Adoption applicants are required to have at least a 400 square foot corral with panels that are at least 4.5 feet tall for burros. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the burro for one year and the burro and the facilities are inspected to assure the adopter is complying with the BLM's requirements. After one year, the adopter may take title to the burro, at which point the burro becomes the property of the adopter. Adoptions are conducted in accordance with 43 CFR 4750.

Potential buyers must fill out an application and be pre-approved before they may buy a wild burro. A sale-eligible wild burro is any animal that is more than 10 years old; or has been offered unsuccessfully for adoption three times. The application also specifies that all buyers are not to re-sell the animal to slaughter buyers or anyone who would sell the animal to a commercial processing plant. Sales of wild burros are conducted in accordance with IM 2019-026.

Euthanasia and Sale without Limitation
While humane euthanasia and sale without limitation of healthy burros for which there is no adoption demand is authorized under the WFRHBA, Congress prohibited the use of appropriated funds for euthanasia. Whether a similar limitation will continue in the future will be determined by Congress.

3.8.2 Impacts of Alternative 1 (Proposed Action)
Impacts to wild burros in the subject lands would be reduction of burro populations in the HAs moving towards the complete removal of burros. Due to the rugged mountainous terrain within the HAs, the ability to remove all burros under the helicopter removal methods would be difficult to achieve without multiple gathers, but would reduce the burro populations where their impacts to sensitive resource values would be reduced and eventually eliminated if all excess burros are captured. Burros removed will be placed into the BLM's National Wild Horse and Burro Adoption and Sale Program. Burros removed by helicopter assisted gathers may experience some physical strain due to the distance animals travel, age and condition of animals, terrain, physical barriers, weather and if roped, the process of being led into the holding pen. However, as noted by Scasta (2019), the BLM has a recent history of incurring very low levels of capture-related mortality, especially when compared to capture operations in other large animal species.

Burros would be transported to the BLM's Ridgecrest Wild Horse and Burro Holding and Adoption Facility. They are vaccinated, wormed, freeze branded, microchipped, tested for Equine Infectious Anemia and given any medical treatment needed prior to being placed up for adoption to the public, which typically takes 3 to 4 months. Burros removed from their natural environment adjust well to domestication. Adopted and purchased burros are often used as pack animals, riding, pulling carts or wagons, guard animals for livestock, and as pets.

The analysis in the Impacts Common to Action Alternatives adequately addresses impacts to the burros welfare which will be given the highest priority and the reduction in population of burros would result of lower density of wild burros across the HAs following the removal of excess burros, competition for resources would be reduced, promote healthier animals and possibly increasing the recruitment rate.

3.8.3 Impacts of Alternative 2
The difficulty in locating burros in the rugged mountainous terrain, and then herding the wild burros to trap site from wilderness areas will greatly reduce the number of burros that can be captured, increasing the cost per animal captured and would allow for some continuing impacts and conflicts resulting from burro presence.

Operational:

The burros are located and driven into the trap by riders on horseback. The success of this method depends on many factors including, terrain, the nature of the burros being gathered, the distance the animals are driven, the number of riders on the drive, and the skill of the riders. The risk of injury to the rider and the saddle horse is high and the stress to which a rider must expose his mount is high, especially on steep, rugged terrain where the agility of the burro(s) can outmaneuver the herding attempt. This method would require more time for gathering and the costs would be greater than under the Proposed Action. It would possibly increase the stress of the burros being gathered and hazed and more chances of jennies and foals being separated.

Public Law 94-579 known as the "Federal Land Policy Management Act," Section 404 provides for the gathering of wild burros using the helicopter because it;

1) Provides safety for saddle horse and rider.

2) Increases capability to locate and herd burros to trap sites.
3) Increases distance and ease that animals could be herded.
4) Decreases cost per animal.

3.8.4 Impacts of No Action Alternative

Under the No Action Alternative, there would be no active management to control the population size within the established AML at this time. In the absence of a gather, wild burro populations would continue to grow at an average rate of 14% per year. Without a gather and removal now, the population could grow to in five years time based on the average annual growth rate to approximately 762 burros in the Centennial HA, 785 burros in the Slate Range HA and 260 burros in the Panamint HA.

Competition between wildlife and wild burros for limited forage and water resources would continue, and worsen. Damage to rangeland resources would continue or increase. Over time, the potential risks to the health of individual burros would increase, and the need for emergency removals to prevent their death from starvation or thirst would also increase. The animals would be competing with each other for the limited resources, increasing the risk of massive die offs. Allowing wild burros to die of dehydration or starvation would be inhumane and would be contrary to the WFRHBA which requires that excess wild burros be immediately removed. Allowing rangeland damage to continue to result from wild burro overpopulation would also be contrary to the WFRHBA which requires the BLM to protect the range from the deterioration associated with overpopulation and to implement the land use plan decisions towards their management.

3.8.5 Mitigation

The design features and operating measures in Section 2.1 and Appendix A, especially measures regarding Horses and foaling season, with reduce impacts and mitigate potential negative effects to horses and burros.

4.0 List of Preparers

The following list identifies the interdisciplinary team member's area of responsibility:

Name	Title	Resource Area
Alex Neibergs	Rangeland Management Specialist-Wild Horse and Burro Project Lead	Air Quality, WH&B, Greenhouse Gas Emissions, Invasive Species and Noxious Weeds
Blair Street	Rangeland Management Specialist-	Rangeland Management Standards and Guidelines, Livestock Grazing, Soils
Caroline Woods	Planning and Environmental Coordinator	NEPA adequacy, ACEC, socio-economics,
Donald J. Storm	Archeologist	Archeology, Paleontology, Cultural Resources, Native American Religious Concerns
Clint Helms	Wildlife Biologist	Wildlife, Threatened/Endangered Species, Vegetation, Water,
Priscilla Watson-Wynn	Contractor- Biology	Vegetation
Martha Dickies	Outdoor Recreation Specialist-Wilderness Coordinator	Wilderness, Visual Resources, Areas with Wilderness Characteristics
Thomas Bickauskas	Associate Field Manager	Recreation

5.0 Consultation, Coordination and Public Involvement

Public scoping efforts, included the NOPA (See Sec. 1.5). This EA will be published for public comment on the BLM Environmental Documents and Land Use Plans website located at: www.eplanning.blm.gov for 30 days. Consultation occurred with U.S. Fish and Wildlife Service (U.S.F&WS), on November 10, 2010 and again 2021 with a no-affect with respect to the Inyo California towhee and Desert Tortoise. Informal coordination occurred with National Park Service (Death Valley National Park) on creating the gather plan.

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7.0 Appendices

Appendix A– CAWP and Standard Operating Procedures (Gather Operation)
Appendix B- MAPS
Appendix C- Applicable CMA Table
Appendix D – MINIMUM REQUIREMENTS DECISION GUIDE (MRDG)
Appendix E- Great Falls Basin Wilderness Springs Data
Appendix F- Spill Plan