

**Biological Assessment
of
Threatened, Endangered, and Proposed Species
for the
Motorized Travel Plan Project
Preferred Alternative with Modifications**

Dixie National Forest

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I. Introduction

This Biological Assessment (BA) analyzes the potential effects of the proposed **Motorized Travel Plan Preferred Alternative with Modifications (PAWM)** project on species listed as threatened, endangered, or proposed under the Endangered Species Act (ESA), and determines whether the likely effects on these species necessitates a formal consultation or conference with the U.S. Fish and Wildlife Service.

The objectives of this Biological Assessment (BA) include:

- 1) Ensure that Forest Service actions do not result in the loss of persistence of any native or desired non-native plant or animal species, or create significant trends toward Federal listing of any species.
- 2) Comply with the Endangered Species Act (ESA) requirement that actions of Federal agencies not jeopardize or adversely modify critical habitat of Federally listed species.
- 3) Provide a process and standard that ensures that threatened, endangered, and proposed species receive full consideration in the decision making process (FSM 2670.11 to 2671.45f).
- 4) Maintain documentation on actions regulated under the “Environmental Policy and Procedures Handbook” FSH 1909.15 chapter 40 (Environmental Assessments and Related Documents).

Table 1 shows the Federally listed species that may occur or have suitable habitat on the Dixie National Forest. Specific information regarding life histories and habitat requirements for species listed in Table 1 can be found on file at the Dixie Supervisor’s Office, Cedar City, Utah (Rodriguez 2008).

Table 1. Species listed as Threatened (T) or Endangered (E) under the Endangered Species Act (ESA) that may occur or have suitable habitat on the Dixie National Forest, and their occurrence in or near the proposed Motorized Travel Plan project area.

Species	Habitat suitability or known occurrences of listed species in or near the project area	Species to be analyzed further? (Yes or No)*
California Condor (E) <i>Gymnogyps californianus</i>	Suitable habitat of rugged canyons, gorges, and forested mountains mainly between 985 and 8860 feet is present within the project area.	Yes
Mexican Spotted Owl (T) <i>Strix occidentalis lucida</i>	Suitable breeding habitat is available for this species within the project area.	Yes
Mojave Desert Tortoise (T) <i>Gopherus agassizii</i>	Upon field verification on 11-5-2008, suitable habitat is not available within the project area.	No
Utah Prairie Dog (T) <i>Cynomys parvidens</i>	Deep/sandy soil habitat suitable for Utah prairie dogs is available within the proposed project area.	Yes
Virgin River Chub (E) <i>Gila seminuda</i>	Known only to occur in the Virgin River mainstem from Pah Tempe Springs, Utah, downstream to the Mesquite Diversion near the Arizona-Nevada border. No known populations on the Dixie National Forest (65 FR 4140 4156).	No
Woundfin (E) <i>Plagopterus argentissimus</i>	Known only to occur in the Virgin River mainstem from Pah Tempe Springs, Utah, downstream to Lake Mead. There are no known populations of woundfin on the Dixie National Forest (65 FR 4140 4156).	No

*Yes – The proposed project’s potential effects on these species will be further analyzed in this document.

*No – No further analysis is necessary, and a determination of “No Effect” is rendered.

II. Consultation to Date

The U.S. Fish and Wildlife Service (FWS) was provided a list of Threatened, Endangered, and Proposed species by Ranger District that may occur on the Dixie National Forest on April 1, 2008. The FWS concurred with this list on April 2, 2008 (Table 2).

Table 2. Threatened, Endangered, and Proposed Species that may occur on the Dixie National Forest.

Common Name	Ranger Districts¹
California Condor (Endangered)	D1, D2, D3, D4, D5
Mexican Spotted Owl (Threatened)	D1, D2, D3, D4, D5
Mojave Desert Tortoise (Threatened)	D1
Utah Prairie Dog (Threatened)	D2, D3, D4, D5
Virgin River Chub (Endangered)	D1*
Woundfin (Endangered)	D1*

¹ D1 = Pine Valley Ranger District; D2 = Cedar City Ranger District; D3 = Powell Ranger District; D4 = Escalante Ranger District; D5 = Teasdale Ranger District

*None known to occur on the Dixie NF. Downstream effects would be the only discussion if potential effects were possible.

The FWS stated that for those species that do not occur or have suitable habitat on a specific Ranger District, a programmatic "No Effect" determination would be made. Therefore, a "No Effect" determination has been made and concurrence received for the Mojave Desert tortoise, Virgin River Chub, and Woundfin.

Critical habitat has been designated on the Dixie National Forest for the Mexican spotted owl, but no other threatened or endangered species.

On February 3, 2009, Forest Service staff met with FWS staff to discuss the section 7 consultation for the proposed MTP project. The purpose of the meeting was to discuss the intent of the MTP as well as the timeline for consultation.

On February 10, 2009, the Forest Service sent a letter to FWS requesting initiation of informal consultation for Mexican spotted owl, Utah prairie dog, and California condor.

On February 11, 2009, the FWS concurred with our findings.

Since the concurrence was provided, further discussion between our offices revealed that informal consultation should be reinitiated. On February 23, 2009, the Forest Service sent a letter to the FWS requesting initiation of section 7 consultation.

On March 5 and 6, 2009, Forest Service staff met with FWS staff to refine and clarify points within the BA.

III. Current Management Direction

Current policy is stated in the Forest Service Manual (FSM 2670.3) and includes:

- 1) Review actions carried out by the Forest Service to determine their potential effect on threatened, endangered, and proposed species.
- 2) Avoid actions that adversely affect listed species whenever possible.

- 3) Initiate consultation with the FWS when the Forest Service determines that a proposed activity may affect threatened, endangered, or proposed species or designated critical habitat.
- 4) Identify measures to prevent adverse modification of designated critical habitat or other habitats essential for the conservation of endangered, threatened, and proposed species.

Management direction specified by the Dixie National Forest Land and Resource Management Plan is to manage habitat for Federally listed species to maintain or enhance their listing status under the ESA by direct habitat improvement and agency cooperation. Objectives include managing habitats for the recovery of species listed under the Endangered Species Act (USDAFS 1986).

IV. Description of the Proposed Project

The **Dixie National Forest (DNF)** proposes to designate a system of authorized roads, trails, and/or areas for motor vehicle use to provide legal access and improve recreation management and enforcement related to motor vehicle use. Part of the proposed action will close, decommission, and administratively close roads and trails in order to better protect natural resources. The purpose and need is in accordance with 36 CFR Parts 212, 251, 261 (which also incorporates Executive Orders 11644 and 11989), and 295 Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule. This Assessment addresses the effects of selection of the Preferred Alternative with Modifications (PAWM). The PAWM was developed as a result of internal and external comments after the release of the DEIS in June of 2008.

Activity: The proposed Action is to designate a motorized travel system that addresses the following four components:

1. Cross-country travel.
 - a. Prohibition of motorized cross-country travel (travel off designated roads or trails) except as specified for permitted uses (e.g., firewood gathering, allotment maintenance), emergency fire suppression, search and rescue activities, law enforcement activities, military operations, and Forest Service administrative uses and purposes.
2. Designation of authorized National Forest system Roads and motorized trails.
 - a. Closure of currently authorized routes that will not be designated for motorized use and will therefore be removed from the National Forest System of roads and motorized trails. All routes removed from the system will be decommissioned.
 - b. Designation of unauthorized routes that will be added to the National Forest System of roads and trails, thereby becoming authorized routes.
3. Designation of authorized uses of National Forest System roads and motorized trails.
 - a. Designation of routes that will be open to all uses,

- b. Designation of routes needed to accommodate administrative activities and permitted uses.
 - c. Designation of routes needed for access to private lands, rights-of-way, easements, and other jurisdictions.
 - d. Designations of routes with seasonal restrictions or routes that only allow certain types of vehicles.
4. Construction or relocation of designated Nation Forest System roads and motorized trails.
- a. Construction or relocation of routes to improve the transportation system or to respond to evaluation findings.

General Method of Analysis-Road Impacts on Habitat Availability:

For this analysis, miles of open motorized route within known and modeled habitat were quantified for each alternative. Road classifications are as follows:

- Previous Decision: Pursuant to 36 CFR 212.50 of the Travel Rule, 22 previous and pending decisions that allow, restrict, or prohibit motor vehicle use on National Forest System roads, trails, or areas have been incorporated as previously designated into this travel planning project (See FEIS Table 2-6 for a list of these decisions). Routes affected under previous decisions will not be analyzed for this project. They are included in the tables to demonstrate routes within habitat, but unaffected by this project.
- 0 - Decommissioned Road: Road decommissioning may be completed through two approaches: active or natural revegetation. Active techniques may include ripping, seeding, planting, placing rocks, signing, and recontouring routes. These actions may be carried out by mechanized equipment or hand crews. Natural revegetation will include placement of barriers on the road or trail to prevent unauthorized access. The road area will be allowed to revegetate naturally.
- 1 - Basic Custodial Care (Closed): These are Maintenance Level 1, which are open for private property access, permitted uses, or administrative access, but closed to the public.
- 2 - High Clearance Vehicles: Open
- 3 - Moderate Degree of User Comfort: Open
- 4 - Moderate Degree of User Comfort: Open
- 5 - High Degree of User Comfort (Highway): Open
- 6 - Seasonal: Though these roads may be closed at times, they are considered open for this analysis.
- Motorized trail: Open
- Non-Forest: (Private inholdings). Acres of habitat reported include private land within the Forest boundary. Routes within these areas are not part of the Motorized Travel Plan, and are considered open.
- Non-motorized trail
- Unauthorized: These are user-created, non-system routes.

Open Routes: These are motorized routes currently open to or being used by the public. They include Maintenance Levels 2-6, motorized trails, non-Forest, and unauthorized routes.

Cross-Country Travel: Traveling across the country-side rather than on designated roads or trails.

Decommissioned Routes: Each known Utah prairie dog colony was buffered to 500 feet beyond the known colony perimeter to allow for colony expansion. Active decommissioning activities will not occur in occupied prairie dog habitat. All decommissioning activities will have a site-specific environmental analysis conducted on the action prior to ground-disturbing activities to assess impacts that may occur. The MTP has been designed to provide short- and long-term beneficial effects to listed species by limiting access to occupied habitats.

Location: The Motorized Travel Plan analysis area is located within the Dixie National Forest in southern Utah. The Forest is located in Garfield, Iron, Kane, Piute, Wayne, and Washington counties. There are currently four Ranger Districts managed by the Forest: Pine Valley, Cedar City, Powell, and Escalante. In March 2006, the Teasdale Ranger District on the Dixie National Forest and Loa Ranger District on the Fishlake National Forest were consolidated into the Fremont River Ranger District. This new Ranger District is administered by the Fishlake National Forest, though the area that was the Teasdale Ranger District remains part of the Dixie National Forest. As this motorized Travel Plan was begun prior to the reorganization, the Teasdale portion of the Fremont River Ranger District is included in this analysis. The project area comprises approximately 1,970,647 acres.

Timing: For the purposes of this project, short-term effects are those that will occur within five years of beginning implementation, and long-term effects are considered as occurring five years or more after implementation.

Conservation Measures: In order to further protect and enhance threatened and endangered species on the DNF, the following conservation measures will be implemented:

- Site-specific NEPA and surveys will be conducted prior to project implementation for all roads and trails proposed for decommissioning or closure.
- Each known Utah prairie dog colony will be buffered to 500 feet beyond the known colony perimeter to allow for colony expansion. Active decommissioning activities will not occur in occupied prairie dog habitat. Only natural revegetation will occur within Utah prairie dog colonies.
- Timing restrictions may be implemented on site-specific decommissioning projects to protect perching California condors.

V. Existing Environment

Cumulative Effects Area (CEA)

In general, a larger area outside the Forest Service boundary was considered for the CEA. Past, present, and reasonably foreseeable future actions within the CEA that would most likely add cumulatively to effects associated with the MTP include, but are not be limited to: livestock grazing, fire use and suppression, recreational use, roads and trails, construction, land development, and vegetation management projects such as timber harvest. The species included in this analysis would likely use all or part of this CEA during some portion of their life cycle. Lands identified outside of the National Forest boundary primarily consist of private, State, National Park, and Bureau of Land Management administered lands. These lands have had and will continue to have a variety of uses; however, limited data is available to be included in this analysis because much of the land identified is under private ownership. For this reason, only a brief general discussion on past, present, and reasonably foreseeable future actions within these areas has been included.

The CEA for California condor includes the project area and extends 1.5 miles beyond the Forest boundary. The U.S. Forest Service management approach at currently occupied nest sites in California includes restrictions on human activity within 1.5 miles of these areas (USFWS 1996).

The Mexican spotted owl CEA consists of suitable habitat within the project area, a ½ mile buffer beyond the Forest boundary, and designated critical habitat. The ½ mile buffer was selected based on FWS protocol (USFWS 2003). The ½ mile buffer represents an area where owls could forage beyond the exterior boundary of the PA. The CEA for the Utah prairie dog consists of the Awapa Plateau and Paunsaugunt Recovery Units (RUs). The RUs have been identified as areas that represent suitable and occupied habitats.

Selected past and ongoing activities within PA habitat for each species are summarized in Table 3. These include management activities associated with changes in vegetation (i.e., timber harvest, thinning, prescribed burning, and livestock grazing).

Table 3. Summary of habitat availability within the Project Area (PA), Cumulative Effect Area (CEA), and direct impacts to habitat (in acres) from past and present management actions. Acres of potential habitat are approximate. Please refer to individual species' accounts for habitat requirements. The Project Area includes the entire Dixie National Forest (NF) and the Teasdale portion of the Fremont River Ranger District managed by the Fishlake NF.

Species	Habitat	Total Habitat Available within PA (Acres)	Past and Present Management Actions within PA (Acres)				Cumulative Effects Area
			Timber Harvest/ Thinning/ Burning		Livestock Grazing		
California Condor	Potential Cliff Nesting/Roosting	616,825	95,704	7,938	46,835	445,538	1.5 miles beyond Forest boundary
Mexican Spotted Owl	Critical	35,797	2,348	125	777	15,178	FWS Critical habitat and 1/2 mile beyond FS boundary
	PAC	2,398	0	0	90	1,666	
	Potential	22,014	1,340	263	1,152	11,198	
Utah Prairie Dog	Known habitat	15,027	3,401	317	31	14,618	Paunsaugunt Recovery Unit
	Known habitat	17,474	2,335	197	0	17,474	Awapa Plateau Recovery Unit

Several Forest Service documents concerning the effects of timber harvest, prescribed burning, and livestock grazing on wildlife resources have been completed for the Dixie National Forest (USDAFS 1995, Summers 1998a, Summers 1998b). These documents provide supporting documentation for the effects these management activities have throughout the CEA on wildlife resources. These three documents are incorporated here by reference.

Species Account, Life History, and Habitat Status

Information concerning life histories, suitable habitats, threats, population trends, and ecology of the species that are known or suspected to occur within the Motorized Travel Plan project area can be found within the “Life History and Analysis of Endangered, Threatened, Candidate, Sensitive, and Management Indicator Species of the Dixie National Forest” (Rodriguez 2008). This document is located in the Dixie Supervisor’s Office in Cedar City, Utah. Potential effects and determinations are based in part upon the data presented in this document, and principal habitats described in this paper were used to assess the habitat conditions for the Motorized Travel Plan project.

The following reviews of existing condition are briefs syntheses of information contained in this document.

California Condor

Potentially suitable nesting and roosting habitat exists along steep cliffs located on all Ranger Districts of the Dixie National Forest. Condors are sensitive to human disturbance near their nest sites, and are known to abandon sites that experience excessive human activity. The U.S. Forest Service management approach at currently occupied nest sites in California includes restrictions on human activity within 1.5 miles of these areas (USFWS 1996).

A review of cliff habitat within the project area by district wildlife biologists resulted in the identification of 616,825 acres of potentially suitable nesting and roosting habitat. A 1.5 mile buffer was applied at the identified cliffs to determine potential habitat acres. Existing potential habitat within the project area is currently impacted by approximately 919 miles of open motorized route, which includes 255 miles of unauthorized route. Of the 616,825 acres of potential habitat, some 330,658 acres (54%) are currently open to cross-country travel. There are no known nesting condors within the project area.

Mexican Spotted Owl

In Utah, Mexican spotted owls are only known to nest and roost in steep-walled, narrow canyon complexes. Foraging occurs in canyon bottoms and along canyon rims in the pinyon-juniper and ponderosa pine types. Mexican spotted owls have been confirmed on the Cedar City (winter location), Teasdale, and Escalante Ranger Districts. No nesting Mexican spotted owls have been located anywhere on the Dixie National Forest. Birds located on the Cedar City Ranger District in the winter were found in non-canyon areas within a mixed-conifer cover type. One of these birds was a radio-collared individual from Zion National Park that moved up onto the south end of the Forest. When tracked with telemetry equipment, it did not return to the Forest. In addition, an audio response from a male and possibly a female spotted owl were detected on Bureau of Land Management (BLM) land near the southeast end of the Cedar City Ranger District. The birds on the Escalante and Teasdale Ranger Districts were both located in steep-walled canyon complexes; despite numerous follow-up visits, no nests were located (Rodriguez 2008).

Approximately 35,797 acres of Critical Habitat have been designated within the project area. This Critical Habitat is located on the Teasdale and Escalante Ranger Districts (69 FR 53181 53298). Critical Habitat is currently impacted by approximately 27 miles of open motorized route, which includes 11 miles of unauthorized route. Of the 35,797 acres of Critical Habitat, 23,490 acres (66%) are currently open to cross-country travel.

Three Protected Activity Centers (PACs) are located on the Escalante and Teasdale Ranger Districts. These PACs comprise approximately 2,467 acres of habitat, though only 2,398 acres is within the Forest boundary. Of this total, approximately 1,666 acres (68%) are currently open to cross-country travel. No routes currently exist within the delineated PACs.

In addition, 22,014 acres of potentially suitable breeding habitat have been identified within the project area. Of the 22,014 acres of potentially suitable breeding habitat, approximately 2,934 acres (13%) are currently open to cross-country travel. The 1997 and updated 2000 Willey-Spotskey Mexican spotted owl habitat models were used for initial evaluation of potential nesting and roosting habitat. Modeled habitat is field-verified for suitability and to determine if and where calling surveys would be required. Two years of calling surveys are required in suitable habitat if located within 0.5 miles of proposed management activities (USFWS 2003). For this project, these 22,014 acres of modeled habitat are affected by approximately two miles of roads, and implementation of the PAWM would not result in a noticeable change of open motorized routes within this

habitat. Therefore, effects to potentially suitable breeding habitat will be evaluated with regards to cross-country travel.

Utah Prairie Dog

Potentially suitable and currently occupied habitat for this species is derived from UDWR and Forest Service habitat coverages. The Awapa Plateau and Paunsaugunt RUs encompass identified prairie dog colonies, and include habitat on the Forest. The colony perimeters on Forest Service administered lands were mapped in 1993, 2001, 2007, and 2008. The colony perimeters for each year were unioned to produce a colony boundary that contained all known or historically occupied habitats. These unioned polygons were then buffered by an additional 500 feet to account for potential expansion of the colony.

Of the approximate 961,964 acres of the Paunsaugunt RU, 15,027 acres of buffered habitat are within the project area. Of the approximate 1,053,689 acres of the Awapa Plateau RU, 17,474 acres of buffered habitat are within the project area.

Identified Paunsaugunt RU habitat within the project area is currently impacted by approximately 80 miles of open motorized route, which includes 25 miles of unauthorized route. Of the 15,027 acres of habitat, 9,589 acres (64%) are currently open to cross-country travel. Identified Awapa Plateau RU habitat within the project area is currently impacted by approximately 69 miles of open motorized route, which includes 15 miles of unauthorized route. Of the 17,474 acres of habitat, 15,228 acres (87%) are currently open to cross-country travel.

VI. Effects of the Proposed Action

California Condor

Direct/Indirect Effects

Table 4 illustrates how the PAWM would directly impact potential California condor nesting and roosting habitat.

Table 4. The impact of roads and trails by Road Operation Maintenance Level within potential California condor nesting and roosting habitat for the No Action Alternative (A) and the PAWM.

Road Operation Maintenance Level (Classification)	Total Length (Miles)	
	No Action	PAWM
Previous Decision	458.41	458.53
0 – Decommissioned Road	3.57	71.65
1 – Basic Custodial Care (Closed)	117.58	211.54
2 – High Clearance Vehicles	460.72	329.72
3 – Suitable for Passenger Cars	77.85	76.47
4 – Moderate Degree of User Comfort	7.96	7.96
5 – High Degree of User Comfort	34.06	34.06
6 – Seasonal Road	30.55	18.43
Motorized Trail	10.55	45.02
Non-Forest	42.28	42.28
Non-Motorized Trail	319.59	375.00
Unauthorized	254.66	0.00
Unauthorized Closed	0.00	146.48
Total:	1817.78	1817.14

Table 5 summarizes the net amount of open routes left after decommissioning, closing, and conversion to alternate types of access is completed.

Table 5. Summary of open routes located within potential California condor nesting and roosting habitat for the No Action Alternative (A) and the PAWM.

Post-Implementation	No Action	PAWM
Open Route (miles)	918.63	553.94

The PAWM would result in the closure of cross-country travel within the 330,658 acres (54%) of potential habitat. Total miles of open motorized route within potential habitat would be reduced by 40% from the existing condition (Table 5). This would be accomplished by closing, decommissioning, and converting roads into non-motorized trails.

Reducing access will decrease habitat fragmentation and exposure to human disturbance. Though suitable nesting sites may not be directly accessible, open routes at cliff bases and tops could increase the chance for disturbance to condors that may be present. Condors do not currently nest within the project area, but they occasionally forage on Forest Service administered lands. Disturbance to foraging condors during

decommissioning activities is extremely unlikely to occur, and will be discussed in the site-specific NEPA analysis.

Because condors forage over a wide range of habitats for carrion, an overall decrease in motorized access and the resulting decrease in potential for disturbance would be beneficial to foraging condors. Due to the net reduction of motorized access and elimination of cross-country travel, implementation of the PAWM would lead to a reduction in disturbance and an increase in habitat effectiveness for California condor immediately and over time. Prior to decommissioning activities, habitat validation will occur along with presence/absence surveys where needed, and limited operating seasons will be in effect if California condors are found within the area slated to be closed, ensuring that perching condors will not be impacted by decommissioning activities. If condors are located in an area scheduled for decommissioning activities to occur, notification of conservation measure implementation will be provided to the FWS.

Cumulative Effects

Past, present, and reasonably foreseeable future actions within condor habitat include such actions as livestock grazing, vegetation management, special uses (such as utility development), and recreational activities (e.g., ATV riding, hunting, and hiking). The cumulative effects of these actions have and will continue to impact the effectiveness and availability of habitat within the CEA. There will be increases and decreases in habitat effectiveness depending upon the type of activity that is occurring. A reduction in motorized access will improve habitat effectiveness over the short- and long-term by reducing the potential for disturbance and habitat degradation. This increase will add cumulatively to the increases in habitat effectiveness that are associated with other actions within the CEA.

Determination

Given the net reduction of motorized access and elimination of cross-country travel, implementation of the PAWM would lead to short- and long-term improvements in condor habitat. Disturbance during decommissioning activities will be avoided through implementation of conservation measures, namely enforcing limited operating season restrictions. Implementation of the PAWM *may affect, but is not likely to adversely affect* the California condor.

Mexican Spotted Owl

Direct/Indirect Effects

Table 6 illustrates how the PAWM would directly impact designated Critical Habitat for the Mexican spotted owl. Not all habitat that will be affected by the PAWM contains the primary constituent elements necessary for the habitat to be identified as Critical Habitat.

Table 6. The impact of roads and trails by Road Operation Maintenance Level within Mexican Spotted Owl Critical Habitat for the No Action Alternative (A) and the PAWM. Resulting roads and trails within available habitat are not influenced by any previous management decisions concerning access.

Road Operation Maintenance Level (Classification)	Total Length (Miles)	
	No Action	PAWM
0 – Decommissioned Road	0.00	6.82
1 – Basic Custodial Care (Closed)	4.30	9.72
2 – High Clearance Vehicles	15.27	5.57
3 – Suitable for Passenger Cars	0.82	0.82
Motorized Trail	0.20	0.08
Non-Forest	0.07	0.07
Non-Motorized Trail	6.27	10.69
Unauthorized	10.53	0.00
Unauthorized Closed	0.00	3.71
Total:	37.46	37.48

Table 7 summarizes the net amount of open routes left after decommissioning, closing, and conversion to alternate types of access is completed.

Table 7. Summary of open roads located within Mexican Spotted Owl Critical Habitat for the No Action Alternative (A) and the PAWM.

Post-Implementation	No Action	PAWM
Open Route (miles)	26.89	6.54

The PAWM would result in the closure of cross-country travel within 76% of the designated Critical Habitat. This would be accomplished by closing, decommissioning, and converting roads into non-motorized trails. In addition, implementation would result in a closure of motorized cross-country travel within the 13% and 68% of available potential breeding and designated PAC habitat, respectively.

Reducing access within designated Critical Habitat will decrease the potential for disturbance from recreation in these sensitive areas. Although no Mexican spotted owls are currently known to be nesting on the Forest, a reduction in access will decrease the chance of disturbance or mortality for owls that have not yet been located. Within foraging habitat, a reduction in open route miles will decrease habitat fragmentation and disturbance, thereby increasing habitat effectiveness. Although there are no roads currently within PAC habitat, eliminating cross-country travel will limit the opportunity for recreational disturbance in canyon bottoms and along mesa tops that owls most likely inhabit, particularly in the PACs. Closing cross-country travel within designated Critical

and potential habitat will further reduce habitat fragmentation and disturbance, and increase habitat effectiveness. To minimize potential impacts to the Mexican spotted owl, roads slated for decommissioning and closure will be monitored and/or surveyed according to protocol to determine occupancy. Should Mexican spotted owls be detected during monitoring and survey efforts, a PAC will be designated, and limited operating seasons will be enforced within the PAC.

Cumulative Effects

The cumulative effects of past, present, and reasonably foreseeable future recreation, vegetation management, livestock grazing, and general development (i.e. special uses, and oil and gas exploration and development) have and will continue to impact the effectiveness and availability of Critical, PAC, and potentially suitable habitat within the CEA. Vegetation management activities such as thinning, prescribed burning, and livestock grazing may affect the quality and suitability of foraging and roosting habitat. On Forest Service lands, these activities require NEPA and site-specific section 7 consultation if effects to listed species are anticipated. Impacts from each implementation project will be reduced and minimized through limited operating seasons. A reduction in motorized access by reducing the overall miles of motorized route and eliminating cross-country travel will have short- and long-term beneficial impacts for Mexican spotted owls by reducing disturbance and habitat degradation, thus increasing habitat effectiveness.

Determination

Given the net reduction of motorized access and elimination of cross-country travel, implementation of the PAWM would lead to increased habitat effectiveness for Mexican spotted owl over the short- and long-term. If site-specific surveys and/or monitoring efforts identify Mexican spotted owls within the project area, limited operating seasons will be enforced within designated PACs. Implementation of the PAWM *may affect, but is not likely to adversely affect* the Mexican spotted owl and designated Critical Habitat.

Utah Prairie Dog

Direct/Indirect Effects

Tables 8 and 9 illustrate how the PAWM would directly impact Utah prairie dog habitat, defined as within 500 feet of currently or historically occupied colonies, located within the two Recovery Units.

Table 8. The impact of roads and trails by Road Operation Maintenance Level within the Awapa Plateau Recovery Unit Utah Prairie Dog habitat for the No Action Alternative (A) and the PAWM.

Road Operation Maintenance Level (Classification)	Total Length (Miles)	
	No Action	PAWM
Previous Decision	1.44	1.44
0 – Decommissioned Road	0.00	3.80
1 – Basic Custodial Care (Closed)	4.37	8.56
2 – High Clearance Vehicles	44.44	37.17
3 – Suitable for Passenger Cars	9.07	9.07
Motorized Trail (Admin Closed)	0.00	0.81
Non-Forest	0.02	0.02
Unauthorized	14.86	0.00
Unauthorized Closed	0.00	13.52
Total:	74.20	74.39

Table 9. The impact of roads and trails by Road Operation Maintenance Level within the Paunsaugunt Recovery Unit Utah Prairie Dog habitat for the No Action Alternative (A) and the PAWM.

Road Operation Maintenance Level (Classification)	Total Length (Miles)	
	No Action	PAWM
Previous Decision	2.84	2.84
0 – Decommissioned Road	0.38	7.38
1 – Basic Custodial Care (Closed)	2.17	11.07
2 – High Clearance Vehicles	34.38	27.84
3 – Suitable for Passenger Cars	9.41	9.41
5 – High Degree of User Comfort	5.15	5.15
Motorized Trail	0.00	0.57
Non-Forest	6.20	6.20
Non-Motorized Trail	0.58	0.58
Unauthorized	25.32	0.00
Unauthorized Closed	0.00	15.39
Total:	86.43	86.43

Tables 10 and 11 summarize the net amount of open routes left after decommissioning, closing, and conversion to alternate types of access is completed.

Table 10. Summary of open roads located within the Awapa Plateau Recovery Area Utah Prairie Dog habitat for the No Action Alternative (A) and the PAWM.

Post-Implementation	No Action	PAWM
Open Route (miles)	68.39	46.26

Table 11. Summary of open roads located within the Paunsaugunt Recovery Area Utah Prairie Dog habitat for the No Action Alternative (A) and the PAWM.

Post-Implementation	No Action	PAWM
Open Route (miles)	80.46	49.17

The No Action Alternative (A) has 80.46 and 68.39 miles of open route in Utah prairie dog habitat within the Paunsaugunt and Awapa RUs, respectively (Tables 10 and 11). Under the PAWM, there are 49.17 miles of open route remaining within the Paunsaugunt RU and 46.26 miles of open route remaining within the Awapa Plateau RU. Overall, open routes within Utah prairie dog habitat will be reduced by 39% in the Paunsaugunt RU and 32% in the Awapa RU.

Within the Paunsaugunt RU, we anticipate authorizing a road that has been previously unauthorized. The effects of this authorized opening will be offset by decommissioning a road that is currently authorized open, in order to appreciably reduce travel through an occupied Utah prairie dog colony.

Reducing open road miles and eliminating cross-country travel will reduce the likelihood of disturbance and mortality, namely from illegal shooting. Closures will also increase habitat effectiveness by reducing the potential for habitat degradation and fragmentation, disturbance, and mortality. Disturbance to Utah prairie dogs due to decommissioning will not occur because site-specific surveys will be conducted prior to decommissioning activities, and the 500-foot buffer will further eliminate the risk. In addition, limited operating seasons will be implemented as needed, based on site-specific findings. Travel on main roads is not anticipated to increase substantially because main roads are not proposed for decommissioning or closure, and the use will not change. Reducing motorized access may increase use of remaining routes within Utah prairie dog habitat; however, the change in use on these routes will be offset by the closure of roads, trails, and the elimination of cross-country travel.

Cumulative Effects

Past, present, and reasonably foreseeable future actions within prairie dog habitat include such actions as livestock grazing, vegetation management, special uses (such as utility development), and recreational activities (e.g., ATV riding, hunting, and hiking). The cumulative effects of these actions have and will continue to impact the effectiveness and availability of habitat within the CEA. A reduction in motorized access will improve habitat effectiveness over the short- and long-term by reducing disturbance, mortality, and habitat degradation. The reduction in open route miles and elimination of cross-country travel will reduce access for recreational disturbance within Utah prairie dog habitat.

Determination

Given the net reduction of motorized access and elimination of cross-country travel, implementation of the PAWM would lead to increased effectiveness in Utah prairie dog

habitat over the short- and long-term. Prior to route closures and decommissioning activities, site-specific surveys and NEPA will be conducted. Should Utah prairie dog habitat be identified, a 500-foot buffer and limited operating seasons will be enforced. There is no risk of disturbing Utah prairie dogs during decommissioning activities because active decommissioning will not occur within buffered habitat. Routes slated for closure within Utah prairie dog habitat will be decommissioned through natural revegetation only. Implementation of the PAWM *may affect, but is not likely to adversely affect* the Utah prairie dog.

VII. Determination

As a result of this analysis, it is our professional determination that implementation of the proposed Motorized Travel Plan Preferred Alternative with Modifications *may affect, but is not likely to adversely affect* the California condor, the Mexican spotted owl and designated Critical Habitat, and the Utah prairie dog.

VIII. Management Recommendations

Follow direction in all approved Recovery Plans.

IX. Best Available Science

The techniques and methodologies used in this analysis are considered the best available science. The analysis includes a summary of the credible scientific evidence which is relevant to evaluating reasonably foreseeable adverse impacts. The analysis also identifies methods used and references scientific sources relied on. The conclusions are based on the scientific analysis that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk.

The best available science is a composite of several key elements. The elements of science used are:

- On-site data and history.
- Scientific literature. Literature reviewed and cited is listed below and included within the Life History paper.
- Modeling using currently acceptable analysis. Modeling of Mexican Spotted Owl habitat is standardized across the Forest per USFWS direction.
- Professional knowledge, judgment, and experience.
- Comparative analysis considering other local similar projects. The effects to the threatened and endangered wildlife species resource in other similar projects in the local area have been considered in the analysis.

X. References

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