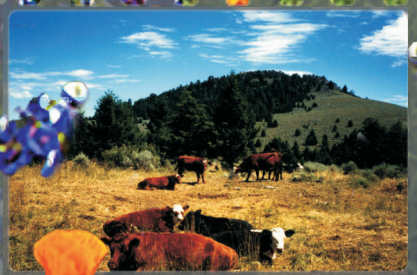
# Volume II of II
# Supplemental Draft Environmental Impact Statement for the Tehachapi Uplands Multiple Species Habitat Conservation Plan

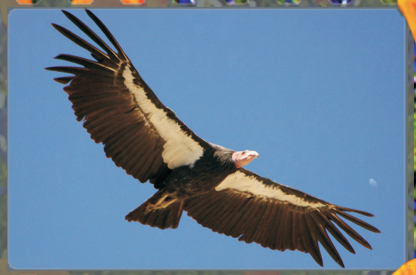
Prepared by:

U.S. FISH & WILDLIFE SERVICE

DEPARTMENT OF THE INTERIOR

January 2012





## Supplemental Draft

# Environmental Impact Statement for the Tehachapi Uplands Multiple Species Habitat Conservation Plan

# Volume II: Master Responses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# Contents

## Volume II


List of Tables and Figures ..... ix

Acronyms ..... x

**Master Response 1A California Condor Data and Habitat Use ..... 1A-1**

1A.1 Summary of Substantive Comments ..... 1A-3

1A.2 Responses to Substantive Comments ..... 1A-3

1A.2.1 Overview ..... 1A-3

1A.2.2 Limitations and Use of Condor Data ..... 1A-4

1A.2.3 Use of Data to Determine Boundaries of the Condor Study Area and to Depict Condor Use of the TMV Planning Area ..... 1A-5

1A.2.4 Use of Buffers Around Data Points ..... 1A-6

1A.2.5 Recent Condor Data and Habitat Use by Fully Recovered Populations ..... 1A-7

**Master Response 1B California Condor Critical Habitat ..... 1B-1**

1B.1 Summary of Substantive Comments ..... 1B-3

1B.2 Responses to Substantive Comments ..... 1B-3

1B.2.1 Overview ..... 1B-3

1B.2.2 Definition, Discussion, and Analysis of Critical Habitat for the California Condor ..... 1B-4

1B.2.3 Definition and Significance of the Condor Study Area ..... 1B-10

1B.2.4 Loss of Foraging Habitat in the California Condor Recovery Plan ..... 1B-12

1B.2.5 Adverse Modification of Critical Habitat ..... 1B-14

1B.2.6 Development in the Critical Habitat ..... 1B-15

1B.2.7 Findings Required under the Endangered Species Act ..... 1B-16

1B.2.8 Potential Effects on Condor Population Movements Across All Critical Habitat Units ..... 1B-16

**Master Response 1C California Condor Take and Habituation ..... 1C-1**

1C.1 Summary of Substantive Comments ..... 1C-1

1C.2 Responses to Substantive Comments ..... 1C-2

1C.2.1 Overview ..... 1C-2

1C.2.2 Attraction of Condors to Humans and Development ..... 1C-2

1C.2.3 Development on Key Ridges and Proximity of People and Condors ..... 1C-4

1C.2.4 Ecological Value of Condors Removed from the Wild ..... 1C-4

1C.2.5 Federal Incidental Take Permit and Lethal Take ..... 1C-6

1C.2.6 Analysis of Indirect Effects on Condors ..... 1C-6

1C.2.7 Supplemental Feeding and Condor Behavior ..... 1C-7
1C.2.8 Loss of Foraging Habitat and Critical Habitat Due to Development Resulting in Take ..... 1C-7
**Master Response 1D California Condor Microtrash and Lead Ingestion ..... 1D-1**
1D.1 Summary of Substantive Comments ..... 1D-1
1D.2 Responses to Substantive Comments ..... 1D-2
1D.2.1 Potential for Lead Poisoning of Condors on Tejon Ranch ..... 1D-2
1D.2.2 Ingestion of Microtrash and Lead-Contaminated Gut Piles as a Result of Increased Human Population on Tejon Ranch ..... 1D-2
1D.2.3 Supplemental Feeding and the Potential for Increased Ingestion of Microtrash ..... 1D-4
1D.2.4 Legitimacy of Proposed Mitigation and Suggested Additional Measures ..... 1D-5
**Master Response 1E California Condor Loss of Foraging Habitat ..... 1E-1**
1E.1 Summary of Substantive Comments ..... 1E-2
1E.2 Responses to Substantive Comments ..... 1E-2
1E.2.1 Significance of Foraging Habitat ..... 1E-2
1E.2.2 Evaluation of Extent of Foraging Habitat ..... 1E-3
1E.2.3 Management Practices and Natural Processes ..... 1E-5
1E.2.4 Evaluation of Loss of Foraging Habitat ..... 1E-8
1E.2.5 Implications of Loss of Foraging Habitat for Condor Populations and Recovery ..... 1E-9
1E.2.6 Fragmentation ..... 1E-11
**Master Response 1F California Condor Collisions with Powerlines and Structures ..... 1F-1**
1F.1 Summary of Substantive Comments ..... 1F-1
1F.2 Responses to Substantive Comments ..... 1F-2
1F.2.1 Powerline Fatalities ..... 1F-2
1F.2.2 Effects of Objects and Wires on Condor Habitat and Viability ..... 1F-3
1F.2.3 Restrictions on Towers and Powerlines Considered as Mitigation ..... 1F-4
1F.2.4 Powerline and Telephone Wire Interference with Overflights and Foraging Areas ..... 1F-4
1F.2.5 Effects of Powerlines, Telephone Wires, Cell Phone Towers, or Antennae on Critical Habitat ..... 1F-5
1F.2.6 Placing Wires Underground where Collisions Have Occurred ..... 1F-6
1F.2.7 Construction of Wind Turbines in the TMV Planning Area ..... 1F-6
1F.2.8 Contradictory Language of Draft TU MSHCP and the Tejon Ranch California Condor Conservation and Management Plan Regarding Wind Turbines ..... 1F-7

**Master Response 1G California Condor Overflight Habitat Connectivity ..... 1G-1**
1G.1 Summary of Substantive Comments ..... 1G--2
1G.2 Responses to Substantive Comments ..... 1G-3
1G.2.1 Tejon Ranch Location in Relation to California Condor Movement ..... 1G-3
1G.2.2 Habitat Fragmentation and California Condor Movement ..... 1G-3
1G.2.3 Effects of the TMV Project on Flyover Habitat ..... 1G-4
1G.2.4 Habitat Connectivity on Tejon Ranch and California Condor Recovery ..... 1G-5
1G.2.5 Effects of Combined Cumulative Development on Tejon Ranch on Connectivity ..... 1G-6
1G.2.6 Flight Line Data and Proposed Development ..... 1G-6
1G.2.7 Condor Range Mapping ..... 1G-7
1G.2.8 Use of Buffers Around California Condor Occurrence Data ..... 1G-8
**Master Response 1H California Condor Supplemental Feeding ..... 1H-1**
1H.1 Summary of Substantive Comments ..... 1H-2
1H.2 Responses to Substantive Comments ..... 1H-2
1H.2.1 Overview ..... 1H-2
1H.2.2 Consistency with the California Condor Recovery Plan ..... 1H-3
1H.2.3 Supplemental Feeding as Mitigation in Support of Conservation and Recovery ..... 1H-4
1H.2.4 Supplemental Feeding and Take from Harassment ..... 1H-5
1H.2.5 Supplemental Feeding and Microtrash Ingestion ..... 1H-5
1H.2.6 Supplemental Feeding and Lead Ingestion ..... 1H-6
**Master Response 1I California Condor Lead Ban ..... 1I-1**
1I.1 Summary of Substantive Comments ..... 1I-1
1I.2 Responses to Substantive Comments ..... 1I-1
1I.2.1 Ranchwide Lead Ammunition Ban as Mitigation ..... 1I-1
1I.2.2 Enforcement of Ranchwide Ban on Lead Ammunition ..... 1I-2
1I.2.3 Threats from Lead-Containing Gut Piles or Carcasses ..... 1I-3
**Master Response 2 Amphibians/Tehachapi Slender Salamander ..... 2-1**
2.1 Summary of Substantive Comments ..... 2-2
2.2 Responses to Substantive Comments ..... 2-3
2.2.1 No Take of Amphibians Should Be Allowed ..... 2-3
2.2.2 Overview: Identification of Effects and Mitigation Measures ..... 2-6
2.2.3 Evaluation of Operational Effects and Associated Avoidance, Minimization, and Mitigation Measures ..... 2-6
2.2.4 Evaluation of Grazing Effects and Associated Avoidance, Minimization, and Mitigation Measures ..... 2-8

2.2.5 Evaluation of Human Recreation and Pet Effects and Associated Avoidance, Minimization, and Mitigation Measures ..... 2-9
2.2.6 Evaluation of Nonpermanent Activity Effects and Associated Avoidance, Minimization, and Mitigation Measures ..... 2-11
2.2.7 Additional Effects on Modeled Habitat May Occur ..... 2-12
2.2.8 Measures to Minimize the Spread of Disease ..... 2-13
2.2.9 Preconstruction Surveys ..... 2-13
2.2.10 Tehachapi Slender Salamander ..... 2-14
2.2.11 Western Spadefoot ..... 2-16
2.2.12 Yellow-Blotched Salamander ..... 2-19

**Master Response 3 Raptors ..... 3-1**

3.1 Summary of Substantive Comments ..... 3-2
3.2 Responses to Substantive Comments ..... 3-3
3.2.1 Buffers and Viewsheds ..... 3-3
3.2.2 Long-Term (Operational) Effects and Project Design Features ..... 3-7
3.2.3 Cattle Grazing ..... 3-8
3.2.4 Recreation, Pets, and Enforceability ..... 3-9
3.2.5 Infrastructure, Access, Trails, and Facilities ..... 3-10
3.2.6 Goals and Objectives, Baseline Surveys, and Adaptive Management ..... 3-10
3.2.7 Pest Management, Rodenticides, and Bubonic Plague ..... 3-11
3.2.8 Habitat Fragmentation ..... 3-12
3.2.9 Habitat Type Definitions ..... 3-12
3.2.10 Fully Protected Species and Lethal Take ..... 3-12
3.2.11 Identification and Mitigation of Threats ..... 3-13
3.2.12 Burrowing Owl ..... 3-14
3.2.13 Golden Eagle ..... 3-14
3.2.14 White-Tailed Kite ..... 3-15
3.2.15 Bald Eagle ..... 3-16

**Master Response 4 Covered Species Threats and Potential Effects from Covered Activities ..... 4-1**

4.1 Summary of Substantive Comments Received ..... 4-2
4.2 Responses to Substantive Comments ..... 4-2
4.2.1 Inadequate Range and Characterization of Effects ..... 4-2
4.2.2 Net Loss of Habitat and Individuals ..... 4-5
4.2.3 Identified Threats Not Adequately Analyzed ..... 4-5
4.2.4 Threats Will Remain in Open Space ..... 4-7

**Master Response 5 Habitat Suitability Model ..... 5-1**
5.1 Summary of Substantive Comments ..... 5-3
5.2 Responses to Substantive Comments ..... 5-4
5.2.1 Overview ..... 5-4
5.2.2 Transparency of Habitat Modeling, Use of All Available Data, and Independent Scientific Review ..... 5-4
5.2.3 Spatial Scale, Available Occurrence Locations, and Additional Data Sets for Habitat Modeling ..... 5-5
5.2.4 Field Ground-Truthing and Verification Studies ..... 5-8
5.2.5 Advanced Modeling Techniques ..... 5-8
5.2.6 Climate Variables ..... 5-9
5.2.7 Vegetation Data ..... 5-9
5.2.8 Soils and Geological Data ..... 5-11
5.2.9 Habitat Overestimation and Underestimation ..... 5-12
5.2.10 Plant Models and Aspect ..... 5-14
5.2.11 Species-Specific Recommendations ..... 5-14
**Master Response 6 Surveys ..... 6-1**
6.1 Summary of Substantive Comments ..... 6-2
6.2 Responses to Substantive Comments ..... 6-2
6.2.1 Design, Location, and Implementation of Surveys ..... 6-2
6.2.2 Identification of Habitat Needs and Adequacy of Surveys ..... 6-3
6.2.3 Sufficiency of Data Sets ..... 6-4
6.2.4 Scope of Preconstruction Surveys ..... 6-6
6.2.5 Burrowing Owl ..... 6-7
6.2.6 Two-Striped Garter Snake ..... 6-8
6.2.7 Fort Tejon Woolly Sunflower, Round-Leaved Filaree, Striped Adobe Lily, Tehachapi Buckwheat, and Tejon Poppy ..... 6-8
**Master Response 7 Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity ..... 7-1**
7.1 Summary of Substantive Comments ..... 7-1
7.2 Responses to Substantive Comments ..... 7-2
7.2.1 Analysis of Edge Effects ..... 7-2
7.2.2 Fire Management ..... 7-4
7.2.3 Effects on Landscape Wildlife Habitat Connectivity and Movement ..... 7-7
7.2.4 Condor Habitat Connectivity ..... 7-11
7.2.5 Movement Around Castac Lake ..... 7-12

**Master Response 8 Regulatory Considerations ..... 8-1**
8.1 Summary of Substantive Comments ..... 8-3
8.2 Regulatory Overview ..... 8-3
8.2.1 Permit Application under ESA Section 10 ..... 8-3
8.2.2 The Role of the ESA Section 7 Consultation Process in the ITP Application Process ..... 8-4
8.2.3 The Role of NEPA in the ITP Application Process ..... 8-4
8.2.4 The Role of the Bald and Golden Eagle Protection Act in the ITP Process ..... 8-5
8.3 Responses to Substantive Comments ..... 8-5
8.3.1 Identification and Protection of Covered and Imperiled Species ..... 8-5
8.3.2 Criteria for Issuance of an ITP ..... 8-8
8.3.3 Critical Habitat Designation ..... 8-13
8.3.4 Role of the Condor Recovery Plan ..... 8-14
8.3.5 Implementing Agreement ..... 8-14
8.3.6 No Surprises Rule ..... 8-16
8.3.7 Enforceability of the ITP and TU MSHCP ..... 8-18
8.3.8 Section 7 Consultation Process and Biological Opinion ..... 8-19
8.3.9 Bald and Golden Eagle Protection Act ..... 8-23
**Master Response 9 Administrative Issues ..... 9-1**
9.1 Summary of Substantive Comments ..... 9-9
9.2 Responses to Substantive Comments ..... 9-9
9.2.1 Clarifications ..... 9-9
9.2.2 Miscellaneous Nonspecific Comments and Opinions ..... 9-15
9.2.3 Perceived Flaws in the Documents ..... 9-16
9.2.4 Scope of Covered Lands ..... 9-26
9.2.5 Requests to Extend Comment Period ..... 9-26
9.2.6 References Cited by the Center for Biological Diversity ..... 9-27
**Master Response 10 TMV Project, EIR, and Development-Related Effects Analyses ..... 10-1**
10.1 Summary of Substantive Comments ..... 10-3
10.2 Responses to Substantive Comments ..... 10-4
10.2.1 Scope of Agency Action ..... 10-4
10.2.2 Consideration of Indirect Effects of Project-Specific Effects ..... 10-4
10.2.3 Sufficiency of EIS Analysis of Development-Related Effects ..... 10-8

**Master Response 11 Alternatives ..... 11-1**
11.1 Summary of Substantive Comments ..... 11-2
11.2 Responses to Substantive Comments ..... 11-3
11.2.1 Regulatory Overview ..... 11-3
11.2.2 Scope of Purpose and Need Statement ..... 11-4
11.2.3 Use of a Consistent Baseline ..... 11-6
11.2.4 Incorporating the Ranchwide Agreement ..... 11-7
11.2.5 Analysis of the No Action Alternative ..... 11-8
11.2.6 Analysis of the Kern County General Plan Buildout Alternative ..... 11-11
11.2.7 Range of Alternatives Considered ..... 11-13
**Master Response 12 Cumulative Effects ..... 12-1**
12.1 Summary of Substantive Comments ..... 12-1
12.2 Responses to Substantive Comments ..... 12-2
12.2.1 NEPA Requirements for Cumulative Analysis ..... 12-2
12.2.2 Approach to Cumulative Effects Analysis in the Supplemental Draft EIS ..... 12-2
12.2.3 Cumulative Effects Analysis for Biological Resources ..... 12-3
12.2.4 Cumulative Effects Analysis for Climate Change ..... 12-4
12.2.5 Cumulative Effects Analysis for Other Regional Projects ..... 12-5
12.2.6 Holistic Regional Planning ..... 12-5
**Master Response 13 Climate Change ..... 13-1**
13.1 Summary of Substantive Comments ..... 13-3
13.2 Responses to Substantive Comments ..... 13-4
13.2.1 Environmental Setting ..... 13-4
13.2.2 Adequacy of Analysis of Indirect Climate Change Effects ..... 13-6
13.2.3 Significance of Climate Change Effects ..... 13-7
13.2.4 Black Carbon ..... 13-8
13.2.5 Embodied Emissions ..... 13-10
13.2.6 Adequacy of Mitigation Measures ..... 13-10
13.2.7 Consistency of Proposed Action with Implementation of AB 32 and Executive Order S-3-05 ..... 13-12
13.2.8 Analysis of Climate Change Effects on Biological Resources ..... 13-13
13.2.9 Climate Change Effects on Air Quality ..... 13-20
13.2.10 Climate Change Effects on Water Resources ..... 13-20
13.2.11 Climate Change Analysis Required by Endangered Species Act ..... 13-21

**Master Response 14 Cultural Resources ..... 14-1**
14.1 Summary of Substantive Comments ..... 14-2
14.2 Responses to Substantive Comments ..... 14-3
14.2.1 Adequacy of the Cultural Resources Identification and Analysis Process ..... 14-3
14.2.2 Compliance with National Historic Preservation Act ..... 14-4
14.2.3 State Historic Preservation Office Agreement and Mitigation Requirements ..... 14-5
14.2.4 Specific Cultural Resources Sites and Information Sources ..... 14-6
**Master Response 15 Procedural Considerations ..... 15-1**
15.1 Summary of Substantive Comments ..... 15-2
15.2 Responses to Substantive Comments ..... 15-3
15.2.1 Availability of Management Plans for Public Review ..... 15-3
15.2.2 Identification of Effects from Management Plans ..... 15-4
15.2.3 Development of a Fire Management Plan ..... 15-5
15.2.4 Development of Weed Management Plan ..... 15-6
15.2.5 Document Disclosure and Transparency ..... 15-6
**Master Response 16 Air Quality ..... 16-1**
16.1 Summary of Substantive Comments ..... 16-2
16.2 Responses to Substantive Comments ..... 16-2
16.2.1 Air Quality Analysis Overview ..... 16-3
16.2.2 Baseline Information ..... 16-4
16.2.3 Regional Air Quality ..... 16-5
16.2.4 Ozone and Particulate Matter Transport ..... 16-6
16.2.5 Analysis of Fine Particulate Matter and Health Effects ..... 16-6
16.2.6 Dispersion Analysis and Attainment of NAAQS ..... 16-7
16.2.7 Federal Clean Air Act Conformity Analysis ..... 16-8
16.2.8 Combined Construction and Operations Emissions Analysis ..... 16-9
16.2.9 Adequacy of Mitigation Measures ..... 16-9
16.2.10 Consistency of Analysis Between the Draft EIS and TMV EIR ..... 16-10
**Master Response 17 Monitoring and Adaptive Management ..... 17-1**
17.1 Summary of Substantive Comments ..... 17-1
17.2 Responses to Substantive Comments ..... 17-1
17.2.1 Long-Term Monitoring ..... 17-1
17.2.2 Measureable Criteria and Adaptive Management ..... 17-2

**Volume II References**

**Attachment 1: Comment Letters**

# Tables and Figures


**Page**

Table MR1A-1. Comments Addressed in Master Response 1A ..... 1A-1
Table MR1B-1 . Comments Addressed in Master Response 1B ..... 1B-1
Table MR1C-1. Comments Addressed in Master Response 1C ..... 1C-1
Table MR1D-1. Comments Addressed in Master Response 1D ..... 1D-1
Table MR1E-1. Comments Addressed in Master Response 1E ..... 1E-1
Table MR1F-1. Comments Addressed in Master Response 1F ..... 1F-1
Table MR1G-1. Comments Addressed in Master Response IG ..... 1G-1
Table MR1H-1. Comments Addressed in Master Response 1H ..... 1H-1
Table MR1I-1. Comments Addressed in Master Response 1I ..... 1I-1
Table MR2-1. Comments Addressed in Master Response 2 ..... 2-1
Table MR3-1. Comments Addressed in Master Response 3 ..... 3-1
Table MR4-1. Comments Addressed in Master Response 4 ..... 4-1
Table MR4-2. Proposed TU MSHCP Alternative - Other Covered Species Potential Indirect Effects Matrix ..... 4-ϕ
Table MR5-1. Comments Addressed in Master Response 5 ..... 5-1
Table MR6-1. Comments Addressed in Master Response 6 ..... 6-1
Table MR7-1. Comments Addressed in Master Response 7 ..... 7-1
Table MR8-1. Comments Addressed in Master Response 8 ..... 8-1
Table MR9-1. Comments Addressed in Master Response 9 ..... 9-1
Table MR10-1. Comments Addressed in Master Response 10 ..... 10-1
Table MR11-1. Comments Addressed in Master Response 11 ..... 11-1
Table MR12-1. Comments Addressed in Master Response 12 ..... 12-1
Table MR13-1. Comments Addressed in Master Response 13 ..... 13-1
Table MR14-1. Comments Addressed in Master Response 14 ..... 14-1
Table MR15-1. Comments Addressed in Master Response 15 ..... 15-1
Table MR16-1. Comments Addressed in Master Response 16 ..... 16-1
Table MR17-1. Comments Addressed in Master Response 17 ..... 17-1

**Figure** **Follows Page**

Figure 14-1 Cultural Resources ..... MR 14-6

# Master Response Acronyms

| | |
|---|---|
| AB | Assembly Bill |
| amsl | above mean sea level |
| AVAQMD | Antelope Valley Air Quality Management District |
| BGEPA | Bald and Golden Eagle Protection Act |
| BMP | best management practice |
| CAAQS | California Ambient Air Quality Standards |
| CalEEMod | California Emission Estimator Model |
| CARB | California Air Resources Board |
| CBD | Center for Biodiversity |
| CBI | Conservation Biology Institute |
| CC&Rs | covenants, conditions, and restrictions |
| CCR | California Code of Regulations |
| CDFG | California Department of Fish and Game |
| CEQ | Council on Environmental Quality |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFR | Code of Federal Regulations |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| CNRA | California Natural Resources Agency |
| $CO_2$ | carbon dioxide |
| Condor Plan | California Condor Recovery Plan |
| CWA | Clean Water Act |
| DDT | dichlorodiphenyltrichloroethane |
| DOI | U.S. Department of the Interior |
| DPM | diesel particulate matter |
| EIR | environmental impact report |
| EIS | environmental impact statement |
| EKAPCD | Eastern Kern Air Pollution Control District |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| FGC | California Fish and Game Code |
| FPP | fire prevention plan |
| FR | *Federal Register* |
| FRAP | fire and resource assessment program |
| FOIA | Freedom of Information Act |

| | |
|---|---|
| GHG | greenhouse gas |
| GIS | geographic information system |
| GPS | global positioning system |
| HCP | habitat conservation plan |
| HSI | habitat suitability index |
| I-5 | Interstate 5 |
| IPCC | Intergovernmental Panel on Climate Change |
| IPMP | integrated pest management plan |
| ITP | incidental take permit |
| IUCN | International Union for Conservation of Nature |
| MOA | Memorandum of Agreement |
| MDAB | Mojave Desert Air Basin |
| MPV | minimum population viability |
| MSHCP | multiple species habitat conservation plan |
| NAAQS | national ambient air quality standards |
| NAHC | Native American Heritage Commission |
| NDVI | nominalized difference vegetation index |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NHTSA | National Highway Traffic Safety Administration |
| NMFS | National Marine Fisheries Service |
| $NO_X$ | nitrogen oxide |
| NWR | National Wildlife Refuge |
| $O_3$ | ozone |
| OPR | Office of Planning and Research |
| PM | particulate matter |
| $PM_{10}$ | particulate matter less than or equal to 10 microns in diameter |
| $PM_{2.5}$ | particulate matter less than or equal to 2.5 microns in diameter |
| PVA | population viability analysis |
| ROD | Record of Decision |
| ROG | reactive organic gas |
| RWQCB | Regional Water Quality Control Board |
| RWMP | Ranchwide Management Plan |
| SB | Senate Bill |
| SCAB | South Coast Air Basin |
| SCAQMD | South Coast Air Quality Management District |
| Scoping Plan | Climate Change Scoping Plan: A Framework for Change |
| SHPO | State Historic Preservation Office |
| SIP | state implementation plan |

| | |
|---|---|
| SJVAB | San Joaquin Valley Air Basin |
| SJVAPCD | San Joaquin Valley Air Pollution Control District |
| SR | State Route |
| SSURGO | Soil Survey Geographic |
| TAC | toxic air contaminant |
| TCWD | Tejon Castac Water District |
| TMV | Tejon Mountain Village |
| TMV EIR | Tejon Mountain Village Environmental Impact Report |
| TRC | Tejon Ranchcorp |
| UCSB | U.C. Santa Barbara |
| USACE | U.S. Army Corps of Engineers |
| U.S.C. | United States Code |
| USDA | U.S. Department of Agriculture |
| USGCRP | United States Global Change Research Program |
| USGS | U.S. Geological Survey |
| VERA | voluntary emissions reduction agreement |
| VHF | very high frequency |

# California Condor Data and Habitat Use

**Table MR1A-1. Comments Addressed in Master Response 1A**

| Comment | Commenter |
|---|---|
| O4-74 | Center for Biological Diversity, Adam Keats |
| O4-75 | Center for Biological Diversity, Adam Keats |
| O4-76 | Center for Biological Diversity, Adam Keats |
| O4-77 | Center for Biological Diversity, Adam Keats |
| O4-79 | Center for Biological Diversity, Adam Keats |
| O4-80 | Center for Biological Diversity, Adam Keats |
| O4-81 | Center for Biological Diversity, Adam Keats |
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| O4-86 | Center for Biological Diversity, Adam Keats |
| O4-87 | Center for Biological Diversity, Adam Keats |
| O4-88 | Center for Biological Diversity, Adam Keats |
| O4-88A | Center for Biological Diversity, Adam Keats |
| O4-89 | Center for Biological Diversity, Adam Keats |
| O4-90 | Center for Biological Diversity, Adam Keats |
| O4-91 | Center for Biological Diversity, Adam Keats |
| O4-93 | Center for Biological Diversity, Adam Keats |
| O4-94 | Center for Biological Diversity, Adam Keats |
| O4-124 | Center for Biological Diversity, Adam Keats |
| O4-376 | Center for Biological Diversity, Adam Keats |
| O4-378 | Center for Biological Diversity, Adam Keats |
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| O4-390 | Center for Biological Diversity, Adam Keats |
| O4-391 | Center for Biological Diversity, Adam Keats |
| O4-392 | Center for Biological Diversity, Adam Keats |

| Comment | Commenter |
|---|---|
| O4-393 | Center for Biological Diversity, Adam Keats |
| O4-394 | Center for Biological Diversity, Adam Keats |
| O4-395 | Center for Biological Diversity, Adam Keats |
| O4-396 | Center for Biological Diversity, Adam Keats |
| O4-397 | Center for Biological Diversity, Adam Keats |
| O4-398 | Center for Biological Diversity, Adam Keats |
| O4-399 | Center for Biological Diversity, Adam Keats |
| O4-400 | Center for Biological Diversity, Adam Keats |
| O4-401 | Center for Biological Diversity, Adam Keats |
| O4-402 | Center for Biological Diversity, Adam Keats |
| O4-403 | Center for Biological Diversity, Adam Keats |
| O4-404 | Center for Biological Diversity, Adam Keats |
| O4-405 | Center for Biological Diversity, Adam Keats |
| O4-406 | Center for Biological Diversity, Adam Keats |
| O4-415 | Center for Biological Diversity, Adam Keats |
| I293-13 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-14 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-15 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-16 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-17 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-18 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-19 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-20 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-21 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-22 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-23 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-58 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I626-5 | Hamber, Robert |
| I627-44 | Hamber, Robert |

# 1A.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to California condor data and habitat use. Table MR1A-1 provides a list of the commenters and a reference to the individual comments, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

This response begins with an overview of recent developments regarding the available data on the use of Tejon Ranch by California condors, followed by specific responses on issues raised in the comments on the Draft EIS and TU MSHCP (Section 1A.2.1, Overview).

- The Draft EIS and TU MSHCP do not acknowledge the limitations and biases of the data on condor movement and habitat use. (Response provided in Section 1A.2.2, Limitations and Use of Condor Data.)
- The data on condor movement and habitat use do not support the delineation of the Condor Study Area and underestimate condor use of the TMV Planning Area. (Response provided in Section 1A.2.3, Use of Data to Determine Boundaries of the Condor Study Area and to Depict Condor Use of the TMV Planning Area.)
- Estimates of the area used by condors should include all areas within at least 0.5 mile of individual condor data points, nests, and feeding sites. (Response provided in Section 1A.2.4, Use of Buffers Around Data Points.)
- The Draft EIS and TU MSHCP should acknowledge that the pattern of recent condor global positioning system (GPS) occurrences for Tejon Ranch show increased use of Tejon Ranch and indicates its importance for the recovery of the species. (Response provided in Section 1A.2.5, Recent Condor Data and Habitat Use by Fully Recovered Populations.)

# 1A.2 Responses to Substantive Comments

## 1A.2.1 Overview

Subsequent to the period reflected in the data used in the TU MSHCP and Draft EIS (December 2008), there was a substantial increase in the use of Tejon Ranch by California condors (U.S. Fish and Wildlife Service 2011, unpublished data) (refer to Figure 3.1-7 in Volume I of this Supplemental Draft EIS for an illustration of condor GPS data between January 2010 and May 2011). After evaluating the more recent data and comments on the TU MSHCP and Draft EIS, the Service contracted with the U.S. Geological Survey (USGS) to conduct an independent analysis of all condor data sets for the southern California subpopulation of the California condors. The USGS analyzed the use of space by the California condors in six management units in southern California: Hopper Mountain and Bitter Creek National Wildlife Refuges, Wildlands Conservancy–Wind Wolves Preserve, TMV Planning Area, Condor Study Area, and the remaining areas of Tejon Ranch. Space use was analyzed using location data from GPS transmitters collected by the Service between 2004 and 2009 and geographic information system (GIS) data. The results of this analysis identify probable use by California condors of these six management units, with the Hopper Mountain and Bitter Creek National Wildlife Refuge units receiving the highest overall concentration of use by condors during this time period. Within Tejon Ranch, the Condor Study Area unit received the highest concentration of use during this period. The analysis also identified individual condor home ranges for the population of California condors occupying southern California. The report clarifies that condors currently, and are likely to continue, to use all three of the Tejon Ranch management units, as well as the other three management units outside Tejon Ranch. The Service considers the

USGS study and recent GPS data to be the best scientific information available regarding condor use of these management units, and the data that provides the most updated interpretation of condor use of Tejon Ranch and other southern California locations. This study is included as Appendix I to this Supplemental Draft EIS.

The Service has updated the effects analysis in this Supplemental Draft EIS to include the most current information on use of the ranch by the California condor; the applicant (Tejon Ranchcorp [TRC]) has similarly updated the TU MSHCP. Specifically, GPS data from January 1, 2010, through May 2011, as well as the data presented in the USGS report, were reviewed, analyzed, and incorporated into this Supplemental Draft EIS and TU MSHCP, as reflected in Sections 3.1 and 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS. Of note, the extent and pattern of habitat use by condors within Tejon Ranch indicated by the 2010–2011 dataset is very consistent with overall use discussed in the USGS report (Appendix I of this Supplemental Draft EIS).

## 1A.2.2 Limitations and Use of Condor Data

Several comments pointed to limitations in the California condor point data as a basis for determining patterns of condor use on Tejon Ranch or the boundaries of areas that would be used by condors. Comments pointed to observer biases in earlier data sets based on visual and ground-based radio telemetry. Other comments pointed out that the recent GPS data are limited to a portion of the released condor population and relatively few years of data collection. Another comment suggested difficulties in interpreting point data, because data points represent just one instance of use by a bird, which is not stationary and faces effects from a variety of surrounding sources at various distances. This comment also suggested that point data are of limited utility in determining boundaries of usage areas. Other comments suggested that the data give an inaccurate impression of current and historical condor use, that other studies or data sets are more accurate, and/or additional data sets should be included.

The Service recognizes the value in all of the condor data sets, as well as the limitations pointed out in the comments. Although the recent GPS point data alone may not capture the entire pattern of use on Tejon Ranch, this Supplemental Draft EIS considers a combination of both the historic data sets (including visual observations, radio telemetry, and satellite data) and current datasets (including recent GPS data, current visual observations, and radio telemetry data). While some of these individual datasets show particular biases (that is, characteristics of the dataset that make the sample deviate from a truly random sample; i.e., observer bias), the Service believes this combination of data sets represents the best scientific and commercial data available to assess current condor use and potential future condor use of Tejon Ranch.

Additionally, while GPS point datasets are important components of the information used to make conclusions and conservation decisions regarding condor use of Tejon Ranch (as they provide highly accurate and precise condor locations at a given point in time), the Service agrees that conservation decisions should not be based solely on the condor point data. Therefore, this Supplemental Draft EIS (Section 3.1, Biological Resources) and the TU MSHCP (Chapter 4.0, California Condor) include an in-depth qualitative and quantitative discussion of both historic (1850 to 1987) and recent (1992 to 2010) condor use of Tejon Ranch. Some of the key qualitative observations (i.e., apart from the more recent GPS and radio telemetry data) included in this discussion are noted below.

- Condors were observed almost continuously in the ranch area between 1850 and 1987.
- Historically, the intensity of condor use varied seasonally in accord with recent and historical patterns of food availability. The fall peak of condor use of the Tehachapi Mountains and portions of Tejon Ranch appeared to be at least in part related to deer and other mammal hunting, as many observations of condors were on deer gut piles and deer carcasses. In addition,

current GPS data suggest there is heavy condor use of the ranch in spring, coinciding with the increase in pig hunting with warmer spring weather.

- Condors were observed roosting in portions of the ranch, particularly Winters Ridge, where there are patches of conifers in relatively undisturbed areas.

The Service also recognizes differences in the characterization of the historic condor range maps in the TU MSHCP and Cogan (2009). However, such differences are to be expected because both maps broadly indicate where condors occurred historically based on data that was not as precise as it is today with respect to condor locations and habitat use. The Service does not assume that readers will be misled into believing the entire historic range of the condor would remain free of development or remain intact, based on the proposed plan description in the TU MSHCP.

## 1A.2.3 Use of Data to Determine Boundaries of the Condor Study Area and to Depict Condor Use of the TMV Planning Area

One comment suggested that current occurrence point data are factored too heavily in determining the Condor Study Area boundary and that the boundary is not supported by recent point data. One comment suggested that the data show heavy use of the TMV Planning Area as an important habitat area, and other comments suggested that all condor datasets show similarity and stability in condor use patterns, including use of the TMV Planning Area. Another comment suggested that historic and current use was the most important data in assessing impacts on the condor. Another comment pointed to GPS data that indicate the TMV Planning Area is one of the most heavily used areas of critical habitat, although it is excluded from the Condor Study Area. Comments expressed concern that the absence of condor presence data is taken to imply that areas are not condor habitat.

The Condor Study Area boundaries were originally designed to preserve what, at the time, was thought to be the most important roosting and foraging condor habitat on the ranch (Master Response 1B, California Condor Critical Habitat, for additional information). Based on current GPS data and the updated interpretation of this data, as well as the Condor Recovery Program's ground-truthing of GPS data points on Tejon Ranch, the Service agrees that the increasing population of California condors is now foraging more extensively across the Covered Lands, including in the TMV Planning Area, rather than just in the Condor Study Area. This conclusion is supported by the 2010 USGS study (Appendix I), which confirmed that the home ranges of all GPS-tagged condors tracked in 2009 (n=14) overlapped the TMV Planning Area, Condor Study Area, and the remaining portions of Tejon Ranch (Tejon Management Unit), as well as the other three southern California management units (Bitter Creek and Hopper Mountain National Wildlife Refuges, and Wind Wolves Preserve). The updated data also confirm that the ongoing pattern of use at Tejon Ranch has remained consistent, with overflights and foraging occurring across much of the Covered Lands, and roosting and feeding events (characterized by stationary GPS hits) occurring more frequently in the Condor Study Area, but also occurring elsewhere in the Covered Lands, including within the TMV Planning Area.

Based on the revised model of suitable foraging habitat, and considering other significant habitat features in the Condor Study Area, including the traditional roost sites on Winters Ridge and its connectivity to the other critical habitat areas and historic portions of the species range to the northeast of Tejon Ranch, the Service affirms the original designation of the Condor Study Area as an area of particular conservation value to the condor (Master Response 1B, California Condor Critical Habitat, for a detailed discussion on the configuration of the Condor Study Area).

In summary, the evaluation of different areas of Tejon Ranch as suitable habitat for the California condor focuses on distinctions between foraging habitat, traditional roost sites, night roosts, and

connectivity to the other portions of the species historic range. As previously stated, the Service recognizes that California condors may now use nearly all of Tejon Ranch at any given time, and that use is focused on specific locations depending on the availability of food resources, temporary overnight roosting behavior, and the regular use of the traditional roost sites in the Condor Study Area. In addition, the USGS has documented probable use of Tejon Ranch, the Condor Study Area, and the TMV Planning Area by California condors in the future (USGS report, Appendix I). Based on this information, in combination with the revised model of suitable foraging habitat for the California condor on Tejon Ranch, the Service has updated the analysis in this Supplemental Draft EIS to reflect the more recent information on California condor habitat use in the Covered Lands. Similarly, TRC has updated the TU MSHCP to reflect the same data.

## 1A.2.4 Use of Buffers Around Data Points

Comments suggested using a 0.5-mile buffer around individual condor data points. One comment suggested that even though use of 0.5-mile buffers are based on guidelines for avoidance of condor nests, this distance still appears reasonable for use as a buffer around individual condors in flight. Comments also suggested that a 0.5-mile buffer from feeding sites may be too small and that the ecological footprint of development may extend beyond property lines.

The Service disagrees with comments suggesting that a 0.5-mile buffer around each condor data point should be used to assess use patterns and potential effects on condor habitat; it is inappropriate to use a buffer around condor point locations that can change hourly, particularly in the case of birds in flight. Current GPS data show condors traveling throughout a large portion of their historic range, including across interstate highways and developed areas such as Santa Clarita. Condor data points are continuously generated and as the condors continue to expand their range, an increasingly larger data set will be generated covering more area. As discussed below and in Master Response 1G, California Condor Overflight Habitat Connectivity, the Service does not think the development proposed under the TU MSHCP would interfere with the ability of condors to continue to access the portions of their range outside the TMV Planning Area or beyond the borders of Tejon Ranch.

The Service has also calculated the direct loss of foraging habitat and the indirect effect of the Commercial and Residential Development Activities on condors under the Proposed TU MSHCP Alternative, as discussed below and described in detail in Master Response 1E, California Condor Loss of Foraging Habitat (similar analyses for the other action alternatives are also included in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS). The traditional roost site in the Winters Ridge area of the Condor Study Area would be more than 5 miles from the nearest proposed development, and would be buffered from proposed development by topography. Potential adverse effects on condors as a result of Covered Activities outside the TMV Planning Area would be minimized as discussed in the Section 4.1, Biological Resources, in this Supplemental Draft EIS, and Section 4, California Condor, in the TU MSHCP. Because the Service believes the direct and indirect effects of the Covered Activities on condors and their habitat would not restrict the condors' ability to access portions of their historic range outside of the Covered Lands and beyond Tejon Ranch, it is unnecessary to consider buffered condor data points in the EIS analysis.

Instead of adding a 0.5-mile buffer around each condor data point, the Service believes it is more appropriate to address the indirect effects on the condor associated with development by quantifying areas of habitat that are unlikely to provide the same habitat value to the species following development. Therefore, the Service has determined that a 0.5-mile distance from the development envelope for each alternative would be subject to development-related noise and visual effects, and this area would not continue to function as foraging habitat for condors. The Service recognizes that condors are sensitive to disturbance while feeding, and while there is no known documentation examining minimum or maximum distances at which condors would be

disturbed prior to or during feeding, the 0.5-mile distance is based on the best available scientific and commercial information, including previously used buffer distances associated with roosting and nesting, as well as field observations of proffered and non-proffered feeding events. The Service believes a 0.5-mile disturbance area extending out from the edge of the proposed development envelope captures the potential indirect effects associated with proposed Commercial and Residential Development Activities under the action alternatives (Master Response 1E, California Condor Loss of Foraging Habitat, for a more detailed discussion of distances identified to avoid condor disturbance).

Furthermore, the Service does not believe the development proposed in the TU MSHCP would interfere with the ability of condors to continue to access the portions of their range outside the TMV Planning Area. Current GPS data indicate that condors travel throughout a large portion of their historic range, including across interstate highways and developed areas such as Santa Clarita. Based on current condor movements over developed areas, the Service does not believe development proposed under the TU MSHCP would impede condors from accessing the conservation areas of the ranch outside the TMV Planning Area, including the Condor Study Area, other critical habitat units, or suitable foraging habitat and roost and nest sites in the southern Sierra Nevada and its foothills, and the Coast Range (Master Response 1B, California Condor Critical Habitat, and Master Response 1G, California Condor Overflight Habitat Connectivity).

## 1A.2.5 Recent Condor Data and Habitat Use by Fully Recovered Populations

Several comments cautioned against using the distribution of recent condor GPS occurrences for Tejon Ranch as representative of what is expected to occur in the long term and suggest that the increasing use of Tejon Ranch indicates its importance for recovery of the species. Other comments suggested that the analysis should consider use by fully recovered populations. Another comment noted that the condor data from 2002 to 2008 may be influenced by the presence of feeding stations at other locations.

As indicated in the Master Response 1E, California Condor Loss of Foraging Habitat, and Master Response 1B, California Condor Critical Habitat, the Service recognizes the increase in use of the ranch by the increasing population of condors shown in the most recent GPS data set (2010 and 2011), and the USGS data analysis of condor use of six management units in southern California (Appendix I). Accordingly, the analysis in this Supplemental Draft EIS has been updated to reflect that data, as has the analysis provided in the TU MSHCP.

However, at this time, the Service cannot predict with any accuracy the size of a future, fully recovered southern California condor subpopulation, or when recovery would be achieved. As explained in Master Response 1B, California Condor Critical Habitat, the Service has based the evaluation of future condor use of the ranch on the recovery plan goal of a population of 150 reproductively self-sustaining condors, even though that projection is unlikely to be achieved in the foreseeable future. As discussed in greater detail in the Master Response 1E, California Condor Loss of Foraging Habitat, and Master Response 1B, California Condor Critical Habitat, the Service believes that the suitable foraging habitat conserved on the TU MSHCP Mitigation Lands and Existing Conservation Easement Areas in general, along with the traditional roost sites and other potential roosting habitat conserved in the Condor Study Area under the TU MSHCP, and the additional foraging habitat conserved on other ranch lands under the Ranchwide Agreement, would accommodate future use of Tejon Ranch by a population of 150 condors, population movement by existing condors, and, importantly, would permanently maintain the conservation value of Tejon Ranch as a foraging and roosting area, even after the condor is fully recovered.

**Table MR1B-1 .Comments Addressed in Master Response 1B**

| Comment | Commenter |
|---|---|
| O4-64 | Center for Biological Diversity (Keats, Adam) |
| O4-66 | Center for Biological Diversity (Keats, Adam) |
| O4-80 | Center for Biological Diversity (Keats, Adam) |
| O4-103 | Center for Biological Diversity (Keats, Adam) |
| O4-104 | Center for Biological Diversity (Keats, Adam) |
| O4-105 | Center for Biological Diversity (Keats, Adam) |
| O4-107 | Center for Biological Diversity (Keats, Adam) |
| O4-109 | Center for Biological Diversity (Keats, Adam) |
| O4-113 | Center for Biological Diversity (Keats, Adam) |
| O4-243 | Center for Biological Diversity (Keats, Adam) |
| O4-416 | Center for Biological Diversity (Keats, Adam) |
| O4-418 | Center for Biological Diversity (Keats, Adam) |
| O5-4 | Defenders of Wildlife (Flick, Pamela) |
| O5-16 | Defenders of Wildlife (Flick, Pamela) |
| O5-17 | Defenders of Wildlife (Flick, Pamela) |
| O10-15 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-18 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-23 | TriCounty Watchdogs (de Leeuw, Jan) |
| I212-1 | Burk, John W. |
| I212-5 | Burk, John W. |
| I293-5 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-6 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-7 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-8 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-9 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-10 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-11 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-12 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |

| Comment | Commenter |
|---|---|
| I293-17 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-22 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I 293-24 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-27 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-37 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-44 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-45 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-47 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-48 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I425-10 | Duchamp, Mark |
| I426-12 | Duchamp, Mark |
| I948-17 | Manning, Jeffrey A |
| I948-26 | Manning, Jeffrey A |
| I948-28 | Manning, Jeffrey A |
| I1054-3 | Moore, Stan |
| I1163-8 | Palmer, Bruce |
| I1300-5 | Risebrough, Bob |
| I1300-14 | Risebrough, Bob |

# 1B.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to California condor critical habitat and the determination of adverse modification of that habitat. Table MR1B-1 provides a list of the commenters and a reference to the individual comment, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

This response begins with an overview of the Service's approach to the evaluation of the effects of the Proposed TU MSHCP Alternative and associated incidental take permit (ITP) on critical habitat. The overview discussion is followed by responses to the individual issues raised by commenters.

- The Draft TU MHSCP and the Draft EIS did not adequately define, discuss or analyze critical habitat for the California condor. (Response provided in Section 1B.2.2, Definition, Discussion, and Analysis of Critical Habitat for the California Condor.)
- The Draft TU MSHCP improperly uses the Condor Study Area , rather than the critical habitat boundaries, to identify important condor habitat on the ranch, and the Condor Study Area boundary itself is inappropriate because it excludes important habitat. (Response provided in Section 1B.2.3, Definition and Significance of the Condor Study Area.)
- The Draft TU MSHCP and Draft EIS incorrectly interpret the California Condor Recovery Plan regarding the importance of loss of foraging habitat. (Response provided in Section 1B.2.4, Loss of Foraging Habitat in the California Condor Recovery Plan.)
- The Draft TU MSHCP does not reach an accurate and well-supported conclusion regarding adverse modification of critical habitat. In addition, the Service must distinguish between the terms *destruction* and *adverse modification* when describing the effects on critical habitat, in accordance with Section 7(a)(2) of the Endangered Species Act (ESA). (Response provided in Section 1B.2.5, Adverse Modification of Critical Habitat.)
- Development in critical habitat could set a precedent for development with substantial adverse effects and continuation of the *status quo* as mitigation. (Response provided in Section 1B.2.6, Development in the Critical Habitat.)
- The assessment in the Draft EIS under-represents the "action area." (Response provided in Section 1B.2.7, Findings Required under the Endangered Species Act.)
- The Draft TU MSHCP does not adequately evaluate potential effects on the California condor population movements across all critical habitat units. (Response provided in Section 1B.2.8, Potential Effects on Condor Population Movements Across All Critical Habitat Units.)

# 1B.2 Responses to Substantive Comments

## 1B.2.1 Overview

Portions of the lands on Tejon Ranch proposed to be covered by the TU MSHCP lie in critical habitat for the California condor. As a consequence, the Service is required to analyze condor habitat on ranch lands both within and outside of the critical habitat under two different statutes. In compliance with the National Environmental Policy Act (NEPA), the Service is required to analyze the effects of the proposed Federal action on the human environment. That analysis must include an evaluation of the proposed action on condor habitat, including critical habitat. This Supplemental

Draft EIS has been prepared to meet the Service's NEPA obligations. Thereafter, the Service is required to render a formal determination of the effects of the proposed ITP and TU MSHCP on critical habitat for the California condor as part of the Service's intra-Service consultation under Section 7 of the ESA. This determination is made in a biological opinion that formally addresses the issue of the destruction or adverse modification of critical habitat.

Under the Section 7 process, as informed by the NEPA EIS process, the Service will determine whether the proposed Federal action would result in the destruction or adverse modification of critical habitat consistent with the Ninth Circuit Court of Appeals decision in *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir. 2004) (*Gifford Pinchot*). The Service no longer relies on the regulatory definition of critical habitat. Instead, consistent with *Gifford Pinchot*, the Service relies on the statutory definition of critical habitat under the ESA and analyzes the effects of the proposed action on the ability of critical habitat to carry out its intended function and conservation role. Thus, in reviewing the effects of a proposed Federal action that would eliminate or degrade the habitat value of specific lands within the boundaries of critical habitat, the Service analyzes what the effects of such habitat elimination or degradation are likely to be on the overall ability of critical habitat to perform its conservation function. The analysis is species-specific and habitat-specific, and considers the life history needs of the species and the particular role of the affected critical habitat in meeting those life history needs. The analysis also considers the extent to which the effects of the proposed action on the specific critical habitat area alter the overall capability of critical habitat to serve its intended conservation role and function.

As noted above, the Service has not yet completed the ESA Section 7 process. The Draft TU MSHCP is the applicant's document and the analysis and conclusions in the Draft TU MSHCP regarding critical habitat are those of the applicant (Tejon Ranchcorp [TRC]).

Since the Draft TU MSHCP and Draft EIS were released to the public, the Service has considered the comments provided by the public on this issue, as well as current condor management methods being implemented by the Service's California condor recovery program in Southern California, updated condor global positioning system (GPS) location data, and the 2010 analysis by the U.S. Geological Service (USGS) (Johnson et al. 2010) (Appendix I of this Supplemental Draft EIS). Based on this updated analysis, as well as continued use of prior and more recent California condor GPS location data, the Service has developed a revised model of foraging habitat for the California condor, which is described in greater detail in Master Response 1E, California Condor Loss of Foraging Habitat. The analysis in this Supplemental Draft EIS (Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS) has been updated to reflect the updated condor data, including the USGS study and the revised foraging habitat suitability model, to more accurately evaluate the effects of the Proposed TU MSHCP Alternative on the condor and its habitat, including direct and indirect loss of foraging habitat that would likely result from proposed development activities. The project applicant, TRC, has updated the analysis in the TU MSHCP as well.

The following discussion addresses the significance of the updated California condor analysis and the revised amount of suitable foraging habitat available on Tejon Ranch. The discussion specifically considers the anticipated effects of the TU MSHCP on the species and its essential foraging and roosting habitat in critical habitat and ranchwide, as well as the issue of connectivity to other suitable condor habitat (including nesting habitat) within the species' historical range.

## 1B.2.2 Definition, Discussion, and Analysis of Critical Habitat for the California Condor

Commenters raised a series of issues relating to critical habitat for the California condor. Several commenters emphasized the importance of the habitat on Tejon Ranch and its significance as critical habitat for recovery of the condor. Other commenters suggested that TMV Project lands are some of

the most important areas for condors within critical habitat areas. Commenters also noted important habitat elements, such as native ungulate populations, topography, and populations of ravens and golden eagles, which assist condors in foraging and roosting. One commenter stated broadly that the TU MSHCP and Draft EIS are too inadequate to allow for an analysis of effects and do not mention or discuss critical habitat. Other commenters sought better, additional, and clearer information regarding condor use, hunting restrictions, and the definition of critical habitat. Several commenters called for consideration of recovered or expanded future condor populations. Other commenters expressed concern regarding the reliance on historical and current condor habitat use data, or assessments of "static environmental conditions" to determine critical habitat. One commenter asked that the use of appropriate buffers around development be used to calculate effects on critical habitat. One commenter suggested that the foraging and feeding functions of Tejon Ranch would be preserved through management of the large conserved area. One commenter noted that critical habitat cannot be assessed without consideration of management practices.

The Service designated critical habitat for the California condor in 1976 (41 *Federal Register* [FR] 41914, September 24, 1976). It was one of the first critical habitat designations, was demarcated generally by township and range lines, and lacks the detailed discussion of essential habitat features and primary constituent elements that are characteristic of more recent designations. The totality of the discussion of Tejon Ranch in the 1976 final rule is as follows:

> The Tejon Ranch, Kern County rangelands, and Tulare County rangelands, as described below, are considered critical for feeding and related activities. The Tejon Ranch is very important because it contains the only significant feeding habitat remaining in close proximity to the Sepe-Piru Condor nesting area. In most cases Condor feeding habitat is not so restricted as nesting and roosting sites, and only certain portions of the areas described below are needed at any one time. Because, however, the location of food is directly related to both Condor distribution and reproductive success, substantial areas of open range, with adequate food, and limited development and disturbance, would have to be preserved in each delineated area in order to maintain the species.
>
> Tejon Ranch: an area of land, water and airspace in Kern County, with the following components (San Bernardino Meridian): R16W T10N, R17W T10 N, R17W T11N, R18W T9N, R18W T10N, R19W T10N (41 FR 41914–41916).

The Tejon Ranch critical habitat unit encompasses 134, 871 acres. A total of 102,098 acres of critical habitat would be conserved under the TU MSHCP and the Ranchwide Agreement, which include both suitable foraging habitat and traditional roosting areas. As discussed above, the specific conservation function of the Tejon critical habitat unit as described in the final critical habitat rule is to provide essential feeding (foraging) areas for the California condor. In addition, the Tejon critical habitat unit provides areas for roosting, including traditional roost sites, as well as habitat connectivity to other portions of the historic range outside and beyond the boundaries of Tejon Ranch. As discussed previously, the Service has revised the model of foraging habitat for the California condor on Tejon Ranch (Master Response 1E, California Condor Loss of Foraging Habitat). Based on the revised model, there are 87,400 acres of suitable foraging habitat in the Tejon Ranch critical habitat unit. Commercial and Residential Development Activities proposed under the TU MSCHP would result in the direct loss and indirect effects on 12,015 acres of foraging habitat in the Tejon Ranch critical habitat unit. Approximately 80,231 acres of critical habitat, including 46,045 acres of foraging habitat, in the critical habitat unit would be conserved in the TU MSHCP Mitigation Lands. In addition, 21,867 acres of critical habitat, including approximately 18,261 acres of suitable foraging habitat, would be conserved outside of the Covered Lands under the Ranchwide Agreement.

In evaluating the effects of the TU MSHCP on condor critical habitat, the Service considered the loss of foraging habitat and the effect such loss is likely to have on the availability of food for the condor, as well as the amount of foraging habitat that would be lost and conserved under the TU MSHCP.To estimate the available food supply for free-flying condors in California, the Service calculated the

number of carcasses that would be necessary to support one wild population of 150 condors in their historic range (with the other disjunct wild population identified in the Recovery Plan occurring in Arizona), and the amount of available carcasses from cattle operations, hunting and natural sources, within the range of the California population. (See discussion under Section 1B.2.4, Loss of Foraging Habitat in the California Condor Recovery Plan, below.) Using this information, the Service assessed the importance of Tejon Ranch to a wild population of condors in California in terms of the estimated amount of annual livestock and wildlife mortality available to condors that currently use Tejon Ranch and that are anticipated to use it in the future.

In summary, a total of 14,837 acres of critical habitat, including 12,015 acres of suitable foraging habitat for the condor, would be lost and indirectly affected as a result of development within the TMV Planning Area. Approximately 80,231 acres of California condor critical habitat, including 46,045 acres of suitable foraging habitat, would be conserved in the TU MSHCP Mitigation Lands. An additional 21,867 acres of critical habitat, including 18,261 acres of suitable foraging habitat, would be conserved outside the Covered Lands under the Ranchwide Agreement.

Finally, the Service evaluated historic and current data on the use of Tejon Ranch by California condors (Master Response 1A, California Condor Data and Habitat Use). The California population of condors continues to grow, and the number of condors equipped with GPS data transmitters likewise continues to increase, providing the Service with a larger data set relative to the data included in the Draft TU MSHCP and Draft EIS. This larger data set reflects a pattern of increased use of Tejon Ranch by California condors, relative to the amount of use Tejon Ranch received at the time the Draft TU MSHCP and Draft EIS were published. Based on this updated information, condor use of traditional roosting and foraging locations in the Condor Study Area continues to increase, as does condor flyover and foraging activity within and in the vicinity of the TMV Planning Area.

### 1B.2.2.1 Food Supply within the Range of the California Condor

Free-flying California condors need approximately 2.2 pounds of food per day based on caloric requirements (Houston 1971, Wilbur 1978). Assuming condors obtain a minimum of 50 pounds of food from the average ungulate carcass (some carcasses likely provide more than 50 pounds), Wilbur (1978) calculated that a population of 50 condors would require 39,600 pounds of food or 720 carcasses per year. Based on these calculations, the Service estimates 2,160 carcasses per year would be necessary to provide enough food for one wild population of 150 condors (which would constitute one of the two wild and disjunct populations needed to meet the down-listing criteria of the California Condor Recovery Plan [U.S. Fish and Wildlife Service 1996], as discussed in Section 1B.2.4, Loss of Foraging Habitat in the California Condor Recovery Plan, below.) For the purposes of this EIS, the Service considers condors in southern California and condors in Big Sur/Pinnacles National Monument as two subpopulations that will both contribute to one free-flying population in California per the recovery plan down-listing criteria. Although condors in southern California are not currently mixing regularly with condors in the north (generally between the Big Sur Coast in Monterey County and Pinnacles National Monument in San Benito County), the Service expects that individuals, probably juveniles and unpaired adults, will eventually intermix more frequently than they currently are, if these subpopulations continue to grow and expand their ranges.

The total number of beef cattle reported in Kern, Los Angeles, San Luis Obispo, Santa Barbara, Tulare, Kings, and Ventura Counties in 2009 equaled 112,000 head (U.S. Department of Agriculture 2011) . There was an average mortality rate of 4.7% for cattle and calves in California from 1988 through 2010 (U.S. Department of Agriculture 2011). The U.S. Department of Agriculture includes death loss of all cattle in their reporting (J. Hardegree pers. comm) and the average mortality of range cattle could be lower or higher than the overall average. However, for lack of another available mortality rate, using an average mortality rate of 4.7%, it is estimated that approximately 112,000

head of cattle would provide 5,260 carcasses within the range of the southern California subpopulation of condors.

The average sheep and lamb mortality rate in California from 1988 through 2010 was 4.6% (U.S. Department of Agriculture 2011). Sheep also historically provided an important food resource for condors (Wilbur 1978, Koford 1953). A total of 106,600 sheep and lamb were reported in Kern and San Luis Obispo Counties in 2009 (Kern County 2009, San Luis Obispo County 2009), with an additional 28,460 sheep reported in Ventura County in 2009 (Ventura County 2010). Using the average mortality rate for sheep and lambs, 135,060 sheep and lambs would provide an estimated 6,212 sheep and lamb carcasses.

Based on the above livestock data, it is estimated that 11,472 cattle and sheep carcasses would be produced within the current range of the southern California subpopulation of condors, from San Luis Obispo County through Kings County (although because not all are range animals, not all of them would be available for condors), and an unknown number of native ungulate, other native mammal, and wild pig carcasses would provide additional food for condors. Livestock, wild pig, sand native ungulate carcasses in Monterey and San Benito Counties would add to the 11,472 carcasses estimated in the southern California subpopulation's current range. This is more than what would be needed (2,160 carcasses) to support one (California population) of the two populations of 150 free-flying condors identified in the recovery plan's down-listing criteria.

Not all carcasses would be found and eaten by condors. Some carcasses may be disposed of by landowners, consumed by other predators, or simply not discovered by condors. The variability in food availability is consistent with the opportunistic scavenging and far-ranging foraging behavior characteristic of condors (U.S. Fish and Wildlife Service 1976, 1996; Wilbur 1978; Snyder and Snyder 2000). For these reasons, the Service cannot accurately predict what proportion of the estimated annual food base would actually be used by condors, nor the number of condors these available carcasses would support. Regardless, reasonable estimates suggest that the overall available food supply is well in excess of that needed to support a population of 150 free-flying condors in California.

The Service anticipates that at least some of this food supply would continue to be available to condors. While livestock production in the condors' historic range in California may be declining, it is not expected to disappear from those counties in the foreseeable future; in fact, livestock production in Kern County appears to be increasing (Kern County 2007,2008, 2009, 2010). Because a substantial amount of potential food should be available for condors, it is not expected that all condors in the recovering population would feed exclusively on Tejon Ranch at all times. Large areas of additional suitable foraging habitat currently occur elsewhere in the historic range of the condor, including lands in public and private ownership (i.e., national forest and refuge lands, private ranches , and preserve lands). Overall, the Service estimates there are currently more than enough potential carcasses from livestock, hunting, and other mortality of native ungulates and feral pigs in the condors' historic range in California to support one of the two free-flying population of 150 birds envisioned in the recovery plan and necessary to down list the condor to threatened status (assuming the mortality factors, particularly lead poisoning, are minimized or eliminated).

The continued availability of a reliable and consistent food source for condors on Tejon Ranch is likely to increase in importance if the overall production of livestock within the range of the condor declines. Under the TU MSHCP, hunting and grazing would continue throughout the Tejon Ranch critical habitat unit as well as the other areas of foraging habitat on Tejon Ranch. Ranching would continue at current grazing levels up to a total of 14,500 head of cattle, consistent with past practices (Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS). Continued ranching would include grazing, breeding, and calving. Cattle would continue to be grazed on the TU MSHCP Mitigation Lands and Existing Conservation Easement Areas on the

Covered Land as well as the Tejon Ranch areas conserved under the Ranchwide Agreement outside the Covered Lands.

As outlined in the grazing plan in the Interim Ranchwide Management Plan (RWMP) (Tejon Ranch Company 2009), grazing would follow seasonal rotations currently in place, where cattle use grazing lands on the lower elevations of the ranch in the winter, moving gradually onto the higher elevation grazing lands through the spring and summer. The continuation of calving on Tejon Ranch, both on the TU MSHCP Mitigation Lands outside of the TMV Planning Area and on the other conserved rangelands on the ranch, is particularly important with regard to food availability for condors. Calves in particular have served as an important food source for condors in the past (Koford 1953, Wilbur 1978, Miller et al. 1965), and the Service (1976) has concluded that cow/calf operations on Tejon Ranch provide a crucial food source for condors.

The Service does not anticipate that carcasses in the TMV Specific Plan or Oso Canyon Development Envelopes, or within 0.5 mile of these Development Envelopes, would serve as a significant food source to condors based on disturbance associated with development. Therefore, the Service does not anticipate that these areas would remain functional as foraging habitat for condors following development in the TMV Planning Area (see discussion of indirect effects in Section 1B.2.2.2, Habitat Suitability Model, below, and Master Response 1E, California Condor Loss of Foraging Habitat).

Hunting, particularly hunter-killed native ungulate and feral pig carcasses and gut piles, also provides an important food source for condors on Tejon Ranch (see Master Response 1E, California Condor Loss of Foraging Habitat, for more discussion of hunting and potential effects associated with the Proposed TU MSHCP Alternative). Approximately 800 to 1,200 pigs are killed on Tejon Ranch each year (Tejon Ranch Conservancy pers. comm.). Wild pigs are expanding their range in California (California Department of Fish and Game 2011). Although not a Covered Activity under the Proposed TU MSHCP Alternative, TRC would continue its established commercial hunting program on the TU MSHCP Mitigation Lands and other conserved portions of the ranch. Managed hunting would also continue in the TMV Planning Area Open Space; however, as described above, the Service does not anticipate that carcasses associated with hunting in the open space within the TMV Specific Plan or Oso Canyon Development Envelopes, and within 0.5 mile of these Development Envelopes, would serve as a significant food source to condors based on disturbance associated with development (see discussion of indirect effects in Section 1B.2.2.2, Habitat Suitability Model, below and Master Response 1E, California Condor Loss of Foraging Habitat).

### 1B.2.2.2 Habitat Suitability Model

Another important consideration in evaluating the effects of the TU MSHCP on California condor critical habitat is the extent to which foraging habitat would be affected by the Covered Activities, particularly any development in the TMV Specific Plan or Oso Canyon Development Envelopes. The Service revised the model of foraging habitat for the condor to better evaluate the effects of the proposed action on condor foraging and feeding habitat on Tejon Ranch, including areas in the Tejon Ranch critical habitat unit.

The California condor forages opportunistically over large expanses of its range. It is a visual scavenger that may identify a food source on its own, or by following other scavenging species, such as common ravens and golden eagles, to locate carcasses. It is recognized that, by definition, an opportunistic scavenger feeds wherever it can find and access a food source. Responses to comments about the foraging behavior of California condors are described primarily in Master Response 1E, California Condor Loss of Foraging Habitat.

However, despite the fact that condors are able to fly over hundreds of square miles of diverse habitat types, certain habitat types are more likely to contain food sources that are more detectable and accessible to condors. Carrion located in grasslands and oak savannah will generally be

observable and accessible to condors because of the open structure of the vegetation. Although condors can locate food and feed under the canopy of various habitat types, including woodlands and chaparral, the Service does not believe this happens as consistently as feeding that occurs in savannahs or grasslands. Grasslands and savannahs are the vegetation communities that have been consistently identified as the primary foraging habitat for the California condor (U.S. Fish and Wildlife Service 1976, 1996; Snyder and Snyder 2000; Wilbur 1978; Koford 1953). These habitat types also likely provide the most consistent potential for condors to locate and access food sources. Given the substantial amount of woodland habitat types on Tejon Ranch (approximately 53,211acres), which include both thick canopy cover and dense vegetative understory (two characteristics that make it more difficult, although not impossible, for condors to access food), the Service does not believe it is accurate or appropriate to assume all woodland habitats on Tejon Ranch qualify as suitable foraging habitat. The Service also considered other habitat types that condors use as foraging habitat in other parts of their historic range, including *potreros* (open grassland) within chaparral and scrub. Although the scrub and chaparral habitat types on Tejon Ranch contain some amount of open ground mixed with dense ground cover, they do not contain large *potreros* conducive to grazing ungulates (areas where condors are known to feed within these habitat types) (U.S. Fish and Wildlife Service 1996). Therefore, the Service does not consider chaparral and scrub as suitable foraging habitat for condors on Tejon Ranch.

Commenters suggested that permitting the TU MSHCP could set a precedent for permitting actions that use "static environmental conditions" such as vegetation maps, to rank the quality of suitable habitat in order to justify adverse modification and fragmentation of critical habitat. While vegetation maps may be static to the extent they capture the particular environmental conditions present at the time the data used in the mapping was collected, the use of vegetation mapping to characterize habitat types is not a precedent-setting concept. The Service developed the suitable foraging habitat model for the California condor included in this Supplemental Draft EIS based on vegetation mapping, knowledge of the species and its foraging and feeding habits, and ground-truthing of those mapped vegetation types on Tejon Ranch (see Master Response 1E, California Condor Loss of Foraging Habitat, and Appendix D, Habitat Suitability Criteria Methods, to this Supplemental Draft EIS for more information on the revised foraging habitat model for the condor).

Approximately 6,653 acres of suitable foraging habitat in the Tejon Ranch critical habitat unit also occurs in TRC's potential Grapevine development, on the San Joaquin Valley floor at the edge of the foothills and extends up to the boundary of the Covered Lands at 2,000 feet above mean sea level (amsl). These 6,653 acres are located outside of the Covered Lands and are not proposed for conservation under the Ranchwide Agreement.

### 1B.2.2.3 Habitat Use

Additional data and analysis have become available since release of the Draft EIS and Draft TU MSHCP (U.S. Fish and Wildlife Service 2011, Johnson et al. 2010), and these data and analyses have been incorporated into the analysis presented in this Supplemental Draft EIS and the TU MSHCP (for a more detailed discussion of California condor habitat use on Tejon Ranch, please refer to Master Response 1A, California Condor Data and Habitat Use). Current California condor GPS data indicate that both the number of condors using the ranch and the extent of ranch lands used by condors have increased since the Draft EIS and Draft TU MSHCP were released for public comment in January 2009. While the Service's regulatory conclusion regarding the effects of the proposed ITP on the California condor and its critical habitat will be contained in the biological opinion for the proposed action, the Service has revised this Supplemental Draft EIS to reflect the updated analysis of the use of Tejon Ranch by California condors. Similarly, TRC has updated the relevant analysis in the TU MSHCP.

## 1B.2.3 Definition and Significance of the Condor Study Area

Several commenters specifically criticized the use of the historical and current data to establish the boundaries of the Condor Study Area and assert that the Condor Study Area excludes the most important habitat within the critical habitat. Commenters also suggested that the Services' GPS data suggests the TMV Planning Area is one of the most heavily used areas of condor critical habitat in recent years.

The Condor Study Area was designed to encompass the core area of California condor activity on the Ranch at the time it was originally conceived, as shown by telemetry and historical data, while capturing some of the areas deemed important to condor conservation by knowledgeable California condor biologists. Since the Condor Study Area was developed and formally proposed as part of the TU MSHCP, the Service has engaged in a more in-depth, and statistically sound, analysis of the entire condor data set through a research contract with USGS (Johnson et al. 2010) (Appendix I).

As discussed in the Draft TU MSHCP, the Condor Study Area was originally designed to take into account historical information, the experience of California condor experts, and both telemetry and historical data points available at that time. Although the final configuration evolved over several years, it is important to understand how the shape and location of the Condor Study Area were determined. The first Condor Study Area configuration was created by former Condor Recovery Coordinator Bruce Palmer in 2002. Mr. Palmer prepared a report on the significance of Tejon Ranch to California condor recovery (U.S. Fish and Wildlife Service 2002) that served as a basis for delineating the original Condor Study Area of 37,099 acres. The Condor Study Area expanded on an area formerly known as the Section 4C Area to include Tunis and Winters Ridge and some of the higher elevations on the ranch. The intent of Mr. Palmer's effort was to capture both the likely feeding areas (i.e., high, exposed ridgelines with prevailing updrafts) and roosting habitat (i.e., tall trees and high ridges with prevailing updrafts). It also incorporated some of the early telemetry data collected from California condor AC-8, the last female taken from the wild. This configuration was the basis for all of the TU MSHCP discussions that followed for the next 4 years. TRC designed the TMV Project to avoid the Condor Study Area. Mr. Palmer delineated and established setbacks to provide a buffer between the development and the Condor Study Area to minimize potential conflicts between condors and new human activity.

Subsequently, the Service generated additional telemetry data (gathered after Mr. Palmer's first efforts) and reviewed historical data detailing California condor activity on the ranch. The historical data covers the period from 1910 through 1987, although the earliest data from the ranch is from 1967. Historical data ends in 1987, when the last wild California condor (AC-9) was taken into captivity. Historical data did not have the benefit of the precision afforded by radio transmitters, satellite tracking, or GPS units. Instead, observational records that identified specific locations were converted into coordinates that could be integrated into a GIS dataset and mapped. In contrast, the telemetry data gathered between 2000 and 2005 relies upon readings from transmitters carried by individual condors and recorded by mobile tracking units, satellites, and GPS transceivers. By triangulation or direct readings, biologists recorded the precise locations of California condors.

As described in the Draft EIS and Draft TU MSHCP, TRC and Service GIS experts mapped the data in its entirety to see if any patterns emerged. In general, the data revealed that condor activity was concentrated in several areas well-known to condor experts from their experiences with the birds both prior to their removal from the wild and since re-introductions began in 1992. One of these areas was Tejon Ranch; however, due to scale, the original mapping did not discern specific condor activity on the ranch to a level where a suitable Condor Study Area could be defined.

As part of the TU MSHCP, TRC next mapped only the telemetry data with the thought that this was the most precise data available. This map showed a definite pattern of use of the ranch by condors; however, it only accounted for activity from 2000 through 2005 and did not include historical

patterns. The Service advised TRC that while the telemetry data was accurate, the majority of the data was from two California condors, AC-8 and AC-9. One of the goals of the reintroduction program, particularly with regard to the "old" birds who were part of the wild flock before their capture, is to reestablish historic movement and land use patterns. While the activities of AC-8 and AC-9 would be useful for that purpose, limiting the mapping to the telemetry data introduced a bias toward these two individuals that could not be overlooked, but would have to be balanced with historical data for other birds.

TRC's next step was to map both the telemetry data from 2000 to 2005 and the historical data from 1967 through 1987. The telemetry data and the historical data indicated that the Condor Study Area Bruce Palmer had delineated in 2002 generally reflected where condors were using the ranch. For most of the historical data, Cogan (1993) assigned an activity code using a complex system of numbers. For example, all foraging fell into category 30,000. Beneath that category, observers discerned (and Cogan coded) whether the food was bait set out by researchers or natural carrion, including the type of animal (e.g., deer carcass versus dead ground squirrel). In discussion with the Condor Recovery Coordinator, Jesse Grantham, the Service decided that some activities were more vital to conservation or reflective of the value of Tejon Ranch to condors than other activities. The Service concluded the foraging/feeding was the most important behavior supported by Tejon Ranch, followed by roosting/perching (nesting would have been first, but California condors have never been recorded as nesting on the ranch).

Continuing to use data provided by the Service, TRC created a new map with unique identifiers for telemetry data for AC-8; telemetry data for AC-9; telemetry data for all other condors fitted with telemetry transmitters; historical data points for foraging/feeding condors; and historical data points for roosting/perching condors. This mapping process reduced the number of historical data points that fell within the Covered Lands from 1,121 to 412 because data for preening, flushing, etc. were no longer mapped. The total number of telemetry data points remained the same (282).

The new map with the unique identifiers showed that the original Condor Study Area configuration defined by Bruce Palmer was still effectively captured by most of the recorded condor occurrence data. However, it also became apparent that there were historical data points for foraging/feeding and roosting/perching that were close to the Condor Study Area boundary but were not captured in its original configuration, and that there were some areas included in the original Condor Study Area where no historical data and very few telemetry data points occurred. TRC decided to see if it could reconfigure the Condor Study Area to capture a greater percentage of both the telemetry and historical data. By shifting some of the Condor Study Area to the east and extending some of the boundaries, an alternative to the original Condor Study Area configuration was created. The proposed revised Condor Study Area boundary was reviewed by the Condor Recovery Coordinator, Jesse Grantham, who has extensive experience with both the current and the historical use of the ranch by California condors. Mr. Grantham's experience with California condors suggested that the western portion of the original Condor Study Area delineation had greater significance as foraging habitat than is reflected by the data because feeding events were rarely witnessed historically (only 13 natural feeding events were recorded on the Covered Lands between 1967 and 1987). Data for the baited feeding stations were more abundant (89 for the same period and area), most likely because observers were usually monitoring baited feeding sites. Perching/roosting data are naturally more abundant because the birds spend more time roosting and may stay in one location for extended periods, increasing the odds they will be observed or recorded by satellite, GPS, or radio telemetry while they are stationary.

Recent condor GPS data, particularly the data generated since release of the Draft EIS and Draft TU MSHCP to the public, indicates a greater number of condors are using a much larger portion of Tejon Ranch, beyond the boundaries of the Condor Study Area. The Service's California Condor Recovery Program field biologists have documented condors feeding on non-proffered pig, cattle, and mule

deer carcasses, including areas inside the TMV Planning Area and the Condor Study Area, as well as regular use of the traditional roost sites in the Condor Study Area (Service GPS data and unpublished field data). Condor occurrence data from January 2010 through May 2011 were also mapped and considered in this Supplemental Draft EIS, including the effects analysis provided in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS.

Although the Condor Study Area was configured prior to the USGS data analysis (Johnson et al. 2010), and was intended to capture what was considered at the time it was developed the core area of the ranch that was most intensively used both currently and historically by condors, the Service recognizes that the Condor Study Area still contains a substantial amount of suitable foraging habitat (approximately 23,040 acres), as well as traditional roost sites that were historically and are currently used by the species. However, the Service does not necessarily consider any particular area of Tejon Ranch as the best or most important foraging habitat for the California condor or consider the Condor Study Area to be the core area for all condor activity on Tejon Ranch. The condor data sets do not provide information that is sufficient to provide qualitative information about the specific areas where condors were located at the time the data were generated. Non-proffered feeding events documented on Tejon Ranch by the Service show condors feeding primarily in grassland and oak savannah, regardless of critical habitat boundaries, elevation, slope, or distance from the center of ridgelines. In contrast to the widespread foraging activity that occurs across the ranch, condors continue to use important traditional roost locations on Winters Ridge (in the Condor Study Area). The Service believes these specific locations within the Condor Study Area are particularly important and are not found in other locations on the ranch.

## 1B.2.4 Loss of Foraging Habitat in the California Condor Recovery Plan

Commenters made several points about the role of critical habitat in the recovery of the condor, suggesting that the Draft EIS and Draft TU MSHCP misstate the importance of foraging habitat in the California Condor Recovery Plan. Commenters suggested that the development planned under the TU MSHCP is a major threat to the recovery of the condor and is incompatible with condor recovery. One commenter suggested that a potentially expanding population makes it scientifically indefensible to exclude any areas of the ranch from being considered suitable habitat. Another commenter suggested that the calculations of the affected and lost habitat areas are inaccurate. One commenter suggested that a population viability analysis should be presented to justify the effectiveness of the proposed conservation strategy. Another commenter cautioned that the loss of foraging habitat should be considered in the context of habitat losses in other areas.

The Service agrees the Tejon Ranch critical habitat unit includes high-quality foraging habitat that is a crucial part of the California condor recovery effort. Patterns of condor use on the ranch have increased since the Draft EIS and Draft TU MSHCP were released for public comment in December 2008, and this Supplemental Draft EIS has been revised to reflect these changes. TRC has also updated the Draft TU MSHCP to reflect the current use of the ranch by condors. (Refer to-Master Response 1A, California Condor Data and Habitat Use, and Master Response 1E, California Condor Loss of Foraging Habitat).

The California Condor Recovery Plan (U.S. Fish and Wildlife Service 1996) does not identify specific criteria for delisting the species. However, the recovery plan does identify the existence of two wild, spatially disjunct and noninteracting, reproductively self-sustaining populations of 150 birds each, as well as one captive population, as the basis for down-listing the condor to threatened status. One of the free-flying populations would occur in California and one Arizona (J. Grantham pers. comm). Currently, due to a very high mortality rate among wild condors (approximately 20 to 25%), resulting primarily from lead contamination, there is no overall natural population growth in the

free-flying populations. Although reproduction has been successful in the wild, the population growth achieved in the free-flying condor populations is due entirely to the continuing introduction of captive-bred juvenile condors into the wild (i.e., mortality rates in the wild exceed reproduction in the wild). Until the threat of lead poisoning from ammunition is effectively minimized or eliminated throughout the condor's range, the Service does not anticipate achieving reproductively self-sustaining populations of condors. Therefore, achieving the recovery plan down listing goal of one of two disjunct, wild and reproductively self-sustaining populations of 150 condors is unlikely in the foreseeable future (i.e., the next 50 to 100 years). While circumstances may improve, particularly with effective enforcement of the ban on lead ammunition in California, the Service cannot at this time provide a reasonable estimate of the size of a fully recovered condor population or predict when recovery will be achieved. Therefore the Service has based the evaluation of future condor use of the ranch on the recovery plan goal of one population of 150 reproductively self-sustaining condors, even though the Service recognizes that this projection is unlikely to be achieved in the foreseeable future.

Updated population viability analysis looking at the long-term population growth in terms of recovering the condor is included in an environmental contaminants program grant administered by the Service that will investigate the biological impact of contaminants and management actions that may influence the long-term persistence of the California condor. The final results are anticipated in 2014, and this and other updated information about the California condor would inform the adaptive management program required under the TU MSHCP.

As discussed above, the Service has determined that the recent historic range of the California condor (as described in Section 1B.2.2.1, Food Supply in the Range of the California Condor) supports sufficient food resources from grazing, hunting, and native ungulate populations to support well in excess of 150 birds. The areas that would be conserved and managed under the TU MSHCP and the Ranchwide Agreement together would provide sufficient habitat to support a substantial fraction of a down listed population spread across the entire range in California. Considering the amount of foraging habitat that would remain on Tejon Ranch under the TU MSHCP and Ranchwide Agreement, and the available food supply for condors that would be produced from cattle, pig, and native ungulate carcasses on that foraging habitat within the TU MSHCP Mitigation Lands and other conserved areas of Tejon Ranch, it is likely that the ranch would continue to function as an essential and viable foraging area for the expanding condor population. In addition, the proposed permanent conservation of historically and currently used traditional roost sites on Winters Ridge, along with the permanent land use restrictions on the TU MSHCP Mitigation Lands and other rangelands proposed by Tejon Ranch within the Tejon Ranch critical habitat unit, would enable those lands to continue to provide foraging and roosting habitat essential for the conservation of the condor. The prohibition on commercial and residential development, the continuation of ongoing ranch-wide activities, such as grazing and hunting, and strict limitations on the nature and extent of public access, are expected to maintain the conservation value of the TU MSHCP Mitigation Lands and other conserved areas of the ranch to the condor.

The Service is aware that historic condor foraging areas in the Simi Valley, the Santa Clara Valley, and Hathaway Ranch adjacent to the Hopper Mountain National Wildlife Refuge have been developed or converted to other land uses that are not consistent with condor foraging, as pointed out by some commenters. The cumulative effects analysis in this Supplemental Draft EIS addresses potential development on the ranch outside the Covered Lands, including potential development identified in the Ranchwide Agreement. In addition to this NEPA analysis, and as part of the ESA Section 7 process described above, the Service also will formally address critical habitat, and other important condor habitat throughout the condor's range, in the intra-Service biological opinion. As discussed previously and below, the development proposed for the TMV Planning Area under the TU MSHCP would not likely result in diminished foraging opportunities on the remainder of the Tejon

Ranch critical habitat unit, or restrict condors from accessing the other critical habitat units designated for the species or other potential foraging habitat within the condor's historical range.

## 1B.2.5 Adverse Modification of Critical Habitat

Several commenters commented on findings regarding the determination of "adverse modification" and how the regulatory definition relates to the critical habitat. Commenters suggest that the conclusion in the Draft TU MSHCP regarding adverse modification of critical habitat is not accurate and not well supported, and that the TU MSHCP would allow major adverse effects, and adverse modification of critical habitat. One commenter stated the proposed plan could set a precedent for developing in critical habitat with substantial adverse effects. Commenters criticized the continuation of the *status quo* as mitigation or asserted that mitigation measures are not accurate, because the only adequate mitigation would be to prevent development within critical habitat entirely. Finally, one commenter suggested that the actual loss of critical habitat should be carefully calculated, not assumed.

The determination of either "destruction" or "adverse modification" of critical habitat is made under Section 7 of the ESA, and is based on the effects the proposed Federal action will have on the capability of critical habitat to carry out its function and conservation role. The Service's ESA Section 7 determination regarding critical habitat must only address those areas that are located within critical habitat.

Based on the updated condor habitat suitability model, approximately 13,718 acres of suitable foraging habitat in the Tejon Ranch critical habitat unit occurs within the TMV Planning Area. Of that total, 12,015 acres of suitable foraging habitat for condors within the TMV Planning Area boundary would be directly and indirectly affected by the proposed development. To quantify the extent of indirect effects on suitable condor foraging habitat, the Service assessed available information on the disturbance threshold of condors to establish a distance of approximately 0.5 mile, extending out from the edge of the proposed development footprint, which would encompass the area in which noise and visual activity associated with development may disturb condors away from potential food sources. This approach conservatively assumed that feeding opportunities for condors would be eliminated in the indirect effects area (i.e., up to 0.5 mile from the TMV Specific Plan/Oso Canyon Development Envelope and other developed areas, such as Interstate 5 (I-5)), and did not assume this area would continue to contribute toward the conservation of the species. Please see Master Response 1E, California Condor Loss of Foraging Habitat, and Master Response 1A, California Condor Data and Habitat Use, for a more detailed description of the analysis of the indirect effects footprint around proposed development under the Proposed TU MSHCP Alternative.

Under the TU MSHCP, TRC would mitigate the nonlethal incidental take of four California condors requested in its permit application through permanent preservation and management of 129,318 acres of the total 141,886 acres of the Covered Lands for the benefit of the California condor and other Covered Species. A total of 149,935 acres of suitable foraging habitat would be conserved both in the Covered Lands (66,117 acres) and outside the Covered Lands but within the ranch (83,818 acres) per the terms of the Ranchwide Agreement. In combination with continuation of the ranch's ongoing grazing and lead free hunting programs, these conserved areas would provide important, continuing benefits to the condor, and therefore are appropriate to consider as mitigation for adverse effects associated with the proposed action. The Service is not implementing an ongoing supplemental feeding program on Tejon Ranch and does not intend to do so in the future. The Service recognizes that there are detrimental effects associated with long-term supplemental feeding and, by definition, it would be unnecessary if condor populations were self-sustaining (see Master Response 1H, California Condor Supplemental Feeding, for additional information on this issue).

After considering the direct loss of habitat and the indirect effects on suitable foraging habitat, the amount of food condors require and the current amount of food estimated to be available in the condors' range, the Service believes the amount of foraging habitat remaining on the ranch, combined with the continuation of historical and current grazing levels and practices, feral pig hunting, and the populations of native ungulates that together provide a consistent food source, would meet the feeding and foraging needs of condors that currently use the ranch, and of the expanding population of condors expected to use the ranch into the future as the population continues to recover. For these reasons, the Service does not have any reason to believe the development proposed under the TU MSHCP would reduce condor reproduction through loss of foraging habitat within the Covered Lands. The Service will evaluate the adequacy of the measures included in the TU MSHCP in accordance with the issuance criteria contained in Section 10 of the ESA decision, as documented in the permit decision documents, and under Section 7 of the ESA as part of the intra-Service consultation process.

## 1B.2.6 Development in the Critical Habitat

Commenters stated that permitting the proposed action could set a precedent of developing in critical habitat areas. One commenter expressed concern that such development would affect critical habitat because of collisions with powerlines and other towers or other detrimental effects of urbanization. Other commenters suggest that the project, if approved, would rest on unsubstantiated assumptions that:

- development would have no adverse effects on the California condor and its critical habitat,
- maintaining existing conditions and management policies qualify as mitigation for negative effects, and
- negative effects can be mitigated by measures which themselves have negative impacts (i.e., supplemental feeding).

Legally, a critical habitat designation is not the same as a wildlife refuge or preserve designation (41 FR 41914, 41915, September 24, 1976). The designation of critical habitat does not establish a wildlife refuge or wilderness area, nor does it preclude development or other lawful uses of critical habitat lands. Nor does the loss of habitat in critical habitat as a result of development or other activities, in and of itself, compel a determination that critical habitat has been "destroyed" or "adversely modified" within the meaning of the statute.

Development is not precluded in critical habitat, and development within the Tejon Ranch critical habitat unit does not set precedent of development occurring in critical habitat. The Service identifies critical habitat as those lands that are essential for the conservation of the species, including those that may require special management. Pursuant to Section 7 of the ESA, it is the Service's responsibility to determine whether or not a proposed Federal action would destroy or adversely modify critical habitat. As previously stated, the Service will make this statutory determination in an intra-Service biological opinion, considering the proposed action in terms of the functionality of the critical habitat to continue to provide its intended function and conservation role for the California condor, as directed in policy guidance.

The commenter is confusing the Service's evaluation of the effects of proposed ITP and TU MSHCP on condor critical habitat under ESA Section 7 with the evaluation of the proposed permit under Section 10 of the ESA (and NEPA). The relevant considerations for the Service when it engages in consultations under Section 7 of the ESA are whether the proposed Federal action is likely to result in jeopardy or in the destruction or adverse modification of critical habitat for the condor. If it is determined that the proposed action is not likely to jeopardize the continued existence of the species or destroy or adversely modify condor critical habitat but may result in incidental take of

condors, the Service would include an incidental take statement with reasonable and prudent measures and terms and conditions to implement those measures and minimize the effects of the incidental take. The determination of whether measures incorporated into a habitat conservation plan adequately mitigate incidental take requested in an incidental take permit application is considered under ESA Section 10, not ESA Section 7. ESA Section 10 requires that the impacts of non-jeopardizing incidental take be minimized and mitigated to the maximum extent practicable.

The Service agrees with the commenters that urban and suburban development generally adversely affect condor conservation. Even with the variety of measures incorporated into the TU MSHCP to reduce condor interactions with humans and human structures, (Master Response 1C, California Condor Habituation and Take, and Master Response 1F, California Condor Collisions with Powerlines and Structures), the Service recognizes there would be a loss of foraging habitat and the potential for disturbance or habituation of condors as a result of the development and other Covered Activities proposed under the TU MSHCP. However, the Service also recognizes that the permanent protection of extensive foraging habitat for the condor on the Covered Lands and elsewhere on the ranch, and the permanent protection of traditional condor roosting areas on the Covered Lands, when combined with the proposed continuation of grazing at current levels, as well as other take avoidance and minimization measures under the TU MSHCP, would enable Tejon Ranch to continue to provide assured conservation value for the California condor, even with the development proposed under the TU MSHCP.

## 1B.2.7 Findings Required under the Endangered Species Act

One commenter stated that the focus of the analysis in the Draft TU MSHCP on the Covered Lands under-represents the action area, which has the potential to reduce the likelihood of the recovery and survival of the California condor by adversely modifying its critical habitat, reducing its distribution, and reducing its reproduction through loss of foraging habitats. One commenter suggested the TU MSHCP and ITP application are the result of a settlement agreement.

The action area is a determination that is made within the scope of a Section 7 consultation under the ESA. Action area is defined in the Service's Section 7 regulations at 50 Code of Federal Regulations (CFR) 402.2 as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." NEPA does not require an independent or predecisional determination of an action area. NEPA does require that this Supplemental Draft EIS address the direct, indirect, and cumulative effects of the proposed Federal action, which will inform the determination of the action area during the Section 7 consultation. As noted above, the Service has not yet completed the ESA Section 7 analysis of the effects of the proposed ITP and TU MSHCP on critical habitat for the California condor. In the Section 7 consultation, the Service will formally consider the direct, indirect, and cumulative effects of the proposed action on critical habitat and make a statutory determination as to whether critical habitat will continue to serve its intended function and conservation role. The formal determination on the effects of the proposed action, and determination of the appropriate action area on which to base the regulatory determination regarding the California condor and its critical habitat will be made in the biological opinion.

## 1B.2.8 Potential Effects on Condor Population Movements Across All Critical Habitat Units

Several commenters noted that the Draft TU MSHCP does not adequately evaluate potential effects on condor population movements across all critical habitat units, because Tejon Ranch is critical for connectivity.

The Service does not have any scientific basis to believe development associated with the TU MSHCP would preclude condors from accessing other critical habitat units. Please see Master Response 1G, California Condor Overflight and Connectivity, for more information and analysis on this topic. Condors are known to fly over developed areas in southern and central California (e.g., Frazier Park, Lebec, Pine Mountain Club, Stallion Springs, Big Sur, King City, and Santa Clarita) to reach foraging areas. Therefore, the Service does not anticipate the Commercial and Residential Development Activities associated with the TU MSHCP would restrict condor movements or prevent condors from accessing critical habitat throughout their range.

**Table MR1C-1. Comments Addressed in Master Response 1C**

| Comment | Commenter |
|---|---|
| O5-16 | Defenders of Wildlife, Pamela Flick |
| O4-115 | Center for Biological Diversity, Adam Keats |
| I293-26 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-27 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-34 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-35 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I948-27 | Manning, Jeffrey A |
| I1054-6 | Moore, Stan |
| I1163-3 | Palmer, Bruce |

# 1C.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to take and habituation of the California condor. Table MR1C-1 provides a list of the commenters and a reference to the individual comment, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

This response begins with an overview of take as defined under the Federal Endangered Species Act (ESA). This overview discussion is followed by responses to individual issues raised by comments.

- Attraction of condors to humans and development can alter condor behavior. (Response provided in Section 1C.2.2, Attraction of Condors to Humans and Development.)
- Development on “key ridges” will bring people into proximity with condors, altering behavior. (Response provided in Section 1C.2.3, Development on Key Ridges and Proximity of People and Condors.)
- Condors removed from the wild are not ecologically valuable. (Response provided in Section 1C.2.4, Ecological Value of Condors Removed from the Wild.)
- The Federal incidental take permit (ITP) does not allow for lethal take. (Response provided in Section 1C.2.5, Federal Incidental Take Permit and Lethal Take.)
- Indirect effects on condors are not adequately analyzed. (Response provided in Section 1C.2.6, Analysis of Indirect Effects on Condors.)
- Supplemental feeding can lead to unnatural condor behavior. (Response provided in Section 1C.2.7, Supplemental Feeding and Condor Behavior.)

- Loss of foraging habitat and critical habitat as a result of development would lead to "take" of condors. (Response provided in Section 1C.2.8, Loss of Foraging Habitat and Critical Habitat Due to Development Resulting in Take.)

# 1C.2 Responses to Substantive Comments

## 1C.2.1 Overview

The ESA generally prohibits the take of federally listed animal species, including the California condor (Section 1.4.1, Federal Endangered Species Act, in Volume II of this Supplemental Draft EIS). However, the ESA expressly authorizes the Service to allow take of listed species by permit under Section 10, if the Service finds that the take will be incidental to otherwise lawful activities, the applicant's plan will minimize and mitigate the effects of the take to the maximum extent practicable, and the take will not appreciably reduce the likelihood of survival and recovery of the species in the wild. Congress added Section 10 to the ESA to provide private landowners with a legal mechanism to develop their private property or engage in other lawful activities on their lands that might inadvertently take a listed species, so long as such take is appropriately minimized and mitigated and does not jeopardize the continued existence of the species. In accordance with Section 10, Tejon Ranchcorp (TRC) has applied for an ITP to cover incidental take of 27 species, including the California condor, that may occur as a result of the Covered Activities (including proposed development) on a portion of Tejon Ranch (i.e., Covered Lands), as described in the TU MSHCP. Over a proposed 50-year permit term, TRC has requested the Service to authorize up to four nonlethal instances of incidental take of California condors in the form of harassment or harm. No lethal take of condors has been applied for or would be authorized under the ITP.

Under the regulations defining take under the ESA, "harass" is defined as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering." "Harm" is defined in the Service's regulations as "an act which actually kills or injures wildlife" and includes "significant habitat modification where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." As noted above, no lethal take of condors is being sought by TRC and the TU MSHCP is designed to avoid physical injury to condors.

Take of condors, as contemplated under the TU MSHCP, would be in the form of habituation, that is, the circumstance where a condor becomes attracted to development or other human activity and becomes unresponsive to measures incorporated into the plan to deter such condor/human interaction such that its "normal behavioral patterns are disrupted", thereby creating a "likelihood of injury" to an individual bird.

## 1C.2.2 Attraction of Condors to Humans and Development

A commenter stated that many current problems with released birds are related to the attraction of condors to humans and development, and noted that efforts are being made to ensure that birds have as little contact with humans and development as possible. Another commenter stated that developing the TMV Planning Area into urban or suburban living areas would degrade habitat on Tejon Ranch such that it would not be viable for California condors, as historical records show the original condor population did not occupy urban or suburban areas for reasons that likely include various forms of molestation of birds by humans, collisions with overhead objects and wires, and disturbance at feeding sites. Another commenter stated that condors are inquisitive and can become

behaviorally compromised through interactions with humans or human structures, which can lead to individual condors teaching other condors inappropriate behaviors.

While lead ammunition poisoning remains the primary cause of condor mortality in the wild, the Service agrees with the commenters that many of the current problems associated with released condors are related to attraction to humans and development. As recognized in the comments, the Service is actively implementing measures to avoid and minimize the attraction of humans, and human structures to condors. Such measures include hazing (e.g., the use of noise, dogs, or other measures to deter condors from perching on human structures such ascommunication towers and buildings), and working to keep areas frequented by condors free of attractants, such as trash, microtrash (Master Response 1D, California Condor Microtrash and Lead Ingestion), and food resources, as described in more detail below.

The Service anticipates there is a potential for condors to be attracted to human activities and structures associated with the development proposed under the TU MSHCP during and following its construction, and for condors to be attracted to other uses of the Covered Lands, such as film-making activities or passive recreational activities. However, the Service considers the potential for take to be unlikely given the proposed minimization and avoidance measures included in the TU MSHCP, such as provisions for an onsite Service-approved biologist to monitor condors on the ranch and coordinate daily with the Service regarding condor locations and activity. The ability of the Service to respond quickly to situations involving negative interactions between condors and humans, or human structures, and to deter condors from such adverse situations, is one of the primary measures that the Service believes would minimize the potential for take to occur.

Throughout the existence of the condor recovery program, and in accounts of historical condor activity (Mee and Snyder 2007, Wilbur 1978, Koford 1953), human and condor interactions have been recorded. At times, negative interactions have occurred more frequently than at others. The Service attributes some of the variation in frequency and number of negative interactions to the age structure of the wild condor population. Condors that have reached reproductive status spend more time pursuing mates, nesting, and foraging than juveniles. During periods of the recovery program when only juvenile condors occurred in the wild, there were more frequent occurrences of destructive behavior. This does not mean that mature condors are free of the attraction to humans and/or human structures. Both adult and juvenile condors have been attracted to hunting cabins and other structures when food resources, such as animal parts, gut piles, cleaned carcasses, and trash and debris, are left out in the open. These practices increase the potential for harmful interactions, including destruction of property, injury to condors (i.e., entanglement in structures, ingestion of trash or harmful chemicals), and positive reinforcement (i.e., food) that, in turn, increases the potential for such interactions to occur more frequently if allowed to continue unabated. Communication towers in the San Gabriel Mountains (where anti-perching devices have not been consistently maintained) have also recently been attractive to condors as perching or roosting locations, even without the presence of food. In April 2011, one adult condor was entangled in a loose strap hanging from a communication tower, resulting in loss of one of the bird's wings.

These examples demonstrate the need to ensure that measures to avoid and minimize such interactions are properly implemented and maintained. If anti-perching devices are installed on towers, bird flight diverters are installed on relocated transmission lines and towers and regularly maintained, and residential, commercial, recreational and other sites occupied by humans are kept free of trash and other dangerous debris, the Service believes that the potential for injury to condors from these sources can be effectively minimized.

As described in Chapter 4, California Condor, of the TU MSHCP, and summarized in Table 2-3 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume II of this Supplemental Draft EIS, the applicant has proposed avoidance and minimization measures to reduce the potential for take of condor as a result of the Plan-Wide Activities, including film production, passive recreation, and

maintenance and use of roads and back-country cabins. These include measures to reduce and/or avoid exposure of the condor to microtrash, disturbances to condors, potential collisions with powerlines and utility structures, habituation to human activities and artificial structures, and exposure to lead ammunition.

In addition, the Tejon Ranch Conservancy has developed a public access plan that describes how public access is currently managed, and will be managed in the future. , The plan will be reviewed and revised as necessary in connection with the development of the Ranchwide Management Plan (RWMP) under the requirement to preserve existing conservation values of the Ranchwide Agreement. Depending on the easement holder, a separate public access plan could be prepared for the TMV Planning Area Open Space. Regardless, the Service would review and approve the public access plan(s) to ensure consistency with the TU MSHCP, ESA, and any applicable recorded conservation easement restrictions, both during and following the end of the permit term (i.e., in perpetuity), and to ensure that any public use of the TU MSHCP Mitigation Lands is consistent with preserving the conservation value of the Covered Lands for the Covered Species, including condors.

## 1C.2.3 Development on Key Ridges and Proximity of People and Condors

A commenter stated that allowing development on “key” ridges would bring people into close proximity to condors, thus altering their behavior.

Development on “key ridges” as suggested by commenters does have the potential to attract condors, bringing them in proximity to human development and altering their behavior. As part of the TU MSHCP process, proposed development was removed from some key ridges. Nonetheless, based on the increased use of the ranch by condors, as indicated by updated geographic positioning system (GPS) data, and the likely continuing use of the ranch as indicated by the U.S. Geological Survey (USGS) analysis of the condor data (Johnson et al. 2010, Appendix I), the Service recognizes that land currently used by condors for foraging, feeding and overnight roosting would be directly and indirectly affected as a result of the development proposed under the TU MSHCP. The proposed ITP would recognize the potential for take due to habituation, and the measures incorporated into the TU MSHCP are intended to minimize the potential for such take. Given that condor activity occurs across most of Tejon Ranch at any given time, and is not concentrated in any particular area (except for the traditional roost site in the Condor Study Area that condors regularly use), the Service anticipates that condors would continue to use the vast majority of ranch lands located outside of the proposed development area that support essential condor foraging, feeding, and roosting. The measures proposed in the TU MSHCP and identified above, including restrictions on public access to the TU MSHCP Mitigation Lands, enforceable covenants, conditions, and restrictions (CC&R) on TMV Project lands to minimize human/condor interactions, continual monitoring of the Covered Lands to identify condor activity, and provision for immediate and consistent responses to deter birds away from humans and human structures, if carefully implemented, should effectively minimize the potential take of condors due to habituation.

## 1C.2.4 Ecological Value of Condors Removed from the Wild

A commenter stated that birds that "seek out people … may be considered ecologically dead" and must be returned to captivity before inappropriate behavior is passed on to other birds.

The Service agrees that birds removed from the wild are no longer contributing to the wild population. As discussed above, under the TU MSHCP, the removal of a condor from the wild that has become habituated to humans and acquired behaviors that create a likelihood of injury or death is considered a take of the condor, even if “physical injury” to an individual condor has not occurred.

However, removal of a condor from the wild due to habituation has not in the past, and is not expected in the future, to result in the actual death of the condor, whether such removal is temporary or permanent. A condor that is removed from the wild could, under specific circumstances, become a necessary part of the captive breeding population. However, at this time all condor founder genes are represented in the wild and captive breeding populations, and the wild and captive populations, are managed independently of each other to ensure all original condor founder genes are represented both in captivity and in the wild.

Because a condor that becomes unafraid of humans and is attracted to human activity puts itself at risk of injury or death by acquiring harmful behaviors, such as ingesting microtrash, eating from dumpsters, or becoming attracted to harmful human structures such as transmission towers, residences, and vehicles, that condor must be removed from the wild. Property can also be damaged by condors, which have been known to pull the shingles off houses and windshield wipers off of vehicles when attracted to humans and human structures. These negative behaviors can be taught to other condors if not acted upon quickly, further exposing more of the population to the potential for habituation.

Removal of a condor from the wild may be temporary if the condor can be trained to avoid human interaction and released back into the wild; capture may be permanent if such training is not successful. Permanent removal of a condor from the wild may occur in the most extreme cases for the safety of the affected condor and for the benefit of the other members of the wild flock when a condor cannot be returned to the wild because a “time out” and/or additional aversion training to eliminate negative behaviors are not successful. While there have been instances where condors have been permanently removed from the wild, early and consistent intervention to deter condor interaction with humans and human structures has typically proven to be an effective deterrent to habituation.

For the purposes of the analysis in this Supplemental EIS, the Service has assumed that up to four condors may be removed from the wild over the 50-year term of the proposed permit. When condors no longer respond to hazing efforts to deter them from approaching humans and human structures on Tejon Ranch, and the Service has determined the birds must be removed from the wild, take of that condor will have occurred.

The Service has determined that take in this manner of up to four condors over a 50-year timespan is reasonable, given the expanding condor population and the Service's experience with previous undesirable interactions between humans and condors, as well as the minimization and avoidance measures proposed in the TU MSHCP. It is not anticipated that removing four condors from the wild over 50 years would have a substantial effect on the population, particularly if the removal is temporary. The potential for the permanent removal of condors from the wild as a result of habitation is low. Most permanent removals of the condor from the wild occurred early in the recovery program, when younger condors were released without the benefit of adults that would normally serve as models for juvenile birds in avoiding human/condor interactions. Relatively few condors have needed to be permanently removed from the wild in recent years due to increased use, and effectiveness, of hazing techniques in potential habituation situations and the growing presence of mature adult birds in the wild that are less likely to engage in undesirable behaviors and can serve as models for juvenile birds. To date, no breeding condors have been permanently removed from the wild as a result of habituation. Please refer to Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS for a more in detailed discussion of the potential effects of habituation.

## 1C.2.5 Federal Incidental Take Permit and Lethal Take

A commenter indicated that the California condor is a state fully protected species for which no incidental take may be authorized pursuant to the California Endangered Species Act (CESA).

CDFG, not the Service, is responsible for administering CESA, and for determining whether the Covered Activities contemplated under the TU MSCHP would result in take, as that term is defined under California state law. As explained in Section 1C.2.1, Overview, above, and as discussed further in Master Response 8, Regulatory Considerations, the applicant is not proposing, and the ITP would not allow, lethal take of condors under the ESA and its implementing regulations.

## 1C.2.6 Analysis of Indirect Effects on Condors

A commenter stated that the Draft TU MSHCP does not analyze how much additional human use would occur outside the development areas associated with recreational access; the dispersed nature of the development would maximize edge effects and difficulty in regulating those effects. The commenter also states that disturbance associated with the proposed development, including increased traffic, construction, recreation, and noise, would reduce condor use in adjacent areas such as the Condor Study Area, as well as the entire ranch, even though they are outside the direct effects area.

As explained in Master Response 1E, California Condor Loss of Foraging Habitat, in addition to habituation, the Service is considering the direct and indirect effects on the condor that may occur as a result of the loss of foraging habitat caused by the Covered Activities in the TU MSHCP. The Service recognizes the increase in human use of the ranch contemplated under the TU MSHCP would create edge effects that would result in a reduction in habitat value beyond the habitat eliminated by the immediate development footprint of the proposed Commercial and Residential Development Activities. The Service anticipates indirect effects on the California condor, and its habitat, may also occur in the form of development-related noise and light and increased passive recreation and human activity in and adjacent to the proposed development. Direct and indirect effects on the condor and its habitat may also occur as a consequence of human activity in the TU MSHCP Mitigation Lands contemplated under the TU MSHCP.

In assessing the potential effects on the California condor and its habitat on the Covered Lands from the development proposed under the TU MSHCP, the Service revised the model of foraging habitat to include indirect effects associated with the proposed development. For example, the Service estimates that lands within an additional distance of up to 0.5 mile from the TMV Specific Plan/Oso Canyon Development Envelope proposed under the TU MSHCP may be indirectly affected by increased noise, light, and human activity resulting from the development. The Service assumes that suitable foraging habitat beyond the additional 0.5 mile from the proposed Development Envelope would likely continue to provide opportunistic feeding opportunities for condors. Please refer to Master Response 1E, California Condor Loss of Foraging Habitat, for an additional discussion of how indirect effects on condors are considered in the revised habitat model.

Because there is a substantial amount of suitable foraging habitat outside of the proposed development areas in the Covered Lands that condors currently frequent, and hunting and grazing would continue under the TU MSHCP at historical levels (Master Response 1E, California Condor Loss of Foraging Habitat), the Service does not believe injury or harm to condors would occur as a result of the loss of foraging habitat associated with the development proposed under the TU MSHCP. As previously stated, the Service recognizes condor behavior could be altered by the proposed development, but anticipates that proposed take avoidance and minimization measures would effectively reduce the potential for such behavioral changes to result in take. The Service will also formally address the issue of adverse modification of critical habitat in the biological opinion

prepared in compliance with ESA Section 7 and in connection with the Service' decision on the issuance of an ITP.

The Service recognizes there is a potential for interactions between humans and condors as a result of increased public access to the TU MSHCP Mitigation Lands. Public access into the TU MSHCP Mitigation Lands would be limited to the passive recreation identified in the TU MSHCP, in accordance with public access plans prepared by the Tejon Ranch Conservancy (and potentially other easement holders in the TMV Planning Area Open Space) and reviewed and approved by Service. Public access would be confined to designated trails, or existing roads, unless part of a guided group.

Existing Ranch Uses and passive recreation generally consist of activities that the Service considers compatible with condor use of the ranch. Some activities such as TRC's existing grazing program and the ranch hunting programs (not a Covered Activity under the TU MSHCP), are considered beneficial to the condor and its habitat because they augment food sources for condors foraging in TU MSHCP Mitigation Lands. The Service also notes that ranching activities and passive recreation occur, or have occurred, elsewhere in the range of the California condor and in the vicinity of some of the release and supplemental feeding sites, such as Los Padres National Forest and Pinnacles National Monument. Although there have been incidences of human/condor interaction in these areas, negative interactions are uncommon. Therefore, the substantial amount of habitat protected from development in the TU MSHCP Mitigation Lands would retain its conservation value for condors foraging in the Covered Lands. Similarly, it is not anticipated that many incidents of human/condor interaction on the Covered Lands would occur, particularly with implementation of the minimization measures proposed under the TU MSHCP (Section 1C.2.2, Attraction of Condors to Humans and Development, above). The Service believes the potential for take to occur as a result of ranchwide activities and passive public recreation to be low, but not entirely absent, and therefore it is appropriate to cover existing ranchwide activities and passive public recreation under the permit.

## 1C.2.7 Supplemental Feeding and Condor Behavior

A commenter stated that relying on feeding programs to lure condors away from development in the Tehachapi Mountains would continue to result in altering natural condor behavior. Another commenter stated that artificial feeding stations would themselves constitute take of the species.

For clarification, the Service is not pursuing a permanent supplemental feeding program on Tejon Ranch. The Service anticipates that any supplemental feeding of condors on Tejon Ranch would be limited in scope and duration, and implemented at the sole discretion and direction of the Service, if needed. The main purpose of any supplemental feeding on the ranch would be for trapping condors as part of routine health examinations and transmitter upkeep, if the Service determines it would benefit the species. Please refer to Master Response 1H, California Condor Supplemental Feeding, for a more detailed discussion of the supplemental feeding program.

## 1C.2.8 Loss of Foraging Habitat and Critical Habitat Due to Development Resulting in Take

A commenter stated that development in the TMV Planning Area is a major threat to recovery of the California condor, and the TMV Project would lead to "take" of the species and adverse modification of critical habitat. Another commenter requested an explanation of the Service's determination that the loss of foraging habitat associated with the TMV Project would not significantly adversely affect or cause "injury" or "harm" to condors or interfere with their behavioral patterns. The commenter also stated that despite the preservation of habitat and avoidance, minimization, and mitigation measures proposed in the Draft TU MSHCP, the loss of habitat and indirect effects of fragmentation

would negatively affect the condor and cause direct and indirect take. Another commenter stated that the assertion that proposed development would "preclude condor recovery" is unsupported, and that condors stand to benefit from the proposed TU MSHCP.

As explained in Master Response 1B, California Condor Critical Habitat, and Master Response 1E, California Condor Loss of Foraging Habitat, the Service' initial evaluation of the proposed TU MSHCP Mitigation Lands, including the Condor Study Area, is that these lands would continue to provide substantial foraging, feeding, roosting habitat for the condor, and continue to facilitate condor access to other areas in the condor's historic range, even though some suitable habitat, including critical habitat, would be lost or adversely affected by the Covered Activities. The Service has evaluated the foraging habitat that would remain on the Covered Lands and throughout the Tejon Ranch after construction of the proposed development associated with the TU MSHCP, and assessed whether the remaining habitat would maintain the ranch's habitat contribution to the increasing wild condor population anticipated in the future. The Service believes that with continued grazing and commercial hunting on the ranch, there should be ample, unfragmented foraging habitat in the Covered Lands and on the ranch generally to accommodate the growing condor population.

As discussed above, because there is a substantial amount of suitable foraging habitat outside of the development areas proposed under the TU MSHCP that condors currently frequent, and hunting and grazing would continue under the TU MSHCP at historical levels (Master Response 1E, California Condor Loss of Foraging Habitat), the Service does not believe injury or harm to condors would occur as a result of the loss of foraging habitat associated with the proposed development. The Service will formally address the issue of adverse modification of critical habitat in the biological opinion prepared in compliance with ESA Section 7 in connection with the Service' decision on the issuance of an ITP.

# California Condor Microtrash and Lead Ingestion

**Table MR1D-1. Comments Addressed in Master Response 1D**

| Comment | Commenter |
|---|---|
| I73-4 | Balbona, G. |
| I293-26 | Clendenen, et al. |
| I293-30 | Clendenen, et al. |
| I293-41 | Clendenen, et al. |
| I626-7 | Hamber, Robert |
| I626-8 | Hamber, Robert |
| I627-47 | Hamber, Robert |
| I948-20 | Manning, Jeffrey |
| I1054-4 | Moore, Stan |
| I1163-3 | Palmer, Bruce |
| O4-122 | Center for Biological Diversity (Keats, Adam) |
| O4-123 | Center for Biological Diversity (Keats, Adam) |
| O5-6 | Defenders of Wildlife (Flick, Pamela) |

## 1D.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to potential effects associated with the ingestion of microtrash and lead by California condors in the Covered Lands. Table MR1D-1 provides a list of the commenters and a reference to the individual comment, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- There is a potential for lead poisoning on Tejon Ranch and condors need areas free from lead-based hunting operations. (Response provided in Section 1D.2.1, Potential for Lead Poisoning of Condors on Tejon Ranch.)
- The potential for condors to ingest microtrash and lead-contaminated gut piles is expected to increase on Tejon Ranch as a result of proposed development, habituation to humans and human activity areas, and increased human recreation, and these factors all pose a serious threat to condors. (Response provided in Section 1D.2.2, Ingestion of Microtrash and Lead-Contaminated Gut Piles as a Result of Increased Human Population on Tejon Ranch.)
- The proposed supplemental feeding program can result in unnatural foraging behaviors in condors and thus increase the potential for ingestion of microtrash. (Response provided in Section 1D.2.3, Supplemental Feeding and the Potential for Increased Ingestion of Microtrash.)
- Mitigation measures to control microtrash are existing practices, would not provide a net benefit to condors, and would probably fail to maintain existing conditions. Suggested measures to control microtrash include fitting trash receptacles with animal- and weatherproof lids, regular cleanup during and after filming activities, and additional signage indicating sanctions

for microtrash violations. (Response provided in Section 1D.2.4, Legitimacy of Proposed Mitigation and Suggested Additional Measures.)

# 1D.2 Responses to Substantive Comments

## 1D.2.1 Potential for Lead Poisoning of Condors on Tejon Ranch

Commenters expressed concern regarding the potential for lead poisoning of condors on Tejon Ranch as a result of ingestion of lead-contaminated gut piles and noted that condors need remote areas free from lead-based hunting operations to survive.

The Service is aware that the threat of lead poisoning and the need for lead-free sources of food continues to be the most significant challenge to the recovery of the condor. This Supplemental EIS (Section 3.1, Biological Resources) and the TU MSHCP (Section 4, California Condor) acknowledge the same. The American Ornithologists' Union and California Audubon also recognized the overall threat of lead poisoning to condor recovery in Status of the California Condor and Efforts to Achieve its Recovery (2008) as summarized below:

> We concur with nearly all of those involved in the condor program with whom we spoke that the species cannot be recovered until the lead threat is eliminated. …Similarly, the efficacy of area-specific requirements for nonlead ammunition, such as the local regulations on the Tejon Ranch or even the state regulations in California, remain extremely uncertain. We therefore conclude that total replacement of lead with nontoxic ammunition, at least within the potential range of the condor, and preferably nationally, is necessary for condor recovery. Without such action the reestablishment of viable wild condor populations is improbable (American Ornithologists' Union 2008).

As described in this Supplemental Draft EIS and the TU MSHCP, the applicant (Tejon Ranchcorp [TRC]) imposed a ranchwide ban on the use of lead ammunition on its property, effective January 1, 2008. The ban will remain in effect in perpetuity, surviving both the expiration (after 50 years) and any early termination of an incidental take permit (ITP) that for the TU MHSCP, and covers the full 270,000 acres of the ranch. The ranchwide lead ammunition ban applies to all hunters using the ranch, including those with hunting memberships, group hunts, and guided hunts. It also applies to TRC employees or third parties who are engaged in any animal damage control or nuisance abatement activities on the ranch. Please refer to Master Response 1I, California Condor Lead Ban, for further information on the ranchwide lead ammunition ban.

In addition, California enacted the Ridley-Tree Condor Preservation Act (Assembly Bill 821), effective July 1, 2008, which bans lead ammunition throughout the entire range of the California condor in the state. Consequently, it is illegal to used lead-based ammunition for hunting in any area, remote or otherwise, that is in the designated home range of the condor in California.

## 1D.2.2 Ingestion of Microtrash and Lead-Contaminated Gut Piles as a Result of Increased Human Population on Tejon Ranch

Commenters stated that the potential for condors to ingest microtrash and lead-contaminated gut piles would increase on Tejon Ranch as a result of habituation of condors to humans and human activity areas associated with the increase in human population and recreation on the ranch under the Proposed TU MSHCP Alternative.

Habituation and attraction to humans and associated development have been a concern of the condor program since the first captive-reared condor releases in 1992. The natural curiosity of condors and the propensity for "tame" birds to become habituated to humans and human activity areas is well-documented. For example:

> The inquisitiveness of condors makes tame birds unusually prone to interacting with humans, and because of their large size and gregariousness, such interaction is inevitably problematic (American Ornithologists' Union 2008, p. 19).

Condors have historically been known to fly over residential developments, such as Pine Mountain Club, Lebec, Frazier Park, and Stallion Springs in the Tehachapi Mountains. Condors are naturally curious and often fly near human activity areas, such as the visitor's center and campgrounds in the Grand Canyon National Park. Please refer to the Master Response 1A, California Condor Data and Habitat Use; Master Response 1B, California Condor Critical Habitat; Master Response 1C, California Condor Take and Habituation; and Master Response 1E, California Condor Loss of Foraging Habitat, for additional information regarding condor use of these and other areas.

Hunting with the use of lead-based ammunition and recreational activities that result in the deposition of microtrash in areas accessible by condors are considered threats to the condor, and are specifically addressed in the Section 3.1, Biological Resources, of this Supplemental Draft EIS, as well as Section 4.1.4, Reasons for Decline and Ongoing Threats, in the TU MSHCP. Similarly, the EIS and TU MSHCP identify potential "habituation" risks from condor–human interaction. Proposed measures to reduce those risks are described in the effects analysis for the Proposed TU MSHCP Alternative in Section 4.1, Biological Resources, of the EIS, as well as Section 4.4, Avoidance, Minimization, and Mitigation Measures, in the TU MSHCP. Avoidance, minimization, and mitigation measures associated with potential habituation effects under the Proposed TU MSHCP Alternative include:

- Avoiding and minimizing exposure of condors to microtrash by:
  - Creation and dissemination of a condor education curriculum for training key personnel of the ranch and construction/work crews, film crews, residents and guests;
  - Posting signage at trail heads or entrances to open space areas, and distributing information at onsite nature centers or other public areas;
  - Enforcement of conservation easements, covenants, conditions and restrictions (CC&Rs) by TMV Project land managers;
  - Assignment of a Service-approved biologist or designated staff person to accompany film crews to enforce rules regarding microtrash;
  - Use of animal and weatherproof lids on all trash receptacles; and
  - Regular maintenance efforts to eliminate microtrash.
- Avoiding and minimizing disturbance of condors by:
  - Creation and distribution of educational materials, as described above;
  - Enforcement of CC&Rs related to condor protection;
  - Empowerment of TRC or Tejon Mountain Village, LLC to require construction workers, filming crews, TRC staff, residents, and guests to cease behaviors that constitute an attractive nuisance or present a danger to condors; and
  - Regulation of recreational activities that could disturb feeding or roosting condors, including but not limited to temporarily closing recreational trails that occur near a carcass on which condors are feeding, moving planned recreational events from locations adjacent to

temporary condor feeding or roosting areas, and monitoring recreational activities that would occur near temporary feeding or roosting areas, as determined by biologist Service-approved biologist in coordination with the Service.

Ongoing enforcement of the ranchwide lead ammunition ban is a measure that contributes to the conservation and recovery of the condor (Draft TU MSHCP, p. 4-87).

## 1D.2.3 Supplemental Feeding and the Potential for Increased Ingestion of Microtrash

Several commenters stated the proposed supplemental feeding program for condors on Tejon Ranch could foster unnatural foraging behaviors that could result in increased potential for ingestion of microtrash.

As discussed further in Master Response 1H, California Condor Supplemental Feeding, TRC would provide funding for supplemental feeding on the ranch under the TU MSHCP only if deemed necessary and appropriate by the Service. As detailed in Master Response 1H, California Condor Supplemental Feeding, the Service currently uses supplemental feeding primarily to assist in trapping condors for medical testing and for transmitter upkeep, and to provide food for recently released condors. Under the TU MSHCP, TRC would provide funding for supplemental feeding on the ranch only as determined appropriate by the Service. After the 50-year term of the ITP, supplemental feeding would be implemented at the discretion of the Service.

With respect to commenters' statements that establishment of feeding stations can result in unnatural foraging behavior and can increase the potential for ingestion of microtrash, the Service agrees that there are inherent problems associated with perpetual reliance by condors on subsidized food. Supplemental feeding is not intended as a permanent part of the recovery program. As discussed in Master Response 1H, California Condor Supplemental Feeding, and noted above, the Service currently uses supplemental feeding only to facilitate trapping condors during biannual health checks and to maintain radio and geographic positioning system (GPS) transmitters, and as a food source for recently released, captive-bred juvenile condors that do not have parents to feed them. The natural foraging behavior condors are exhibiting precludes the ability to manage them away from all other potential food sources, including lead-contaminated carcasses, with supplemental feeding. The Service has no reason to believe that the limited, temporary use of supplemental feeding is correlated with increased exposure to microtrash.

The theory that food subsidies increased microtrash ingestion is based on the argument that condors receiving subsidized food become "lazy" because they do not need to more actively forage and are more likely to ingest pieces of trash (Mee and Snyder 2007). This conjecture has not yet been proven and appears to be contradicted in part by evidence from the Arizona and central California coast release programs, both of which provide food subsidies for trapping and recently released condors in multiple locations with varied feeding schedules and some variation in carcass types. Condors have foraged over a several-hundred-mile radius from the feeding sites in these programs and are not experiencing microtrash ingestion problems to the same degree as the southern California subpopulation did during the period when Hopper Mountain National Wildlife Refuge was the only feeding station.

## 1D.2.4 Legitimacy of Proposed Mitigation and Suggested Additional Measures

Commenters stated that several mitigation measures prescribed in the Draft TU MSHCP to control microtrash are existing practices, would not provide a net benefit to condors, and would probably fail to maintain existing conditions. Others suggested various measures to control microtrash, including fitting trash receptacles with animal- and weather-proof lids and regular cleanup both during and after filming activities. One commenter recommended additional signage indicating that litterers would be fined.

Section 4.1, Biological Resources, in the EIS and Chapter 4, California Condor, in the TU MSHCP address the potential increase in microtrash associated with proposed development on Tejon Ranch, and reference a number of measures to avoid and/or minimize the potential of condors to ingest microtrash. These measures are summarized above in Section 1D.2.2, Ingestion of Microtrash and Lead-Contaminated Gut Piles as a Result of Increased Human Population on Tejon Ranch. Mitigation measures to control microtrash associated with proposed development on Tejon Ranch are not existing practices and would be new measures to reduce the potential adverse effects of the Covered Activities on the condor. These measures contribute to the California Condor Recovery Plan goals of implementing California condor information and education programs and minimizing California condor mortality factors. These measures also would work in combination with other avoidance, minimization, and mitigation measures and conservation and management measures under the proposed TU MSHCP, including the preservation of large areas of prime foraging and roosting habitat on the ranch, to ensure that habitat and conservation values for the condor on the ranch are maintained in perpetuity.

The comment that the mitigation measures would probably fail to maintain existing conditions is not substantiated by any evidence provided by the commenters. The Service would ensure implementation of the mitigation measures in the TU MSHCP through enforceable permit conditions in the ITP.

The recommendations regarding additional measures in the comment are appreciated and the text in the Draft TU MSHCP, Section 4.4.1.1, Exposure to Microtrash, has been revised to respond to these comments. Note that a requirement that all trash receptacles be fitted with animal- and weather-proof lids is already included in the measures (Draft TU MSHCP Section 4.4.1.1, subsection (2)). Section 4.4.1.1 has been revised as follows:

1. TRC or an included entity will prepare condor educational materials and implement a training program such as printed brochures or other media that will include information concerning the life history of the California condor, where condors potentially occur within the TMV Planning Area, prohibited behaviors related to condors such as the pursuit, capture, and harassment of individual condors, and other potential direct interaction with condors. The information shall also identify types of microtrash that could be ingested by condors and describe measures to eliminate microtrash at and near all construction sites, recreational areas, outdoor filming projects, roads, and back-country areas where human presence occurs. The education program will include training of key personnel at TRC, appropriate signage at trailheads or entrances to open space areas, and dissemination of pertinent information at onsite nature centers and other public areas. The educational materials will be disseminated to film crews, TMV Project construction and work crews, residents, guests and visitors, particularly those engaging in recreational activities that could put them in close proximity to condors. Project land managers will be empowered to take action to prevent any such activity that would pose a threat to condors. This measure will be included in implementation documentation as appropriate under

the Memorandum of Permit (MOP) (e.g., CC&Rs for commercial and residential development and contracts with third party filming entities).

2. The following condor protection measures shall be implemented and documented as appropriate under the MOP (e.g., CC&Rs for commercial and residential development and contracts with third party filming entities):
   a. Master Developer's Construction Crews—All construction contracts let by the Master Developer shall include provisions requiring the general and subcontractors to provide construction workers with educational materials describing condor protection measures.
   b. Residential or Commercial Construction Crews—All land sale contracts issued by the Master Developer shall include provisions requiring future residential and commercial property owners to provide construction workers with educational materials describing condor protection measures.
   c. Film Crews—All TRC film crew contracts shall include provisions requiring the film companies to provide crew members with educational materials describing condor protection measures.
   d. Residents—The Master CC&Rs shall include requirements for the property manager to distribute educational material describing condor protection measures on an annual basis. The CC&Rs shall also include enforcement language related to condor protection.
   e. Resort Guests—The CC&Rs included in the resort, and any land sale contract or management agreement shall include provisions requiring the property management company to provide resort guests with educational materials describing condor protection measures.
   f. Ranch Visitors—All Entry Permits for back-country areas will include educational material describing condor protection measures.
3. TRC or an included entity will ensure that routine community maintenance activities include regular efforts to eliminate microtrash at and near all work sites, recreational events, filming projects, roads, and back-country areas where human presence occurs. All trash receptacles will be fitted with animal and weather-resistant lids, will be regularly emptied, and will regularly be inspected by the Service-approved Tejon Staff Biologist. This measure will be included in implementation documentation as appropriate under the MOP (e.g., CC&Rs for commercial and residential development and contracts with third party filming entities). The CC&Rs will include provisions authorizing the Master and Commercial Maintenance Associations, as relevant, to promulgate from time to time rules and regulations recommended by the Service-approved Tejon Staff Biologist to address microtrash and trash receptacles and to enforce such rules and regulations, which shall be consistent with and no less stringent than the Conservation Measures.
4. The Service-approved Tejon Staff Biologist, or designated TRC employees or consultants, will be assigned to all film crews to enforce rules regarding discarding of microtrash items and will require a thorough daily clean-up by the filming entity during and immediately upon completion of all film shoots to eliminate any microtrash that may have accumulated.

The exact wording of signage has not been developed, but the commenter's recommendations are noted for the record and will be considered in the design of signage to ensure that the mitigation measures are effectively implemented and enforced.

# California Condor Loss of Foraging Habitat

**Table MR1E-1. Comments Addressed in Master Response 1E**

| Comment | Commenter |
|---|---|
| I293-23 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-24 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-25 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-29 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-42 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I948-19 | Manning, Jeffrey A |
| I948-25 | Manning, Jeffrey A |
| I948-27 | Manning, Jeffrey A |
| O4-95 | Center for Biological Diversity (Keats, Adam) |
| O4-96 | Center for Biological Diversity (Keats, Adam) |
| O4-97 | Center for Biological Diversity (Keats, Adam) |
| O4-98 | Center for Biological Diversity (Keats, Adam) |
| O4-98A | Center for Biological Diversity (Keats, Adam) |
| O4-99 | Center for Biological Diversity (Keats, Adam) |
| 04-100 | Center for Biological Diversity (Keats, Adam) |
| 04-111 | Center for Biological Diversity (Keats, Adam) |
| 04-112 | Center for Biological Diversity (Keats, Adam) |
| O4-114 | Center for Biological Diversity (Keats, Adam) |
| O4-117 | Center for Biological Diversity (Keats, Adam) |
| | Defenders of Wildlife (Flick, Pamela) |
| | Forster, Peggy |
| | Hamber, Robert |
| | Hamber, Robert |
| | Hamber, Robert |

# 1E.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to loss of foraging habitat for the California condor. Table MR1E-1 provides a list of the commenters and a reference to the individual comment, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The TU MSHCP and Draft EIS misstate the importance of the loss of foraging habitat for the California condor and its recovery. (Response provided in Section 1E.2.1, Significance of Foraging Habitat.)
- The estimates of the available foraging habitat and the habitat that would be lost as identified in the TU MSHCP and Draft EIS are misleading and the statements regarding the physical characteristics of foraging habitat are not scientifically valid. The analysis of available habitat should assess the habitat qualities of all potential habitat, historic use patterns, historic ranges, and individual observer experience. (Response provided in Section 1E.2.2, Evaluation of Extent of Foraging Habitat.)
- The analysis of viable foraging habitat fails to account for the effects of natural processes and management practices, such as wildfire or the cessation of hunting and grazing. In addition, the exact areas where hunting and grazing would be excluded are not addressed in the TU MSHCP and Draft EIS. (Response provided in Section 1E.2.3, Management Practices and Natural Processes.)
- The amount of suitable foraging habitat that would be lost from development, the cessation of grazing and hunting and habituation from human structures is misleadingly stated or inaccurately estimated. In addition, scientifically determined buffers used in evaluating indirect effects of development must be large enough to account for condors sensitivity to disturbance while feeding. (Response provided in Section 1E.2.4, Evaluation of Loss of Foraging Habitat.)
- Evaluation of the effects of any habitat loss must consider the needs of a fully recovered condor population and ensure that the habitat on Tejon Ranch remains viable for the California condor. (Response provided in Section 1E.2.5, Implications of Loss of Foraging Habitat for Condor Populations and Recovery.)
- The loss of Tejon Ranch as a foraging area may result in increased fragmentation of the southern and northern portions of the species' range because flight distances between foraging areas may become too great. (Response provided in Section 1E.2.6, Fragmentation.)

# 1E.2 Responses to Substantive Comments

## 1E.2.1 Significance of Foraging Habitat

Comments asserted that foraging habitat will be an important factor for recovery of the condor. Another commenter suggested that the TU MSHCP misstates the importance of foraging habitat in the California Condor Recovery Plan.

Comments suggested that habitat loss is identified in the California Condor Recovery Plan (U.S. Fish and Wildlife Service 1996) as an important aspect in the recovery of the California condor. Although habitat loss is not specifically identified as a threat in the recovery plan (1996), the Service does consider habitat loss to be of concern and its absence from the Recovery Plan should not be

interpreted otherwise. While historically habitat loss was not considered as one of the primary reasons for the decline of the condor, this does not mean that loss of foraging habitat is not an important factor affecting its recovery. Condors are currently reoccupying portions of their historic range including Tejon Ranch. As the condor population continues to expand, if foraging habitat throughout the condor's range is converted to land uses not conducive to livestock grazing, hunting, or conservation of native ungulate populations (the primary food sources for the California condor), the loss of foraging habitat may become one of the primary management issues affecting the recovery of the species. As such, the Service considers the potential loss of foraging habitat one of the ongoing threats to the species.

## 1E.2.2 Evaluation of Extent of Foraging Habitat

Comments suggested that the methods used to estimate the amount of foraging habitat on Tejon Ranch are not scientifically valid and rule out large areas of Tejon Ranch as suitable habitat. Comments also suggested that there have been observations of condors foraging outside of habitats modeled in the Draft TU MSHCP as suitable habitat.

The Service has revised the model of foraging habitat for the California condor in this Supplemental Draft EIS. The following summarizes the methods used in the revised model. Based on the TMV Planning Area/Oso Canyon Development Envelope, it is estimated that approximately 6,656 acres of suitable foraging habitat would be lost and 11,339 acres would be indirectly affected under the TU MSHCP, for a total of 17, 995 acres. The Service assumes the actual amount of suitable foraging habitat lost and indirectly affected under the TU MSHCP would be less because the actual disturbance footprint in the TMV Planning Area would be limited to 5,533 acres.

Although historically the characterization of condor foraging habitat has been based on observations of condors foraging and feeding, the Service has also used habitat modeling to characterize the extent of condor foraging habitat on Tejon Ranch. As identified in the comments, observational data exhibit a bias toward areas more easily accessed by humans. More recently, the use of global positioning system (GPS) technology has allowed field biologists to more easily locate stationary condors to document more of the nonproffered carcasses condors are feeding on, providing a better understanding of where condors are finding food and successfully feeding. The GPS data on nonproffered feeding events indicates condors found and fed on carcasses in various areas of the ranch, primarily in relatively open vegetation. The Service has also used observational and GPS data to model the extent of suitable habitat types. In an attempt to more accurately characterize suitable foraging habitat for the California condor, and subsequently to quantify the amount of suitable foraging that would be directly lost and indirectly affected by the TU MSHCP and alternatives, the Service used the Tejon Ranch vegetation composite geographic information system (GIS) layer (Dudek 2009) included in the Draft TU MSHCP to identify vegetation communities condors have been documented feeding in (U.S. Fish and Wildlife Service unpublished data). These include the grassland and oak savannah vegetation communities that have traditionally been associated with condors feeding and foraging (U.S. Fish and Wildlife Service 1976, 1996, Wilbur 1978, Koford 1953) and that the Service has recently documented condors feeding in (U.S. Fish and Wildlife Service unpublished field notes, Brandt pers. comm.). Other vegetation communities, such as chaparral, are also known to support condors foraging and feeding when they contain potreros (areas of open grassland). Large areas of chaparral occur on portions of Tejon Ranch, but do not include large, open potreros like those in Los Padres National Forest lands that have supported condor foraging (U.S. Fish and Wildlife Service 1996). Additional vegetation communities on Tejon Ranch (i.e., scrub) may also provide some potential foraging and feeding opportunities, while others may not, due primarily to the dense structure of the vegetation, which can negatively affect the species' ability to access food. Thick, dense, vegetation with very little, or no open area between the vegetation would make it difficult for condors to move very easily, due to their large body size and wingspan (up to 9 feet).

Their large, fragile wings could easily be damaged if entangled in branches. Difficulty in moving quickly through branches and undergrowth would also make the condor more vulnerable to predators, especially if they were to become entangled in branches. This is not to say that condors never feed anywhere but wide open areas, but the Service believes condors are not likely to frequent areas which are difficult to access and locate food sources.

As the comments state, the Service is also aware that condors are able to locate carrion and feed under the canopy of trees (J. Grantham pers. comm. 2010). Both oak woodlands and oak savannahs include canopy cover, under which condors would be able to locate carrion, particularly if they are alerted to carcasses hidden from view by ravens or other scavengers. The difference between oak woodland and oak savannah in the Tejon Ranch Vegetation Composite GIS layer is based on the amount of canopy cover (i.e., less than 40% canopy cover is considered oak savannah and 40% and greater canopy is considered oak woodland)(Dudek 2009).

Although the Service knows that condors can access and successfully feed under some amount of vegetation canopy, the Service is not aware of any information in the published literature, or elsewhere, that suggests a specific amount of canopy cover that would restrict condors from foraging and feeding. Therefore, vegetation communities on Tejon Ranch with greater than or equal to 40% canopy cover (i.e., woodlands), as well as other vegetation types that traditionally have not been considered forging habitat for condors (i.e., scrub, chaparral [excluding *poteros* in chaparral]), conifer forest) were identified.[1] These GIS layers were overlaid with aerial imagery of Tejon Ranch to compare the relative density of the vegetative canopy to open ground. A field site visit was then conducted to assess the density, thickness, and extent of the vegetative understory in these vegetation communities, and to assess the potential for condors to access food and/or facilitate escape from potential predators.

The Service recognizes that the structure of the vegetated understory associated with oak woodland vegetation communities is not likely to be entirely uniform across the Covered Lands due to the natural variation associated with localized growing conditions. Due to the large expanse of oak woodlands on Tejon Ranch, as identified in the GIS mapping (Dudek 2009), the Service assumes there may be some areas in these oak woodland vegetation communities where the understory vegetation structure might nevertheless allow condors to access a carcass. However, based on the vegetation mapping and aerial imagery used by the Service, and ground-truthing and vegetative understory assessment, the Service concluded that the areas identified in the GIS mapping as oak woodlands were generally not open enough under the tree canopy to allow condors to access food. Although the possibility of condors finding food in the more densely vegetated, wooded portions of the ranch cannot be ruled out, the Service believes such activity is likely to happen infrequently, if at all. Instead,-condors are more likely to locate and access food in areas that are more accessible to them (i.e., grassland and oak savannah). The Service believes the potential for patches of suitable foraging habitat to occur in  woodland vegetation types across the ranch is probably low, and does not think it is appropriate to consider these vegetation communities (e.g., oak woodland, conifer, scrub, chaparral) as suitable foraging habitat for California condors because the additional acreage they represent greatly overestimates the amount of habitat, both in the TMV Planning Area, as well as the proposed TU Mitigation Lands and other conservation lands on the ranch, where condors are likely to be able to consistently find and access food.

The Service is also aware that condors can access food sources on the lower elevations of the ranch where the topography is less severe than in the Covered Lands. For example, the Service documented condors feeding on a non-proffered cow carcass near the Old Headquarters area of the ranch on the San Joaquin Valley Floor (U.S. Fish and Wildlife Service no date), indicating additional

[1] A list of the vegetation communities in the Tejon Ranch Vegetation Composite geographic GIS layer is provided in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS.

foraging habitat is available to condors outside of the Covered Lands. Opportunistic foraging and feeding will occur wherever condors locate and are able to safely access food. Some areas of the ranch may more consistently provide opportunities for condors to locate food if hunting and grazing regularly occur there.

The foraging habitat model provides a mechanism to assess the location and extent of suitable foraging habitat on Tejon Ranch, instead of treating all conserved areas as equally valuable to the condor. For example, 13,000 acres of suitable foraging habitat, comprised of oak savannah and grasslands, would provide consistent feeding opportunities for condors due to the presence of carrion, appropriate vegetation structure to enable condors to access that carrion to feed, and, therefore, more opportunity for successful feeding attempts. As a result, these areas would have more value to condors as foraging habitat than a larger amount of woodland habitat that provides limited opportunities for successful feeding, given the majority of the vegetation structure would make it too difficult and dangerous for condors to find and access food in such habitat. When comparing the amount of foraging habitat lost as a result of the proposed development versus the amount conserved under the proposed TU MSHCP and existing Ranchwide Agreement, the Service believes it is appropriate to consider the suitably of foraging habitat as areas where condors are likely to consistently find and access food.

Based on this analysis, the Service has determined that grasslands and oak savannahs are the vegetation communities on Tejon Ranch where condors are the most able to consistently find and access food, and therefore constitute the vast majority of the suitable foraging habitat in the Covered Lands. This conclusion is based on, and reflected in, the Service's revised habitat suitability model for the condor, which is provided as Appendix D, Habitat Suitability Criteria Methods, of this EIS. The Service also included some additional vegetation communities (e.g., riparian woodland) in the habitat model where the vegetative understory is sparse enough to allow condors to access to the area under the tree canopy. In the absence of supporting literature, the Service has determined not to use the other parameters included in the initial version of the condor foraging habitat model (i.e., percent slope or distance from the centerline of a ridge) as restrictive to condor foraging or feeding.

## 1E.2.3 Management Practices and Natural Processes

Comments suggested that changes in management practices, such as hunting, grazing, and wildfire management may reduce the value of existing foraging habitat. Other comments point to the positive effects of hunting and grazing on condor populations. Comments also suggested that the Draft EIS and Draft TU MSHCP do not specify where hunting will occur, that the restrictions on hunting may affect the available foraging lands and that restrictions on the disposal of gut piles may be an attempt to manipulate condor foraging patterns.

While the Service agrees with comments suggesting that natural processes, such as wildfires, may increase the value of condor foraging habitat, fire and other natural processes were not factored into the revised model of condor foraging habitat. The Service anticipates wildfire, particularly where it would threaten human life and property, would be controlled to the extent possible. Any potential foraging habitat created or enhanced as a result of fire would be a benefit for condors if located more than 0.5 mile from development (see discussion of indirect effects associated with development proposed under the TU MSHCP in Section 1E.2.4, Evaluation of Loss of Foraging Habitat, below). However, as fire is currently controlled and managed to the extent feasible, and would continue to be in the future, it is not practical to try to factor such processes into a model of foraging habitat or the effects analysis when considering loss and conservation of foraging habitat.

Traditional ranching practices, such as grazing and hunting, would continue under the TU MSHCP. These activities are known to be beneficial to the California condor (U.S. Fish and Wildlife Service 1974, 1996, Wilbur 1978) because they provide a necessary source of carrion for condors to feed on.

The continuation of these practices on Tejon Ranch is especially important for condors because the ranch historically has been a focal point for condors, particularly in the fall (probably due to the consistent availability of food). As recent condor GPS and field observations indicate, Tejon Ranch is once again a key component in the home ranges of nearly all of the free flying condors currently occupying southern California (Johnson et al. 2010) (Appendix I).

Although hunting is not a Covered Activity under the TU MSHCP, it is anticipated that hunting would continue both in the large block open space areas of the TMV Planning Area as well as in the open space areas of the rest of the Covered Lands (and outside the Covered Lands) on Tejon Ranch. The current hunting program on Tejon Ranch operates under a plan that is reviewed and approved by the California Department of Fish and Game (CDFG). Under the Private Land Management Plan, hunters are issued licenses and hunting area maps, and are subject to restrictions designed to protect wildlife. These restrictions would be revised to include a requirement that gut piles be removed from the TMV Planning Area when less than 0.5 mile from the Development Envelope, which would reduce the potential for habituation of condors by limiting foraging opportunities near human structures. West of Geghus Ridge, most of the TMV Planning Area is restricted to guided hunting only, and the disposal of carcasses and/or gut piles is not allowed in that area. The Tejon Ranch hunting maps also indicate that gut piles and carcasses must not be disposed of on or near Geghus Ridge. Managed hunting would continue in the open space areas of TMV Planning Area, which may include recreational hunting under the supervision of an authorized hunting guide. However, as discussed below, the Service is only considering the blocks of suitable foraging habitat in the TU MSHCP open space areas as likely to provide feeding opportunities for condors if they are 0.5 mile or more from the proposed TMV Specific Plan and Oso Canyon Development Envelopes (Table 2-1, in Chapter 2, Proposed TU MSHCP and Alternatives, Volume 1 of this Supplemental Draft EIS).

The Service anticipates that hunting would continue to serve as a primary food source for condors outside the TMV Planning Area, given the amount of suitable foraging habitat present in the TU MSHCP Mitigation Lands and other conserved ranch lands. Tejon Ranch operates a successful commercial hunting program on the ranch. The Service fully expects that program will continue in the 90% of the ranch that would be permanently conserved under the TU MSHCP and/or Ranchwide Agreement. However, restrictions on carcass and /or gut-pile disposal in the TMV Planning Area, combined with the direct loss of suitable foraging habitat and indirect effects associated with development, suggest that any foraging opportunities in the TMV Planning Area would be limited to cattle mortality or hunter-killed carcasses that are improperly abandoned by hunters, notwithstanding the prohibition on carcass and/or gut-pile disposal in this area. The Service has revised this Supplemental Draft EIS, and the applicant has revised the Draft TU MSHCP, with additional details regarding the hunting program in relation to the development proposed under the TU MSHCP, as well as the cumulative effects of additional projects proposed in critical habitat.

The Service does not anticipate that the overall value of foraging habitat outside the TMV Planning Area would be affected by continued public access to lands conserved under the TU MSHCP. Even accounting for additional public access on the conservation lands, in the form of passive recreation activities (e.g., hiking, wildlife viewing, photography, etc.) that would be allowed under the TU MSHCP, the Service assumes that the large size of the TU MSHCP Mitigation Lands (116,523 acres), including 66,117 acres of suitable foraging habitat that would be conserved in this area, in addition to up to 240,000 acres of conservation lands under the Ranchwide Agreement, including an additional 83,818 acres of foraging habitat conserved outside of the Covered Lands under the Ranchwide Agreement, would accommodate both condors and visitors without negative interactions. The protective measures included in the Draft TU MSHCP and proposed conservation easements covering the TU MSHCP Mitigation Lands are designed to minimize negative interactions between condors and humans. The extent and types of public access into the conservation lands would be limited and controlled, and public use would generally be restricted to specific trails and

existing roads to minimize disturbance to feeding or roosting condors. Most importantly, the TU MSHCP requires development of a public access plan to govern public access to the TU MSHCP Mitigation Lands and requires that the plan and future revisions or amendments thereto, be approved by the Service to ensure any public use of the TU MSHCP Mitigation Lands is compatible with conservation of the condor. The requirement to obtain Service review and approval of future public access plans is permanent, notwithstanding the 50-year term of the incidental take permit (ITP).

Other uses of the TU MSHCP Mitigation Lands would also be strictly regulated to protect condors using the Covered Lands. For example, residential and commercial development would not occur in TU MSHCP Mitigation Lands, although Plan-Wide Activities, including ongoing ranch uses, would continue. However, explosions (louder than gunshots) or other abnormally loud noises associated with film production or other activities would be prohibited in the Condor Study Area. Outside of the Condor Study Area, but within the TU MSHCP Mitigation Lands, explosions (louder than gunshots), or other abnormally loud noises would be prohibited unless the Service-approved TRC Staff Biologist determines, in consultation with the Service, that no condors are present or would be otherwise adversely affected by such explosions and/or noise. Roosting condors are readily disturbed by noise or movement and, if it occurs late in the day, may disturb condors away from the roost site that night (Koford 1953). The avoidance of disturbance to condors occupying traditional roost sites is particularly important. Wilbur (1978) noted that some traditional roosts had been used continuously for 35 years. Thirty-three years later, condors are using these same sites on Tejon Ranch. Based on the historic and contemporary use of the Winters Ridge and Bear Canyon roost sites, the Service assume these specific locations must offer something special to condors that is not available elsewhere on the ranch. If condors are easily disturbed from roost sites as Koford (1953) indicates, and the condors are once again using the same sites they did prior to their previous extirpation from the wild (U.S. Fish and Wildlife Service 1996, Snyder and Snyder 2000), it is logical to assume these roost sites are located in an area where condors are free from disturbance and safe from predators. The reoccupation of the site by condors despite current levels of use of a ranch road in the vicinity of the Winters Ridge roost suggests this level of activity is compatible with use of the site by condors. Thus, this level of traffic should be permissible, while increased use of this road beyond the current ranchwide use is subject to strict regulation under the proposed TU MSHCP to avoid disturbance to condors.

Under the TU MSHCP, a Service-approved biologist would monitor condor activities prior to and during the Covered Activities, in order to ensure avoidance and minimization of any disturbance. The public access plan that would be reviewed and approved by the Service would also ensure that any increased public activity is implemented in a way that disturbance to condors is avoided and minimized. The Service anticipates that the level of potential effect on condors from passive recreation would be low under the TU MSHCP, and similar to or (pursuant to the Ranchwide Agreement provisions regarding public access restrictions and requirements) more restrictive than what has occurred in other areas in the historic range. For example, people recreating in the TU MSHCP Mitigation Lands could intersect with a feeding group of condors which may, or may not, result in condors abandoning the carcass depending on the distance and activities involved. Given the large size of the TU MSHCP Mitigation Lands and other lands conserved under the Ranchwide Agreement, the random occurrence of carrion that condors use for food, the low impact, passive recreation activities proposed and regulation of those activities, as well as restrictions on the location and types of organized events, the Service anticipates that the TU Mitigation Lands and conservation lands on the ranch would continue to provide foraging, feeding, and roosting opportunities for condors.

## 1E.2.4 Evaluation of Loss of Foraging Habitat

Comments suggested that the loss of foraging habitat is underestimated in the Draft EIS and Draft TU MSHCP, in part because the estimate of what areas constitute suitable habitat are too narrow. Another comment questioned the small area of lost foraging habitat, given the size of the project and the lack of estimates of indirect effects within a buffer. Several commenters objected to the use of supplemental feeding to offset the loss of foraging habitat in the TMV Planning Area. Comments also expressed concerns that large areas of currently used foraging habitat would be permanently lost to development and cannot be substituted for by conserving other lands or moving food sources.

Based on the Service's revised model of foraging habitat, and assuming disturbance of the entire TMV Specific Plan and Oso Canyon Development Envelopes (8,366 acres within the TMV Planning Area), approximately 6,656 acres of suitable foraging habitat would be directly lost and 11,339 acres of suitable foraging habitat would be indirectly affected, for a total of 17,995 acres of suitable foraging habitat potentially affected under the TU MSHCP. However, the actual amount of suitable foraging habitat directly and indirectly affected would be less because the Disturbance Area in these Development Envelopes would be limited to 5,533 acres. Because the exact location of actual development footprints within the Development Envelope is unknown at this time, the Service analyzed the direct and indirect effects associated with the larger Development Envelope in this Supplemental Draft EIS. Please refer to Master Response 1B, California Condor Critical Habitat, for additional detailed discussion of the modeling approach used to assess direct and indirect effects on condor foraging habitat.

As noted above, the Service agrees that, in addition to the direct loss of foraging habitat in the TMV Specific Plan Area/Oso Canyon Development Envelope, there would be additional indirect effects on California condors that would contribute to the overall amount of foraging habitat that would be lost or adversely affected in the TMV Planning Area portion of the Covered Lands. The Service considered the effects of disturbance on condors that may be actively feeding on, or perched near, a carcass in proximity to development, or on condors that may locate a food source, but not land and feed due to the location of the carcass in relation to the development and associated disturbance. To calculate and estimate this area of indirect effects, the Service assumed that a distance of approximately 0.5 mile extending from the edge of the TMV Specific Plan Area/Oso Canyon Development Envelope would encompass potential disturbance to feeding condors. Although the Service is aware that a 0.5-mile distance between feeding condors and human activity has not been used as a measure to minimize human influence on feeding condors in the past, this distance is an appropriate conservative approximation of the distance necessary to reduce or eliminate the disturbance to foraging and feeding condors, given the exact reactions condors may have to different noise or activities cannot be predicted. Koford (1953) noted that condors normally feed in relatively isolated areas and usually leave if approached within about 1,000 feet (approximately 0.18 mile); he also recorded condors feeding within 500 yards of an active ranch house. Wilbur (1978) documents condors feeding within 1,000 feet of well-traveled roads.

Although the Service cannot rule out the possibility of a carcass occurring in suitable foraging habitat in open space associated with the TMV Planning Area, it is reasonable to assume that, based on the general configuration of about half of the TMV Planning Area Open Space into relatively small conserved open space areas that are interspersed with, and adjacent to, development, and the unknown fate of any carcasses in these areas (i.e., carcasses may be removed if too close to residential or commercial areas, or may be too close to human disturbance to enable condors to feed on them), most of the suitable foraging habitat in the TMV Planning Area Open Space would not consistently provide feeding opportunities for condors. However, the Service assumes that the larger blocks of suitable foraging habitat in the TMV Planning Area Open Space would still function as foraging habitat (e.g., the eastern end of Geghus Ridge and the area north of Grapevine Peak) when more than 0.5 mile away from development. Based on this assessment, the Service calculates

that approximately 2,637 acres of suitable foraging habitat would be functional in the TMV Planning Area Open Space.

For clarification, the density of the proposed TMV Project would be highest in the lower elevations of the TMV Planning Area, particularly around Castac Lake where commercial and resort residential development is proposed. The density of development would decrease in the higher elevations. The Service anticipates that this development scenario would result in relatively low condor use of most of the TMV Planning Area as a result of direct habitat loss to development and indirect effects within 0.5 mile of the proposed Development Envelope. Additionally, the Service notes that the traditional condor roost site in the Winters Ridge area of the Condor Study Area would be more than 5 miles from the nearest proposed development, and would be naturally buffered from the proposed development by topography. Restrictions on public access to the Condor Study Area and the specific activities that would be allowed there are identified in the public access plan included in the Interim Ranch-Wide Management Plan (Tejon Ranch Company 2009). The Implementing Agreement provides for submittal of subsequent public access plans (to be reviewed and approved by the Service to ensure that such use is compatible with maintaining the area's conservation value to the California condor and compliant with the ESA. The Service believes that the proposed TU MSHCP, including development proposed under the TU MSHCP, would not be a limiting factor in the ability of condors to use the portions of the ranch that would remain undeveloped.

Several commenters objected to the use of supplemental feeding to offset the loss of foraging habitat in the TMV Planning Area. Supplemental feeding may occur on the Covered Lands as deemed necessary by the Service for specific management needs, and is not proposed as mitigation to offset the loss of foraging habitat under the TU MSHCP. Please refer to Master Response 1H, California Condor Supplemental Feeding, for a more detailed discussion of the supplemental feeding program.

## 1E.2.5 Implications of Loss of Foraging Habitat for Condor Populations and Recovery

Several comments questioned the overall conclusions regarding the effect of the loss of foraging habitat on the condor. One comment suggested it is unclear how the significance of habitat loss was determined. Other comments suggested that the effect of the loss of habitat on the condor must be evaluated against the needs of a fully recovered population, especially in light of habitat losses elsewhere.

The effect of the loss of foraging habitat from development proposed under the TU MSHCP was determined by comparing the amount of suitable foraging habitat lost in the areas proposed for development in the TU MSHCP to the amount conserved on TU MSHCP Mitigation Lands and on conserved lands under the Ranchwide Agreement, and then evaluating the overall ability of the TU MSHCP Mitigation Lands to function as foraging habitat for a recovering population of condors.The Service considered the amount and type of habitats that would be conserved to determine if the TU MSHCP Mitigation Lands would provide a sufficient amount of foraging habitat and potential food sources (i.e. cattle, feral pigs, and native ungulates) to enable a recovering population of condors to continue to use the ranch as foraging habitat. The conservation of traditional roost sites historically and currently used by condors also factored into the Service's determination of the significance of the amount and type of habitat loss that would occur under the TU MSHCP.

While 17,995 acres of suitable foraging habitat in the TMV Planning Area would be directly and indirectly affected by Commercial and Residential Development Activities, it is anticipated that the remaining Covered Lands (i.e., TU MSHCP Mitigation Lands and Existing Conservation Easement Areas) and other conserved ranch lands would continue to provide conservation value to condors in the form of foraging and roosting habitat. In addition, grazing is anticipated to continue at the current level of 14,500 head of cattle on the Covered Lands, as well as on other ranch conserved

lands, and hunting would also continue on large areas of suitable foraging habitat in the Condor Study Area, other TU MSHCP Mitigation Lands, and other conserved lands on the ranch. Along with wild carrion, these activities would continue to provide important food resources for condors using the ranch in the proposed TU MSHCP Mitigation Lands, including the Condor Study Area, in open space areas in the TMV Planning Area situated more than 0.5- mile from the proposed development footprint, and in other ranch lands conserved pursuant to the Ranchwide Agreement. As described above, hunting and grazing would continue on these lands and provide important food sources, and the condor's traditional roost sites on the ranch, which are located more than 5 miles from the proposed TMV Project, would be preserved in perpetuity. These essential condor habitats would remain intact and functional if the TU MSHCP is implemented.

As discussed in Master Response 1B, California Condor Critical Habitat, the Service believes that even with the development proposed in the TU MSHCP, there would be sufficient foraging habitat remaining on Tejon Ranch, including sufficient food from wild and domestic carrion on the ranch, to support condors that currently feed on the ranch, as well as increased numbers of condors expected to forage there as the population expands. Approximately 79% of suitable foraging habitat in the Covered Lands, and 82% of suitable foraging habitat ranchwide, would remain available for condors with implementation of the TU MSHCP and the Ranchwide Agreement.

Some commenters expressed concern that habitat modeling should consider a fully recovered population "free of the current limitations to the species, like food subsidies and captive breeding." The suitable foraging habitat model for the condor is intended to characterize and quantify suitable foraging habitat for condors on Tejon Ranch. Mortality rates in the wild are averaging 20% to 25% and exceed the rate of natural reproduction in the wild. To address a "fully recovered population" of condors, as suggested, ongoing threats to the population, particularly lead poisoning, must first be addressed. The California Condor Recovery Plan (U.S. Fish and Wildlife Service 1996) does not attempt to define full recovery for the California condor, and the Service does not attempt to do so here. The captive breeding program is still necessary, and will likely continue to be necessary in the reasonably foreseeable future (50 to 100 years). The Service does not anticipate reaching the down-listing criteria until the threat of lead poisoning is adequately addressed. Further information about recovered population considerations is included in Master Response 1B, California Condor Critical Habitat.

Current threats to the condor notwithstanding, the Service estimates a sufficient food base currently occurs within the range of the condors in California including the southern California subpopulation, to support one of the two separate, reproductively self-sufficient populations of wild, free-flying condors which the recovery plan identified as one of the criteria related to down listing the species to a federally threatened status. This estimate is based on the reported cattle and sheep numbers reported from San Luis Obispo County to the southern Sierra Nevada portion of the range, the average mortality rate for cattle and sheep, and the approximate amount of carrion a population of 150 condors would need to support them for a year (Wilbur 1978) (Master Response 1B, California Condor Critical Habitat, for a more in depth discussion of this issue). Potential food resources available in central California, north of Monterey and San Benito Counties, would be in addition to the amount of potential food sources used in the Service's food availability analysis. The conserved lands on Tejon Ranch, as managed under the proposed TU MSHCP and Ranchwide Agreement, would contribute to the foraging habitat and carrion required to support a population of 150 condors in southern California and in the broader California region.

The Service is also aware of land conversions in other areas of condor habitat statewide. The cumulative effects associated with these land conversions are considered in the individual resources sections in Chapter 4, Environmental Consequences, of this Supplemental Draft EIS.

## 1E.2.6 Fragmentation

Comments suggested that the TU MSHCP would affect the condors' ability to use their entire historic range and additional critical habitat units by fragmenting their habitat.

The Service does not agree that development proposed under the TU MSHCP would preclude condors from reaching the remaining portion of the Tejon critical habitat unit, or other critical habitat units, and other suitable foraging habitat in the northern portions of the Tehachapi and Southern Sierra portions of their historic range. Condors regularly fly over other developed areas in Southern and Central California, as well as in Arizona. Based on GPS data, condors are currently flying over developments, including the communities of Frazier Park, Lebec, Pine Mountain Club, Stallion Springs, Big Sur, King City. Condors are also regularly traveling between Hopper Mountain National Wildlife Refuge and the Sespe Condor Sanctuary, south and west of Tejon Ranch, as well as through the Tehachapi Mountains into the northeast portion of their historic range. Condors can fly long distances in a single day, including over developments similar in size to the proposed TMV Project. Based on these patterns, the Service does not anticipate that the development proposed under the TU MSHCP would restrict condor movements or affect their use of their historic range as a result of habitat fragmentation. Please refer to Master Response 1G, California Condor Overflight Habitat Connectivity, for a more detailed discussion of this topic.

Master Response 1F

# California Condor Collisions with Powerlines and Structures

**Table MR1F-1. Comments Addressed in Master Response 1F**

| Comment | Commenter |
|---|---|
| I293-26 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-41 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| O5-4 | Defenders of Wildlife, Pamela Flick |
| O5-5 | Defenders of Wildlife, Pamela Flick |
| O5-21 | Defenders of Wildlife, Pamela Flick |

## 1F.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to California condor collisions with powerlines and structures. Table MR1F-1 provides a list of the commenters and a reference to the individual comment, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- Powerline-related condor fatalities have been documented. (Response provided in Section 1F.2.1, Powerline Fatalities.)
- Development in the TMV Planning Area, including aboveground utilities, would degrade habitat on Tejon Ranch and create negative interactions with human activities such that the ranch would not be viable for the California condor, including as a result of collisions with overhead objects and wires. (Response provided in Section 1F.2.2, Effects of Objects and Wires on Condor Habitat and Viability.)
- Mitigation measures such as restrictions on aboveground towers or powerlines are either existing practices or measures to minimize effects of the TU MSHCP and, as such, cannot be invoked to conclude that the mitigation program would provide a net benefit to condors. The measures simply represent an effort to maintain the *status quo* for condors and, in some cases, would probably fail. (Response provided in Section 1F.2.3, Restrictions on Towers and Powerlines Considered as Mitigation.)
- Construction must be carried out in a manner to discourage perching by condors to avoid potential conflicts with telephone wires and to avoid interference with overflights and foraging areas. All powerlines in the TMV Planning Area should be placed underground and no new cell phone towers or antennae should be constructed. (Response provided in Section 1F.2.4, Powerline and Telephone Wire Interference with Overflights and Foraging Areas.)
- Installation of powerlines, telephone wires, cell phone towers or antennae would result in adverse modification and destruction of condor critical habitat. (Response provided in Section

1F.2.5, Effects of Powerlines, Telephone Wires, Cell Phone Towers, or Antennae on Critical Habitat.)

- If collisions with existing lines occur, "offending" wires must be placed underground for at least 1,000 feet on either side of the collision site, rather than installing bird diverters or other "questionable" devices. (Response provided in Section 1F.2.6, Placing Wires Underground Where Collisions Have Occurred.)
- No new wind turbines should be constructed in the TMV Planning Area. (Response provided in Section 1F.2.7, Construction of Wind Turbines in the TMV Planning Area.)
- The Tejon Ranch California Condor Conservation and Management Plan (Condor Plan) (Bloom 2008)) and the Draft TU MSHCP are contradictory regarding wind turbines (see p. 69 of the Condor Plan and p. 4-.73 of the Draft TU MSHCP). The Draft TU MSHCP states that installation of wind turbines would be prohibited on all residential and commercial lots in the Covered Lands, yet the preceding paragraph in the Draft TU MSHCP indicates that onsite, individual wind turbines may be constructed with review and approval by the Service as long as they do not pose a threat to condors. (Response provided in Section 1F.2.8, Contradictory Language of Draft TU MSHCP and the Tejon Ranch California Condor Conservation and Management Plan Regarding Wind Turbines.)

# 1F.2 Responses to Substantive Comments

## 1F.2.1 Powerline Fatalities

A commenter stated that powerline-related condor fatalities have been documented.

This comment is correct. Both the EIS and TU MSHCP note that collisions with powerlines and high-voltage transmission lines remain a threat to condors (Section 3.1.6, California Condor, in Volume 1 of this Supplemental Draft EIS and Chapter 4, California Condor, in the TU MSHCP). Section 4.1.3.2, Wildlife and Plant Species, in the subsection entitled Collisions with Power Lines and Towers, in this Supplemental Draft EIS, and Section 4.2.2.2, Take Assessment, of the TU MSHCP provide a discussion of this issue in relation to proposed development in the TMV Planning Area. These sections note that any aboveground transmission lines, or vertical communication structures installed as a result of development in the TMV Planning Area, could result in collisions while condors are attempting to land or during flight. This potential effect would be increased if such lines or towers are located along prominent ridgelines.

In recognition of the threat posed by above ground powerlines and towers, the TU MSHCP includes restrictions on the relocation and construction of new transmission lines and associated towers. Specifically, within the TMV Planning Area, Tejon Ranchcorp (TRC) would be allowed to relocate the following within 1,000 feet of their existing alignment: (1) an above ground transmission line within TMV Specific Plan Area 1 and 5; and (2) an above ground transmission line near the I-5/Lebec Road interchange. In addition, TRC may temporarily relocate an existing aboveground transmission line that would run east from I-5, just north of Castac Lake, and which would be undergrounded within the TMV Planning Area after construction is complete, as well as several smaller lines in the TMV Planning Area Development Envelope during construction. Relocation of transmission or distribution lines or relocation of any other existing lines under the TU MSHCP would be prohibited unless reviewed and approved by the Service (see Table 2-3 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS for additional detail on these restrictions).

The construction of new aboveground high-voltage towers and transmission lines would be prohibited under the TU MSHCP, both within the TMV Planning Area and elsewhere in the Covered Lands. New distribution lines for the TMV Project would be underground. The same prohibitions would apply elsewhere in the Covered Lands, with the exception of distribution lines to support ranch uses at historical levels. In areas where such lines cannot be located underground, they would be located in areas that would minimize the threat to Covered Species, including the threat of collision, with technical assistance from the Service on the identification of such locations (e.g., canyon bottoms). Third-party utilities, which TRC does not control, would be required to obtain their own Endangered Species Act (ESA) coverage should a transmission project be proposed in the future. The TU MSHCP would also require the installation of anti-perching devices on transmission towers to minimize the potential for injury or harm to condors. Additional measures to minimize the potential for condor collisions with various types of above ground communication towers would include approval by the Service of the design and location of any such towers, requirements that any approved towers be self-supporting (i.e., no guide wires), that potential perch surfaces be designed with anti-perching devices, and height and location restrictions for smaller communication structures not intended for emergency communication (See Table 2-3 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS for additional detail on these restrictions).

## 1F.2.2 Effects of Objects and Wires on Condor Habitat and Viability

A commenter indicated that development in the TMV Planning Area would degrade habitat on Tejon Ranch such that it would not be viable for the California condor. The comment based this statement on the absence of the original condor population from urban and suburban areas due to negative interactions with humans, including collisions with overhead objects and wires, but also disturbance at feeding sites, limited food sources, microtrash ingestion, and environmental pollutants.

The Service agrees that historically, condors likely avoided populated areas because of disturbance and limited food sources associated with human developments, as well as the other potential threats discussed in the comment. Please see Master Response 1D, California Condor Microtrash and Lead Ingestion, Master Response 1H, California Condor Supplemental Feeding, Master Response 1E, California Condor Loss of Foraging Habitat, and Section 4.1.3.2, Wildlife and Plant Species, in the subsection entitled California Condor, in Volume I of this Supplemental Draft EIS with respect to analysis on those issues.

With regard to overhead objects and wires, the Service agrees that collisions with power lines remain a threat to condors, as described above, in Section 3.1.6, California Condor, in Volume I of this Supplemental Draft EIS, and in Chapter 4, California Condor, in the TU MSHCP. Section 4.1.3.2, Wildlife and Plant Species, in the subsection entitled Collisions with Power Lines and Towers, in this Supplemental Draft EIS and Section 4.2.2.2, Take Assessment, Collisions with Powerlines and/or Artificial Towers/Structures, in the TU MSHCP, discuss the potential effects of these features on condors. As discussed above, under 1F.2.1, Powerline Fatalities, above, power line construction would be restricted.

## 1F.2.3 Restrictions on Towers and Powerlines Considered as Mitigation

A commenter stated that many of the mitigation measures proposed in the Draft TU MSHCP regarding restrictions on aboveground towers or power lines are either existing practices or measures to minimize new effects associated with the proposed action and, therefore, cannot be invoked to imply that the mitigation measures would provide a net benefit to condors. The comment suggested that the mitigation measures simply represent an effort to maintain the status quo for condors and, in some cases, would probably fail.

The commenter is correct in stating that restrictions on towers or aboveground powerlines to reduce development-related effects are measures to minimize the potential new effects associated with the Covered Activities in the TU MSHCP. The Service agrees that these measures do not represent a net benefit to condors. However, these measures are considered the best available measures to avoid and minimize bird collision risk with vertical structures such as communication towers and powerlines. As described in Section 2.2.2.5, Adaptive Management, in Volume I of this Supplemental EIS, the TU MSHCP would also include adaptive management measures in the event that condors do collide with or land on artificial structures on the Covered Lands. Under those circumstances, TRC would work with the Service to assess options for reducing the incidence of collisions, which could include revisions to the guidelines regarding location of antennas and towers, as set forth in the TU MSHCP, Section 4.6, Adaptive Management.

## 1F.2.4 Powerline and Telephone Wire Interference with Overflights and Foraging Areas

A commenter stated that, due to potential for conflicts with telephone wires (e.g., harassment), construction must be carried out in a manner to discourage perching by condors such that these activities do not interfere with overflights and foraging areas. The commenter notes particular concern with powerlines and telephone wires, and recommends that all powerlines in the TMV Planning Area be placed underground, and that no new cell phone towers or antennae be constructed.

As described above (Section 1F.2.1, Powerline Fatalities) and summarized in Table 2-3 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS, the TU MSHCP would allow for permanent relocation of two existing lines (i.e., in the TMV Planning Area and near the I-5/Lebec Road interchange) within 1,000 feet of their current locations; temporary relocation of a third line during construction, which would ultimately be placed underground; and temporary relocation of several other smaller lines during construction in the TMV Planning Area. No new aboveground high-voltage towers, transmission lines, or power lines would be built in the TMV Planning Area under the TU MSHCP. Third-party utilities, which TRC does not control, would be required to obtain their own ESA coverage should a transmission project be proposed in the future. The same prohibitions would apply elsewhere in the Covered Lands, with the exception of distribution lines to support ranch uses at historical levels I. In areas where such lines cannot be located underground, they would be located in areas that would minimize threats to Covered Species (e.g., canyon bottoms), like the threat of collision, with technical assistance from the Service on the identification of such locations.TRC has worked with Kern County and the provider to limit the number of towers necessary to provide adequate emergency radio communication coverage in the TMV Planning Area to meet public safety requirements and reduce the potential for condor collisions. Specifically, two towers would be placed at two separate locations in the TMV Specific Plan Development Envelope: one approximately 68 feet in height (including antennae), and the other approximately 65 feet in height (including antennae) (Table 2-3). Smaller vertical

communication structures would also be located within the TMV Planning Area or Lebec/Existing Headquarters Area Development Envelopes (e.g., cell phone or radio antennas), provided they meet design and height restrictions identified in the TU MSHCP, and that TRC confer with the Service regarding the placement of cell towers, antennas or other similar structures during the preparation of tentative tract maps and corresponding grading plans (Table 2-3). In addition to imposing height and design restrictions on these smaller vertical communication structures, Section 4.4.1.4, Collisions with Powerlines and Utility Structures, in the TU MSHCP and Section 2.2.2.3, Conservation Measures, in this Supplemental Draft EIS, require the installation of antiperching devices on any tower surfaces on which condors could perch, and require that towers be self-supporting (no guide wires).

Please see Master Response 1G, California Condor Overflight Habitat Connectivity, regarding additional comments on this topic.

## 1F.2.5 Effects of Powerlines, Telephone Wires, Cell Phone Towers, or Antennae on Critical Habitat

A commenter disagreed with the conclusion of the Draft TU MSHCP that construction of new powerlines and telephone wires associated with Commercial and Residential Development Covered Activities would not result in destruction or adverse modification of California condor critical habitat.

Section 4.4.1.4, Collisions with Powerlines and Utility Structures, in the TU MSHCP, and Section 2.2.2.3, Conservation Measures, in Volume I of this Supplemental Draft EIS, include measures to minimize potential effects on the condor associated with powerlines and vertical communication structures, such as emergency communication towers, cell phone towers, and radio antenna. The commenter's disagreement with the effectiveness of these measures is noted. As discussed above, no new aboveground high voltage towers and transmission or distribution lines, or similar aboveground electrical transmission structures and lines, would be built in the TMV Planning Area or in the other Covered Lands under this ITP. Smaller vertical communication structures may be constructed with Service review and approval, as described above. Two emergency communication towers (68 feet and 65 feet high) are proposed to be located in the TMV Planning Area, within critical habitat. These towers would be self-supporting (no guide wires) and would be fitted with anti-perching devices to minimize adverse effects to condors.

The restrictions on construction of new aboveground towers and transmission lines, in combination with design restrictions (no guide wires) on the two proposed emergency communication towers, and the Service's review and approval of the design and location of smaller vertical communications towers and distribution lines (see discussion above), would minimize the effects of these utility structures on critical habitat. No new towers would occur without Service approval. The Service will render a formal determination of the effects of the TU MSHCP on condor critical habitat, including the effects of towers and similar structures proposed under the plan, as part of the formal Federal Endangered Species Act (ESA) Section 7 consultation on the incidental take permit (ITP) and TU MSCHP. Please see Master Response 1B, California Condor Critical Habitat, and Section 4.1, Biological Resources, in Volume I of this Supplemental EIS with respect to the overall effects of the TU MSHCP on critical habitat on Tejon Ranch.

## 1F.2.6 Placing Wires Underground where Collisions Have Occurred

A commenter stated that if collisions occur with existing transmission lines and telephone wires, "offending" wires must be placed underground for at least 1,000 feet on either side of the collision site, rather than installing bird diverters or other "questionable" devices.

The Service agrees with the commenter that bird flight diverters are not always reliable in avoiding collisions between birds, including California condors, and powerlines. There are high-voltage transmission lines controlled by TRC located on the Covered Lands. Under the TU MSHCP, TRC would relocate two existing transmission lines approximately 1,000 feet from their existing locations and temporarily relocate during construction and eventually place a third line underground. To date, there have been no collisions between condors and the aforementioned transmission lines, or any other powerlines, on Tejon Ranch, and no new above ground transmission lines would be installed in the Covered Lands (or elsewhere on the ranch). Condor biologists with the Service visited the locations of the existing transmission lines and the proposed relocation sites and determined that the relocated lines would pose little collision risk to condors (and no greater risk than posed by the existing lines) because of the relocated sitings and the relatively low elevation of the lines.

## 1F.2.7 Construction of Wind Turbines in the TMV Planning Area

A commenter stated that no new wind turbines should be constructed in the TMV Planning Area.

Section 4.4.1.4, Collisions with Powerlines and Utility Structures, of the TU MSHCP states that "No wind farms will be constructed anywhere on the Covered Lands...", which includes the TMV Planning Area. This prohibition also extends to the adjacent Gorman Ranch where TRC would exercise its rights to prohibit construction of any wind farm or similar development through its restrictive covenants and negative easement over Gorman Ranch in perpetuity. The Covered Activities in the TU MSHCP, however, would allow for construction of individual wind turbines that have the primary purpose of meeting electrical generation needs for individual sites, but only following review and approval by the Service, and based on a determination that the device is of a design and in a location that would not pose a threat to condors or other Covered Species. Emerging technologies for turbine design should help to avoid and minimize condor and other raptor collisions. For example, vertical blade designs within screened cylinders may be appropriate, but open blade designs likely to cause condor fatality in the event of a collision are not appropriate. Given the benefits associated with renewable energy production, and the rapid advance of feasible renewable technologies at smaller scales and without the open blade tower design of older, more familiar wind farm technologies, the Service does not believe it is appropriate to forever preclude use on the Covered Lands of any wind-based renewable energy technology, particularly if it is designed to solely provide for on-site uses.

## 1F.2.8 Contradictory Language of Draft TU MSHCP and the Tejon Ranch California Condor Conservation and Management Plan Regarding Wind Turbines

A commenter stated that the language in the Condor Plan (Bloom 2008; originally appended to Draft TU MSHCP as Appendix C) is contradictory regarding wind turbines. The Condor Plan, at page 59, states that "[b]ecause of the potential for raptors, including the California condor, to collide with wind turbines, the installation of such turbines will be prohibited on all residential and commercial lots in Covered Lands." The preceding paragraph on page 69 states that "individual wind turbines, which have the primary purpose to serve electrical generation needs on site, may be constructed, if after review and approval by the FWS, such turbines are of a design and in a location that would not pose a threat to condors."

Section 4.4.1.4, Collisions with Powerlines and Utility Structures, of the TU MSHCP was amended to clarify the language regarding, and distinguish between, the installation of individual wind turbines, as described above, and the prohibition on wind farms on the Covered Lands,

> Additionally, the prohibition on wind farms shall be maintained on the Covered Lands in perpetuity, except that individual wind turbine devices, which have the primary purpose to serve electrical generation needs on site, may be constructed following review and approval by the USFWS based on the USFWS determination that the device is of a design and in a location that would not pose a threat to condors (e.g., vertical blade designs within screened cylinders may be appropriate, but open blade designs likely to cause condor fatality in the event of a collision are not appropriate).

The TU MSHCP would allow for individual wind turbines contingent upon review and approval by the Service. The primary purpose of the individual wind turbine would be to provide alternative "green" energy generation in the Covered Lands, and the Service believes that the requirement for review and approval would serve to avoid and minimize effects on the California condor from these individual wind turbines.

Also note, the Condor Plan is no longer appended to the TU MSHCP (it was Appendix C in the original Draft TU MSHCP).

# California Condor Overflight Habitat Connectivity

**Table MR1G-1. Comments Addressed in Master Response IG**

| Comment | Commenter |
|---|---|
| I293-9 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-18 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-36 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-37 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-38 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I502-16 | Forster, Peggy |
| I626-6 | Hamber, Robert |
| I627-45 | Hamber, Robert |
| I627-49 | Hamber, Robert |
| I948-17 | Manning, Jeffrey A |
| O4-64 | Center for Biological Diversity (Keats, Adam) |
| O4-78 | Center for Biological Diversity (Keats, Adam) |
| O4-88 | Center for Biological Diversity (Keats, Adam) |
| O4-88A | Center for Biological Diversity (Keats, Adam) |
| O4-93 | Center for Biological Diversity (Keats, Adam) |
| O4-110 | Center for Biological Diversity (Keats, Adam) |
| O4-112 | Center for Biological Diversity (Keats, Adam) |
| O4-375 | Center for Biological Diversity (Keats, Adam) |
| O4-376 | Center for Biological Diversity (Keats, Adam) |
| O4-388 | Center for Biological Diversity (Keats, Adam) |
| O4-403 | Center for Biological Diversity (Keats, Adam) |
| O4-417 | Center for Biological Diversity (Keats, Adam) |
| O5-7 | Defenders of Wildlife (Flick, Pamela) |

# 1G.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to overflight habitat connectivity for California condors. Table MR1G-1 provides a list of the commenters and a reference to the individual comments, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- Tejon Ranch is centrally located for California condor movement between the Sespe Wilderness area, Bitter Creek National Wildlife Refuge (NWR), Los Padres National Forest, the Coast Range, nesting areas in Santa Barbara County, and the Sierra Nevada. Tejon Ranch is located in a four-fold ecoregion "choke point" between the Transverse Range and the Sierra Nevada. (Response provided in Section 1G.2.1, Tejon Ranch Location in Relation to California Condor Movement.)
- The loss of Tejon Ranch as a foraging area would cause increased habitat fragmentation between other foraging areas and prevent California condors from traveling between the southern and northern portions of the species' range because flight distances may become too great. (Response provided in Section 1G.2.2, Habitat Fragmentation and California Condor Movement.)
- The effect of the TMV Project on California condors with respect to flyover habitat is improperly evaluated in the Draft TU MSHCP, which fails to distinguish the TMV Project from other developed areas over which condors fly, in that the TMV Project is larger, located at a more significant "pinch-point", located higher on ridgelines, and closer to foraging areas. (Response provided in Section 1G.2.3, Effects of the TMV Project on Flyover Habitat.)
- Tejon Ranch is essential to recovery of the California condor because it provides crucial connectivity. The Draft TU MSHCP under-represents the action area and does not evaluate the fragmentation effect of the TMV Project on critical habitat units in California. (Response provided in Section 1G.2.4, Habitat Connectivity on Tejon Ranch and California Condor Recovery.)
- The three areas of proposed Tejon Ranch development form a solid band of human development and activity that is much too large and too close together, and blocks the entire span of condor habitat connecting the southern Sierra Nevada to the Coast Range. (Response provided in Section 1G.2.5, Effects of Combined Cumulative Development on Tejon Ranch on Connectivity.)
- Flight line data that pass over proposed development areas identify critical habitat that connects feeding areas with nesting areas and demonstrate that the combined effects of the TMV Project, Grapevine, and Centennial are a significant intrusion and connectivity barrier to California condors. (Response provided in Section 1G.2.6, Flight Line Data and Proposed Development.)
- The Draft TU MSHCP minimizes the importance of Tejon Ranch for California condor movement and other regional lands and the range map (Figure 1 of the Tejon Ranch California Condor Conservation and Management Plan [Condor Plan][Bloom 2008; originally appended to Draft TU MSHCP as Appendix C]) is inaccurate in showing large areas of the San Joaquin Valley as part of the condor range. (Response provided in Section 1G.2.7, Condor Range Mapping.)
- California condor occurrences based on global positioning system (GPS) data should be buffered by a 0.5-mile radius to address potential effects on condor behavior. When these buffers are added, the three development areas on Tejon Ranch form a more complete barrier to condor movement. (Response provided in Section 1G.2.8, Use of Buffers Around California Condor Occurrence Data).

# 1G.2 Responses to Substantive Comments

## 1G.2.1 Tejon Ranch Location in Relation to California Condor Movement

Several commenters noted that Tejon Ranch is centrally located for California condor movement between the Sespe Sanctuary, Bitter Creek NWR, Los Padres National Forest, the Coast Range, nesting areas in Santa Barbara County, and the Sierra Nevada. A commenter noted that the Tejon Ranch is located in a four-fold ecoregion "choke point" between the Transverse Ranges and the Sierra Nevada.

The Service agrees that Tejon Ranch is centrally located and that it is important to ensure that adequate connectivity between the Transverse Ranges and the Sierra Nevada would be maintained if the TU MSHCP were implemented. Specifically, Tejon Ranch currently provides a natural habitat linkage between nesting and foraging areas to the west in Santa Barbara and Ventura Counties (e.g., Los Padres National Forest, Sespe Wilderness, Bitter Creek NWR and the southern Sierra Nevada [e.g., Sequoia National Forest]). Approximately 240,000 acres (90%) of the 270,000-acre Tejon Ranch are required to be protected as open space under the Ranchwide Agreement, including 82% of the Covered Lands. These areas include substantial condor foraging, feeding and roosting habitat. Although Tejon Ranch does serve as an important linkage between historic condor habitat areas east and west of the ranch, the proposed development on Tejon Ranch would not prevent condors from continuing to fly over Tejon Ranch, or to access areas further to the east or west of the ranch. Refer to Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS.

## 1G.2.2 Habitat Fragmentation and California Condor Movement

Commenters stated that the loss of Tejon Ranch as a foraging area would cause increased habitat fragmentation between other foraging areas and prevent California condors from traveling between the southern and northern portions of the species' range because flight distances may become too great. The commenters stated that degrading Tejon Ranch critical habitat poses a risk to condor use of the Blue Ridge, Kern County Rangelands, and Tulare County Rangelands critical habitat areas, and could prevent birds released in nesting areas in the southern Sierra Nevada from reaching critical habitat south and west of Tejon Ranch. A commenter stated that the TMV Project would fragment critical habitat on Tejon Ranch and significantly constrict the southernmost tip of the historic range of the condor.

Although Tejon Ranch does serve as an important linkage between historic condor habitat areas east and west of the ranch, the proposed development on Tejon Ranch would not prevent condors from continuing to fly over Tejon Ranch, or to access areas further to the east or west of the ranch for the following reasons. Condors are currently flying over residential areas in the region with residential and commercial development densities similar to or greater than that proposed for the TMV Project. As such, the Service does not expect condors to avoid flying over similar areas in the TMV Specific Plan Area after buildout, particularly over the more outlying areas farther north from Castac Lake that are characterized by lower residential development densities. The free-flying condors in the southern California subpopulation have been recorded flying over communities in the Tehachapi Mountains that have rural residential densities similar to or greater than that proposed for the TMV Project, including Pine Mountain Club and Frazier Park, Piñon Pines, Lake of the Woods, Interstate 5 (I-5), and even developed portions of Santa Clarita and the northern San Fernando Valley. Such flyovers have resulted in no measurable ill effects with respect to continued condor use of historical and current foraging, roosting, and nesting areas, as evidenced by Service GPS tracking data. These data

indicate increasing use of these habitat areas since 2002, when the Service began to use GPS transmitters to track free-flying condors.

Furthermore, the U.S. Geological Survey (USGS) recently released a report presenting a statistical analysis of GPS data collected from 2004 to 2009 for spatial behavior patterns in six management units in southern California, including Hopper Mountain and Bitter Creek NWRs, Wildlands Conservancy Wind Wolves Preserve, the TMV Specific Plan Area, the California Condor Study Area, and Tejon Ranch, excluding the TMV Specific Plan Area and the Condor Study Area (Johnson et al. 2010) (Appendix I ). The study generated condor home ranges by estimating the utilization distribution that can then be used to estimate the probability and intensity of use of certain areas of interest. Appendix A of the USGS condor study includes the utilization distribution maps for 21 individual condors and shows urbanized areas of Santa Clarita in the estimated home ranges of 16 individuals, and the communities of Frazier Park and Pine Mountain Club in the home ranges of 18 individuals. For example, a utilization distribution map from Appendix A of the USGS report shows a condor's estimated home range and high likelihood of occurrence locations, including the Condor Study Area on Tejon Ranch, Bitter Creek NWR, Hopper NWR, and the San Gabriel Mountains. This particular individual's home range encompasses highly urbanized areas in the Santa Clarita and San Fernando valleys and the Frazier Park and Pine Mountain Club areas. The USGS condor study supports the conclusion that condors regularly fly over developed areas and that these areas, based on the GPS data, are part of their estimated home ranges.

The TMV Project would not preclude foraging on Tejon Ranch, and thus would not result in habitat fragmentation effects that would prevent flyover of the ranch and movement between areas east and west of the ranch as a result of excessive flight distances. The TMV Specific Plan Development Envelope was modified to move development off of the northernmost higher elevation ridges and slopes to preserve high-quality condor foraging and flyover habitat. These areas include Grapevine Peak and northern Grapevine Ridge, the northern portions of Middle, Silver, Squirrel, and Lolas Ridges, the area encompassing the junction of Tunis and Geghus Ridges, and the easternmost 3-mile reach of Geghus Ridge. Condors have also been documented to fly over the highly urbanized Santa Clarita–Los Angeles area when moving between the Sespe Wilderness area and the San Gabriel Mountains. Similarly, and as discussed above, based on the GPS data, condors regularly fly over developed areas as part of their home ranges (Johnson et al. 2010 ). Additionally, TMV Project development south of the contiguous 2-mile-wide block of high-quality condor foraging and roosting habitat that extends from the western ranch boundary near Grapevine Peak eastward throughout the upland portions of the ranch is planned as very low-density residential development that would not inhibit condors from flying over or adjacent to these areas. Moreover, there are substantial portions of this area south of the 2-mile-wide area that would not have any development at all, but rather are required to be preserved as open space under the TU MSHCP or the Ranchwide Agreement. Thus, the open space lands, low-density developed lands, and high-density developed lands in the TMV Specific Plan Area would all continue to serve as condor overflight habitat and would provide an ample flight path and linkage for continued condor use of Tejon Ranch, as well as of areas to the east and west of Tejon Ranch.

## 1G.2.3 Effects of the TMV Project on Flyover Habitat

A commenter asserted that the effect of the TMV Project on California condors with respect to flyover habitat is improperly evaluated in the Draft TU MSHCP, which fails to distinguish the TMV Project from other developed areas over which condors fly, in that the TMV Project is larger, located at a more significant "pinch-point", located higher on ridgelines, and closer to foraging areas.

As discussed above, the free-flying condors in the southern California subpopulation have been recorded flying over communities in the Tehachapi Mountains, which have rural residential

densities similar to or greater than that proposed for the TMV Project. Condors fly over developed portions of the Santa Clarita River and San Fernando Valley that are much more densely developed than the TMV Project. The USGS condor study (Johnson et al. 2010), discussed above used the 2004 through 2009 Service GPS data to estimate home ranges that overlap these developed areas (Appendix I).

Further, the TMV Project is similar in elevation to such communities as Pine Mountain Club to the west, so the higher elevation of the TMV Project site relative to typical flight elevations compared to the lower elevation Santa Clarita River and San Fernando valleys would not constrain flyover behavior. As evidenced by Service GPS tracking data, condor flights over these nearby mountain communities to and from Hopper and Bitter Creek NWRs, and among these areas and Tejon Ranch, have been ongoing for years and reflect continued condor use of historical and current foraging, roosting, and nesting areas. These data indicate increasing use of these habitat areas since 2002, when the Service began using GPS transmitters to track free-flying condors. Condors continue to regularly fly over these regional mountain communities and I-5 to access these areas. The USGS condor study shows that 18 of 21 individuals analyzed have home ranges overlapping developed areas (Appendix I).

While Tejon Ranch is an important linkage between historic condor habitat areas in the southern Sierras to the Sespe Wilderness area and coast range habitat to the east of the ranch, the Service does not anticipate that implementation of the TU MSHCP, including development of the TMV Project, would preclude condors from continuing to fly over Tejon Ranch. Additionally, development immediately south of the 2-mile-wide open space area that is north of the TMV Project site is planned as very low-density residential development that would not inhibit condors from flying over or adjacent to these areas. Please refer to Section 1G.2.2, Habitat Fragmentation and California Condor Movement, above.

## 1G.2.4 Habitat Connectivity on Tejon Ranch and California Condor Recovery

Commenters stated that Tejon Ranch is essential to recovery of the California condor because it provides crucial connectivity. Commenters also stated that the Draft TU MSHCP does not evaluate the fragmentation effect of the TMV Project on critical habitat units in California. A commenter stated that the TMV Project would fragment critical habitat on Tejon Ranch and significantly constrict the southernmost tip of the historic range of the condor, and suggests that these two effects have the potential to reduce the likelihood of the recovery and survival of the condor by adversely modifying its critical habitat, reducing its distribution, and reducing its reproduction through loss of foraging habitats.

This comment refers to findings standards provided in Section 7 of the Federal Endangered Species Act (ESA). A formal evaluation of the effects of the proposed TU MSHCP and ITP on the condor and condor critical habitat under the regulatory standards of Section 7 of the ESA will be completed through the Service's internal consultation process on the proposed action, and documented in the resulting biological opinion. Refer to Master Response 8, Regulatory Considerations, and Master Response 1B, California Condor Critical Habitat. However, this Supplemental Draft EIS analyzes the effects of potential habitat fragmentation on connectivity and distribution. As discussed under Section 1G.2.2, Habitat Fragmentation and California Condor Movement, above, the proposed action would not result in habitat fragmentation for condors, nor would it fragment critical habitat. Therefore the proposed action would not result in the effects on condor distribution raised by the commenter. Please refer to Master Response 1E, California Condor Loss of Foraging Habitat, for a discussion of the effects of the loss of foraging habitat on California condor reproduction.

Tejon Ranch provides the linkage between the Coastal Range critical habitat units in Santa Barbara, Ventura, and Los Angeles Counties with the units in the southern Sierra Nevada. For the reasons described previously in this response and in Master Response 1E, California Condor Loss of Foraging Habitat, and Master Response 1B, California Condor Critical Habitat, the Services does not anticipate condors would be constrained from moving freely between the Tejon Ranch critical habitat unit and the other critical habitat units as a result of development proposed under the TU MSHCP.

## 1G.2.5 Effects of Combined Cumulative Development on Tejon Ranch on Connectivity

Commenters stated that the two areas of proposed development on Tejon Ranch (the TMV Project and Centennial), and a third area on the San Joaquin Valley floor adjacent to I-5, which is included as a potential future development area in the Ranchwide Agreement but which has no proposed development project planned or pending (Grapevine), form a solid band of human development and activity that is much too large and too close together, and would block the entire span of condor habitat connecting the southern Sierras to the coastal ranges.

For the reasons discussed previously, the Service does not believe the TMV Project or other potential development adjacent to the Covered Lands would act as a barrier to condor movement, such that it would preclude access to other areas of their historic range. Figure 4.1-1 in this Supplemental Draft EIS shows the relationship among the three developments identified by the commenter (i.e., the proposed TMV and Centennial projects and the potential future Grapevine development area) and the 240,000 acres (90%) of Tejon Ranch open space that would be protected under the Ranchwide Agreement, a substantial portion of which would also be protected in perpetuity under the proposed TU MSHCP.

As noted above, condors regularly fly over developed areas as part of their home ranges. The reader is directed to the responses above regarding the function of Tejon Ranch as linkage between historic condor habitat areas east and west of the ranch and information regarding current condor flyover behavior in developed areas.

## 1G.2.6 Flight Line Data and Proposed Development

A commenter stated that flight line data developed and depicted in Figure 9 of Cogan (2009), California Condor Activity in the Tejon Ranch Region, which was attached as Exhibit B to Comment Letter O4, demonstrates that the combined effect of the TMV Project, Grapevine, and Centennial projects would be a significant intrusion and connectivity barrier to California condors. Figure 9 to the Cogan Report shows visual data for feeding activity between 1982 and 1987 in Tejon Ranch in relation to nesting areas and the visual flight line data. The commenter states that the figure highlights the multiple activities (nesting, flying, and feeding) in the California montane chaparral and woodland ecoregion and suggests how effects on Tejon Ranch could affect nesting areas 25 miles to the south.

The flight line data used in Figure 9 of the Cogan Report are based on 1982–1987 data used for the 1993 master's thesis (Cogan 1993); the data were generated in part by U.C. Santa Barbara (UCSB) students and are known as the UCSB Database. That thesis identified a number of problems with the 1982 through 1987 data, including the fact that the coordinate data had to be significantly manipulated before it could be converted for GIS purposes. The thesis also noted several observational biases and inaccuracies in the UCSB database. Neither the Cogan Report nor the master's thesis provide any information regarding: (a) the accuracy of the transcriptions of the identified flight lines to GPS coordinates; (b) errors related to pilots mapping condor routes on county-scale maps while flying an aircraft; (c) observer biases; (d) the repetition of any single line

over time or by more than one bird to identify routes that might indicate a sustained flight path rather than short-term meandering; (e) potential effects that the aircraft itself may have had on the flight behavior of a condor being tracked; (f) the percentage of the flight lines represented by each of the six tracked condors; and (g) whether the flights were sampled in a consistent manner or, as is likely, whether Tejon Ranch and adjacent areas were the focus of aircraft study because of their relatively easy airport access.

The Service has considered the 1982 through 1987 flight line dataset noted by commenters, as well as the analysis in the USGS condor study completed in 2010 (Johnson, et. al., 2010(Appendix I), and the Service's additional field experiences and ongoing analysis of condor data. As described in this and other master responses (i.e., Master Response 1E, California Condor Loss of Foraging Habitat and Master Response 1B, California Condor Critical Habitat), the Service has concluded that California condors would continue to use Tejon Ranch, and the ranch would continue to serve as important roosting and foraging habitat, even after development of the TMV Project and implementation of the proposed TU MSHCP.

## 1G.2.7 Condor Range Mapping

Commenters stated that the Draft TU MSHCP minimizes the importance of Tejon Ranch for California condor movement and other regional lands and that the range map (Figure 3.1-5 in this Supplemental Draft EIS and Figure 4-1 in the TU MSHCP) is inaccurate because it shows large areas of the San Joaquin Valley toward Bakersfield as part of the condor range, thus reducing the relative importance of Tejon Ranch, even though the text in the Draft TU MSHCP states that condors do not use the San Joaquin Valley floor to any significant extent. One commenter stated that Figure 1 of the Cogan report (Cogan 2009) is much more accurate.

As noted in the response in Section 1G.2.6, Flight Line Data and Proposed Development, above, the Service agrees that Tejon Ranch is an important habitat linkage for California condor movement between areas to the east and west of Tejon Ranch. As discussed in Section 3.1.6.3, Biological Resources, in Volume I of this Supplemental Draft EIS, the range of the condor prior to the onset of the decline of the species in the mid-19th century extended across the western United States. The historic range of the California condor depicted in Figure 3.1-5 of this Supplemental Draft EIS and Figure 4-1 of the TU MSHCP was provided to the applicant by the Ventura office of the Service and is reflective of the likely historic range of the California condor as of the mid-20th century after a long period of decline, including occasional flights over the southern portion of the San Joaquin Valley, not the exact distribution within that range. While it is acknowledged that there may be slight discrepancies in the exact boundary of the range from one map to the next, this figure, as well as the USGS report and other analysis described in this and other master responses (i.e., Master Response 1E, California Condor Loss of Foraging Habitat and Master Response 1B, California Condor Critical Habitat), was considered as part of the Service's analysis of the TU MSHCP regarding potential effects on condors and condor critical habitat. The Service agrees that the current range of the condor does not generally include the San Joaquin Valley, although historically condors used the Central Valley floor prior to modern agricultural operations, traveling up to 40 miles from the foothills (Belding 1879, Stillman 1967). They now appear to avoid this area due to lack of food sources. This Supplemental Draft EIS and the Draft TU MSHCP have been updated to include the most recent and accurate data on condor movements and incorporate the analysis conducted by the USGS as well as the most recent 2010–2011 GPS data.

## 1G.2.8 Use of Buffers Around California Condor Occurrence Data

Commenters asserted that California condor occurrences based on GPS data should be buffered by a 0.5-mile radius to address potential effects on condor behavior, and note that when these buffers are added, the three development areas on Tejon Ranch form a more complete barrier to condor movement. The commenters refer to the 0.5-mile buffer placed by Cogan (2009) around each GPS data point (Figure 14 in Cogan 2009), which results in the majority of the TMV Planning Area being covered by the buffer areas. The commenters indicate that while buffer sizes can be debated and may vary in relation to the type of habitat use in an area, the Draft TU MSHCP and Draft EIS do not consider buffers around condor location points.

Figure 14 (Cogan 2009) shows 0.5-mile buffers around all GPS data points, including flight points and points considered to be on-the-ground locations. The legend to Figure 14 states, "There is longstanding precedence to protect nesting and other condor activity areas ranging from 500 yards (0.28 miles) to 2.3 miles (see Text Box 1 for citations)." The Text Box 1 citations regarding buffers address nesting, roosting, and bathing sites. There is no empirical basis or precedent cited by the commenter for setting 0.5-mile buffers around flight locations for condors. Major highways, large portions of both rural and heavily urbanized communities and various mineral and agricultural production lands are well within 0.5 mile of condor flyover areas and such areas were included in the home ranges of most of the condors analyzed in the USGS study (Appendix A in Johnson et al. 2010), as discussed in the above responses. Therefore, buffering of all the GPS points without differentiating points as different behavioral categories (flying, roosting, or perching) is not appropriate. However, the Service does believe it is appropriate to include a distance of 0.5 mile from the proposed TMV Planning Area development footprint to address indirect effects associated with development, such as noise and visual disturbance. These indirect effects are described in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, as well as Master Response 1A, California Condor Data and Habitat Use, Master Response 1B, California Condor Critical Habitat, and Master Response 1E, California Condor Loss of Foraging Habitat.

# California Condor Supplemental Feeding

**Table MR1H-1. Comments Addressed in Master Response 1H**

| Comment | Commenter |
|---|---|
| O4-115 | Center for Biological Diversity, Adam Keats |
| O4-115A | Center for Biological Diversity, Adam Keats |
| O4-116 | Center for Biological Diversity, Adam Keats |
| O4-118 | Center for Biological Diversity, Adam Keats |
| O4-119 | Center for Biological Diversity, Adam Keats |
| O4-120 | Center for Biological Diversity, Adam Keats |
| O4-121 | Center for Biological Diversity, Adam Keats |
| O4-122 | Center for Biological Diversity, Adam Keats |
| O4-123 | Center for Biological Diversity, Adam Keats |
| O5-10 | Defenders of Wildlife, Pamela Flick |
| 1293-30 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-31 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-32 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-33 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I293-39 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I948-21 | Manning, Jeffrey A |
| I948-22 | Manning, Jeffrey A |
| I948-23 | Manning, Jeffrey A |
| I948-24 | Manning, Jeffrey A |
| I1163-6 | Palmer, Bruce |

# 1H.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to supplemental feeding of California condors. Table MR1H-1 provides a list of the commenters and a reference to the individual comments, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

This response begins with an overview of the Service's approach to supplemental feeding. The overview discussion is followed by responses to the individual issues raised by commenters.

- Supplemental feeding is contrary to the California Condor Recovery Plan. (Response provided in Section 1H.2.2, Consistency with the California Condor Recovery Plan.)
- Supplemental feeding is not adequate mitigation, and it will reduce the likelihood of survival and recovery of the condor in the wild because it creates permanent dependence on artificial food sources and manipulates natural behavior. (Response provided in Section 1H.2.3, Supplemental Feeding as Mitigation in Support of Conservation and Recovery.)
- Supplemental feeding will result in take from harassment. (Response provided in Section 1H.2.4, Supplemental Feeding and Take from Harassment.)
- Supplemental feeding will result in take through greater microtrash ingestion. (Response provided in Section 1H.2.5, Supplemental Feeding and Microtrash Ingestion.)
- Supplemental feeding is made obsolete by the lead ban. (Response provided in Section 1H.2.6, Supplemental Feeding and Lead Ingestion.)

# 1H.2 Responses to Substantive Comments

## 1H.2.1 Overview

Currently, and as explained below, the Service provides supplemental feeding primarily to support two major condor recovery actions: the annual release of captive reared juveniles, and biannual trapping of the free-flying population to monitor for lead exposures and for transmitter upkeep.

Each fall, a cohort of juvenile condors that was raised in captivity is released into the wild as a means to grow the wild population and mitigate for deaths that have occurred the previous year. Positive population growth in the wild populations currently depends on captive releases. Newly released condors need extra care to increase the likelihood of their survivorship. Unlike condors that have newly fledged from wild nests, which rely on their parents to provide them with food for six to 18 months after fledging, captive released juvenile condors do not have parents to supply them with food. Instead, the Service uses supplemental feeding stations at release sites as a substitute for the food that young wild condors would receive from their parents prior to becoming independent. Newly released condors tend to remain dependent on these food subsidies for six to 18 months after being released, which requires year round food placements. However, multiple feeding sites are used randomly over an increasing area throughout the year to aid the young birds as they integrate into the wild population.

Twice a year the entire free-flying population of condors is trapped to monitor them for lead exposure, and to provide maintenance of their wing tags and very high frequency (VHF) or global positioning system (GPS) transmitters. Trapping is an essential part of condor recovery because it

allows for the treatment of condors exposed to lead, and allows the Service to maintain the ability to monitor the population as condors recolonize portions of their historic range. Trapping the wild population requires baiting walk-in traps with carrion. In order to trap the entire population, bait used for trapping is typically supplied over a two month period, twice per year. In southern California, trapping is conducted in June and July, and then again in November and December. As the wild population has expanded and become more self-reliant, trapping has become more challenging and the time it takes to trap all of the birds has increased. In the future, new trap sites in expanded portions of the condor's historic range may be necessary to trap the population successfully in a timely manner.

Although lead contaminated food continues to be a threat to condors, recent data indicate that supplemental feeding has not been shown to be an effective tool to facilitate the avoidance of lead poisoning in condors. Despite the regular availability of supplemental food, condors are foraging over hundreds of miles, throughout much of their historic range, and are finding their own food. As a result of this natural behavior, they continue to be exposed to carcasses contaminated with lead. Six condors have died from lead poisoning in 2011 (as of August 2011) (U.S. Fish and Wildlife Service 2011). It has become apparent that condors in the wild cannot be managed away from naturally occurring carrion, despite the presence of supplemental food. However, any lead-free carcasses condors they are able to consume, including supplemental carcasses provided by the condor recovery program, will continue to benefit individual condors and the recovering population, until lead contamination is no longer a threat.

Supplemental feeding is not expected to be permanent. However, under current and reasonably foreseeable future conditions, the Service anticipates that the use of supplemental feeding to facilitate trapping and to serve as a food source for recently released juveniles will continue and possibly expand prior to their discontinuation.

## 1H.2.2 Consistency with the California Condor Recovery Plan

A comment noted that although the California Condor Recovery Plan (Recovery Plan) (U.S. Fish and Wildlife Service 1996) recognizes that some condor populations may require supplemental feeding, the Recovery Plan does not anticipate that supplemental feeding will last indefinitely. Another comment acknowledged the current need for feeding stations, but cites Walters et al. (2008) for the need to reduce, if not eliminate, supplemental feeding stations where possible. Finally, a comment stated that supplemental feeding is a manipulation of the condor's natural behavior, including where birds forage, where they roost, what their diet is, how frequently they feed chicks, and their awareness of predators, and should not be a part of a long-term strategy for recovery of the species. Reliance on supplemental feeding creates an "outdoor zoo" population.

The Service is aware of the supplemental feeding discussion in the Recovery Plan, which acknowledges that even with the condor's downlisting to threatened status, supplemental feeding to augment natural food supplies and/or protect birds from exposure to contaminated carcasses may still be necessary. The Recovery Plan also indicates that supplemental feeding is not anticipated to last indefinitely; the Service agrees with the comments that encourage the need to reduce supplemental feeding where possible. The Service acknowledges the Recovery Plan statements and emphasizes that under the TU MSHCP, Tejon Ranchcorp (TRC) would provide funding for supplemental feeding on the ranch only as determined appropriate by the Service. As described in Section IH.2.1, Overview, above, the Service currently uses supplemental feeding to trap condors to assess their health, particularly their exposure to lead, to repair or maintain global positioning system (GPS) tracking devices, and to temporarily provide food for recently released captive-bred juveniles, which, if hatched in the wild, would obtain such food from their parents. As discussed below, the Service has no plans for permanent supplemental feeding sites on Tejon Ranch, or plans to release condors on Tejon Ranch.

### 1H.2.3 Supplemental Feeding as Mitigation in Support of Conservation and Recovery

A comment stated that supplemental feeding stations are a core mitigation measure proposed by the TU MSHCP, that the measure would adversely modify critical habitat by replacing natural foraging grounds with artificial feeding stations, and that the measure would fail as mitigation for loss of habitat because it would:

- create a permanent dependence on artificial food sources,
- involve a manipulation of behavior,
- potentially result in greater microtrash ingestion, and
- mitigate a threat (lead poisoning) that would be obsolete through other measures (i.e., state ban on lead ammunition).

For these reasons, the comment asserts that the measure fails to minimize or mitigate the loss of habitat and in fact reduces the likelihood of survival and recovery of the condor in the wild. Another comment stated that the remaining open space areas adjacent to development would not be viable foraging habitat due to the cessation of hunting and grazing, resulting in condors becoming more dependent on supplemental feeding stations in the future. The comment also noted that the TU MSHCP fails to admit that the loss of foraging habitat from development on the Covered Lands would make condor natural food source availability more variable, and supplemental feeding stations more necessary, creating dependence on a permanent food source provided by humans. The comment also stated that the TU MSHCP fails to consider the effects on condors that would become reliant on artificial food sources after the 50-year incidental take permit (ITP) term when the supplemental feeding stations may close. Another comment stated that while the supplemental feeding program is important, it must be carefully monitored to ensure that there is no disturbance to natural condor foraging activities and that it does not exacerbate overflights of the TMV Planning Area. Finally, a comment noted that feeding stations, if not constructed and managed correctly, can attract other scavengers, cause increased predation risk, promote abnormal sociality among condors, cause increased flocking and therefore, decreased distribution.

The Service has determined that the loss of foraging habitat from development considered in the TU MSHCP would not significantly reduce condor food sources, as discussed in Master Response 1E, California Condor Loss of Foraging Habitat, and Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS. In addition, hunting and ranching activities that provide the primary source of carrion for condors on the ranch would not cease, but continue to occur throughout all preserved open space areas on the ranch. Consequently, food source availability would remain consistent with what currently occurs on the ranch. As discussed previously, any supplemental feeding would be conducted by the Service as needed; it is not meant as a mitigation measure to offset the loss of foraging habitat that would occur as result of the development under the TU MSHCP. The Service agrees that permanent dependence on a human food source is undesirable, and the optional supplemental feeding measure would not serve to replace natural foraging habitat with permanent artificial feeding stations.

TRC would provide funding for supplemental feeding on the ranch only in coordination with, and at the direction of, the Service. While the Service is not contemplating future releases of condors on Tejon Ranch , it is possible the Service could determine that trapping condors on the ranch would be beneficial as the condor subpopulation in southern California continues to grow and expand their range. However, the Service anticipates any supplemental feeding stations operated for trapping purposes on Tejon Ranch would be operated only for short periods of time each year, and only if attempts to trap birds at existing sites were unsuccessful. To that end, TRC's proposed support of a

supplemental feeding program, included in the TU MSHCP, would aid in condor recovery to the extent that it would enable the Service to trap or release condors.

Thus, while the TU MSHCP lists supplemental feeding as a conservation measure (and not a mitigation measure), to be implemented only if and as directed by the Service based on best available science (which may continue to evolve over time, and thus be accommodated as part of the adaptive management program included in the revised TU MSHCP), to assist with the recovery program, the TU MSHCP has been clarified to eliminate provision of a permanent, frequent supplemental feeding program. As noted above, the Service anticipates that any supplemental feeding of condors on Tejon Ranch would be limited in scope and duration, and implemented at the sole discretion and direction of the Service for the purpose of trapping and releasing condors on the ranch. The purpose of supplemental feeding in relation to the lead ammunition ban is discussed in Section 1H.2.6, Supplemental Feeding and Lead Ingestion.

The supplemental feeding program measure is consistent with the Recovery Plan and would support recovery efforts, as discussed under Section 1H.2.2, Consistency with the California Condor Recovery Plan, above.

## 1H.2.4 Supplemental Feeding and Take from Harassment

A comment stated that disruption of the condor's behavior related to supplemental feeding stations constitutes "take" under Section 9 of the federal Endangered Species Act (ESA) due to harassment.

As discussed above, the use of supplemental feeding has long been a part of the Service's recovery program for the California condor. The commenter has provided no evidence, and the Service is not aware of any evidence, that short-term, supplemental feeding as contemplated by the Service creates a risk of injury to condors by annoying them to such an extent as to significantly disrupt normal behavioral patterns. The Service therefore rejects the suggestion that limited supplemental feeding of condors in conjunction with recovery program efforts results in take under the ESA.

## 1H.2.5 Supplemental Feeding and Microtrash Ingestion

A comment stated that the Draft TU MSHCP fails to identify the potential role of the supplemental feeding program in exposing condors to microtrash. The comment indicated that there is evidence of a relationship between feeding stations and microtrash and cites Mee and Snyder (2007), who suggest that condor use of feeding stations and an absence of natural foraging behavior provides them time to engage in nonessential activities and bring them into greater contact with humans and trash. The comment stated that the Draft TU MSHCP must address this relationship as a potential mortality factor and as a factor resulting in take of the species.

As discussed previously, condors are foraging over a large expanse of their range and finding their own naturally occurring carrion. While this has continued, and probably increased the wild population's exposure to lead poisoning, the suggestion that condor use of feeding stations and an absence of natural foraging behavior provides them time to engage in nonessential activities and bring them into greater contact with humans and trash, including microtrash, has not been confirmed. This conjecture is contradicted by evidence from the Arizona and Central California Coast release programs, both of which provide supplemental food for trapping and for feeding recently released juvenile condors, in multiple locations with varied feeding schedules and some variation in carcass types. Condors have foraged over a several-hundred-mile-radius from the feeding sites in these programs and are not experiencing microtrash ingestion problems to the same degree as the southern California population did during the period when Hopper Mountain National Wildlife Refuge was the only feeding station. Condor populations in southern California, central California, and Arizona all receive some amount of supplemental food for the condor recovery

program purposes described above. All of these populations find their own food sources despite the presence of supplemental food sources, and only the southern California subpopulation has experienced problems with microtrash—suggesting that some of the locations condors in southern California spend time in appear to have a large amount of microtrash (i.e., oil pads adjacent to the Sespe condor sanctuary). The Service does not have any reason to believe the supplemental feeding of young, recently released condors is increasing the population's exposure of condors to microtrash.

## 1H.2.6 Supplemental Feeding and Lead Ingestion

A comment stated that improved compliance with the lead ammunition ban will result in lead poisoning ceasing to be a threat to the condor and suggests that the permanent supplemental feeding program proposed in the Draft TU MSHCP will become obsolete.

The Service fully supports the commenter's positive outlook on the future of the recovery program in regards to lead poisoning and believes an effectively implemented lead ammunition ban can minimize this threat. As discussed above, the Service is not contemplating, and the TU MSHCP does not require, implementation of a permanent supplemental feeding program on Tejon Ranch. Also, as discussed in Section 1H.2.1, Overview, above, recent data indicates supplemental feeding has not been shown to be an effective tool to facilitate the avoidance of lead poisoning in condors in and of itself. However, any lead-free carcasses, including supplemental carcasses provided by the Service's Condor Recovery Program, would continue to benefit individual condors and the recovering population, until lead contamination is no longer a threat.

**Table MR1I-1. Comments Addressed in Master Response 1I**

| Comment | Commenter |
|---|---|
| I293-40 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I426-12 | Duchamp, Mark |
| I626-8 | Hamber, Robert |
| I627-47 | Hamber, Robert |
| O4-125 | Center for Biological Diversity (Keats, Adam) |
| O4-126 | Center for Biological Diversity (Keats, Adam) |
| O4-126A | Center for Biological Diversity (Keats, Adam) |
| O4-239 | Center for Biological Diversity (Keats, Adam) |

# 1I.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP regarding the lead ammunition bans imposed by California law and by Tejon Ranchcorp (TRC). Table MR1I-1 provides a list of the commenters and a reference to the individual comment, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The use of lead-free ammunition on Tejon Ranch is not mitigation because use of lead-free ammunition in the condor range is now California state law. (Response provided in Section 1I.2.1, Ranchwide Lead Ammunition Ban as Mitigation.)
- The TRC ban on the use of lead ammunition cannot be enforced and lead ammunition will still be used by hunters on the ranch. Enforcement and compliance with the lead ban on Tejon Ranch have not been complete, and requests for documents related to this issue have been rejected. (Response provided in Section 1I.2.2, Enforcement of Ranchwide Ban on Lead Ammunition.)
- Lead-containing gut piles or carcasses pose a serious threat to condors. (Response provided in Section 1I.2.3, Threats from Lead-Containing Gut Piles or Carcasses).

# 1I.2 Responses to Substantive Comments

## 1I.2.1 Ranchwide Lead Ammunition Ban as Mitigation

Commenters asserted that the ranchwide ban on lead ammunition on Tejon Ranch is not mitigation because use of lead-free ammunition is now required by California law. Commenters also stated that the ranchwide ban on lead ammunition was made irrelevant by the Ridley-Tree Condor Conservation Act and subsequent regulations of the California Fish and Game Commission banning the use of lead ammunition in all habitat, and state that the ranchwide ban is simply compliance

with state law. Therefore, commenters asserted that it is not appropriate to cite the ranchwide ban on lead ammunition as a mitigation obligation of the TU MSHCP.

The lead ammunition ban at Tejon Ranch became effective in January 2008, 7 months prior to the July 2008 effective date of the state law and regulations. The ban on the use of lead ammunition in Tejon Ranch is not listed as a mitigation measure for effects associated with the Covered Activities in the TU MSHCP, but as a measure that would contribute to the conservation and recovery of the California condor (Section 4.4.3, Measures to Contribute to the Conservation and Recovery of the Condor, in the TU MSHCP). Section 5.5.1 (a) of the Implementing Agreement states, "Because lead poisoning has been documented as the principal cause of California condor mortality, the decision to ban the use of lead ammunition throughout the ranch is a significant *conservation measure* (italics added) that will substantially reduce any potential for the loss of California condors on Tejon Ranch as a result of lead poisoning." The Implementing Agreement does not indicate that the ranchwide lead ammunition ban is a mitigation obligation.

While there is now a state statute prohibiting the use of lead ammunition for hunting in condor habitat, the TRC lead-ammunition ban continues to have substantial independent value. In addition to prohibiting the use of lead ammunition for hunting purposes, the TRC ban on lead ammunition goes beyond the state law ban and also prohibits use of lead ammunition by TRC employees or third parties who are engaged in any animal damage control or nuisance abatement activities on the ranch. Unlike the state statutory ban which can be repealed, amended, or successfully challenged in court, the TRC lead-ammunition ban will remain in effect in perpetuity, surviving both the expiration (after 50 years) and any early termination of an incidental take permit (ITP) that may be issued by the Service. Furthermore, the fact that an applicant has taken steps to protect species prior to issuance of a permit does not render these measures ineligible for incorporation in a habitat conservation plan (HCP). *Loggerhead Turtle v County Council of Volusia County, Fla.*, 120 F. Supp. 2d 1005 (M.D. Fla. 2000). In addition, it covers the entirety of the 270,000-acre ranch, not just the Covered Lands.

## 1I.2.2 Enforcement of Ranchwide Ban on Lead Ammunition

A commenter stated that the ranchwide ban on the use of lead ammunition cannot be enforced and that hunters on Tejon Ranch will still use lead ammunition. Another commenter cites anecdotal evidence in 2008 and statements by TRC biologist Holly Hill in May 2008 that enforcement and compliance with the lead ban on Tejon Ranch have not been complete. The commenter indicated that requests for documents related to this issue have been rejected. The commenter stated that evidence of TRC's compliance with its own mitigation measure and state law must be made public prior to approval of the TU MSHCP.

The ranchwide lead ammunition ban applies to all hunters using the ranch, including those with hunting memberships, group hunts and guided hunts. It also applies to TRC employees or third parties who are engaged in any animal damage control or nuisance abatement activities on the ranch. Section 4.4.3.3, Establishment and Enforcement of a Perpetual, Ranchwide Ban on Lead Ammunition, in the TU MSHCP describes TRC's aggressive hunter awareness and enforcement program, which operates under a "no tolerance" policy, and will continue to be implemented to ensure that the ban on lead ammunition will successfully contribute to reducing the incidence of lead poisoning of condors. The components of the program include the following:

- All hunting permittees must acknowledge and sign a notice and agreement that addresses the lead ammunition ban and the protection of the California condor. Hunting permittees are required to acknowledge that violations of the ban will result in immediate expulsion from the ranch, permanent termination of all future hunting privileges, and liability to TRC and state and Federal governments.

- All hunting permittees must also acknowledge and sign an agreement that defines hunting rules and regulations on Tejon Ranch. Among other things, these rules and regulations prohibit shooting at large birds; require that gut piles and carcasses, unless transported off the ranch or are suspected to contain lead, shall remain in place on the ranch; require the removal of all litter, trash, and microtrash; and prohibit any behavior that could be construed as a take of the condor.
- All hunting permittees must acknowledge and sign a hunting permit that reiterates the rules and penalties described above, and that states that the permit is not valid unless the notice and agreement regarding lead ammunition and protection of the condor and the hunting rules and regulations agreement have been acknowledged and signed.

The education and enforcement program has been administered at the ranch since the ranchwide lead ban took effect on January 1, 2008. The program includes educating hunters with respect to the effects of lead on condors and giving hunters an opportunity to experiment with non-lead ammunition alternatives. The lead ammunition ban and enforcement would be required as terms of the Implementing Agreement under the TU MSHCP.

Regarding the comment that enforcement of the ranchwide ban has been incomplete, there is no direct evidence that condors are exposed to lead in ammunition from Tejon Ranch. In June 2008, hunting was temporarily suspended on the ranch for 30 days following an unusually high number of lead exposures in the southern California flock. Tejon Ranch investigated hunter compliance during this period, and the Service is unaware of any confirmed incidence of the use of lead ammunition on the ranch since the January 2008 ban. Any use of lead-based ammunition on Tejon Ranch prior to January 2008 would have been permissible under TRC's hunting regulations. Despite the TRC and statewide ban on lead ammunition, however, condors in the southern California flock are still exposed to lead in their historic range. The potential for wildlife to carry lead ammunition from nonfatal gunshots is well documented. Thus, the sources of lead occasionally found in carcasses may come from peripheral areas of the ranch where poaching may occur. The commenter takes out of context statements made by former TRC biologist Holly Hill during her presentation at the conference in Idaho in May 2008 (Hill 2009). At her presentation, Ms. Hill explained that enforcement and compliance efforts were still being refined during the first few months of the ban. For example, Ms. Hill explained that from January to May 2008, TRC had been conducting random checks of hunters for lead ammunition. However, she noted that as of June 2008, the ranch would be conducting more extensive searches of each person and vehicle entering the ranch for hunting purposes. Ms. Hill also noted that, in conjunction with the Service, condor conservation efforts on the ranch with respect to the lead contamination issue were being refined, including lead isotope monitoring and sampling of hunter-killed carcasses, and efforts to identify other sources of lead that could adversely affect condors on the ranch. The deterrent effect of the lead ammunition ban program is expected to be extremely high, and, to date, no violations of this hunting ban on the ranch have been reported. TRC has confirmed its ongoing implementation of the lead ban during the TU MSHCP and EIS review and application processing period (Peterson pers. comm. 2011). The lead ammunition ban will continue to be enforced through the ranch's managed hunting program, and is also required as part of the TU MSHCP and Implementing Agreement.

## 1I.2.3 Threats from Lead-Containing Gut Piles or Carcasses

Commenters stated that lead gut piles or carcasses, and accumulations of microtrash pose a serious threat to individual condors.

Commenters are correct in stating that lead poisoning, as a result of the ingestion of lead fragments in gut piles or carcasses, are a threat to condors. In response to this threat, TRC has adopted a perpetual, ranchwide ban on lead ammunition and the state of California has enacted the Ridley-Tree Condor Preservation Act (Assembly Bill 821), which bans lead ammunition for hunting in the

range of the California condor, effective July 1, 2008. Consequently, no hunters are allowed to use lead ammunition on the ranch.

This Supplemental Draft EIS and the Draft TU MSHCP include the measures listed above under Section 1I.2.2, Enforcement of Ranchwide Ban on Lead Ammunition, to limit the potential for lead-contaminated carcasses and microtrash to occur in the Covered Lands.

# Master Response 2
# Amphibians/Tehachapi Slender Salamander

**Table MR2-1. Comments Addressed in Master Response 2**

| Comment Number | Commenter |
|---|---|
| O4-127 | Center for Biological Diversity (Keats, Adam) |
| O4-128 | Center for Biological Diversity (Keats, Adam) |
| O4-129 | Center for Biological Diversity (Keats, Adam) |
| O4-130 | Center for Biological Diversity (Keats, Adam) |
| O4-131 | Center for Biological Diversity (Keats, Adam) |
| O4-132 | Center for Biological Diversity (Keats, Adam) |
| O4-133 | Center for Biological Diversity (Keats, Adam) |
| O4-134 | Center for Biological Diversity (Keats, Adam) |
| O4-135 | Center for Biological Diversity (Keats, Adam) |
| O4-136 | Center for Biological Diversity (Keats, Adam) |
| O4-137 | Center for Biological Diversity (Keats, Adam) |
| O4-138 | Center for Biological Diversity (Keats, Adam) |
| O4-139 | Center for Biological Diversity (Keats, Adam) |
| O4-140 | Center for Biological Diversity (Keats, Adam) |
| O4-141 | Center for Biological Diversity (Keats, Adam) |
| O4-142 | Center for Biological Diversity (Keats, Adam) |
| O4-143 | Center for Biological Diversity (Keats, Adam) |
| O4-144 | Center for Biological Diversity (Keats, Adam) |
| O4-145 | Center for Biological Diversity (Keats, Adam) |
| O4-146 | Center for Biological Diversity (Keats, Adam) |
| O4-147 | Center for Biological Diversity (Keats, Adam) |
| O4-148 | Center for Biological Diversity (Keats, Adam) |
| O4-149 | Center for Biological Diversity (Keats, Adam) |
| O5-11a | Defenders of Wildlife (Flick, Pamela) |
| O5-11b | Defenders of Wildlife (Flick, Pamela) |

# 2.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP specific to amphibians and/or the Tehachapi slender salamander. Table MR2-1 provides a list of the commenters and a reference to the individual comment, as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- No take of amphibians on Tejon Ranch should be allowed because the population is declining worldwide. (Response provided in Section 2.2.1, No Take of Amphibians Should Be Allowed.)
- The pattern of amphibian decline in San Joaquin Valley is unambiguous; therefore, careful evaluation is needed to consider the potential effects of the Covered Activities on amphibian species. (Response provided in Section 2.2.2, Overview: Identification of Effects and Mitigation Measures.)
- The Draft TU MSHCP fails to identify or mitigate for long-term (operational) effects on the amphibian Covered Species. Specifically, the TU MSHCP fails to identify effects associated with road construction and use, such as roadkill and water-quality impacts from urban runoff. The use of design features as mitigation for operational effects is too ambiguous. (Response provided in Section 2.2.3, Evaluation of Operational Effects and Associated Avoidance, Minimization, and Mitigation Measures.)
- The Draft TU MSHCP fails to identify effects on amphibian species from grazing and relies on a "future grazing plan" that is not a component of the TU MSHCP, making it impossible to judge if the "unidentified" impacts would be adequately mitigated. (Response provided in Section 2.2.4, Evaluation of Grazing Effects and Associated Avoidance, Minimization, and Mitigation Measures.)
- The Draft TU MSHCP fails to identify effects on amphibian species from human recreation and pet use in the Covered Lands. Proposed mitigation for these potential effects (i.e., requiring educational materials) is not sufficient; pets must be confined. (Response provided in Section 2.2.5, Evaluation of Human Recreation and Pet Effects and Associated Avoidance, Minimization, and Mitigation Measures.)
- The Draft TU MSHCP does not properly identify effects associated with Plan-Wide Activities, improperly calls them "nonpermanent activities," fails to identify what infrastructure, trails, and access facilities are proposed in amphibian-suitable habitat, and fails to require adequate mitigation, stating that surveys are not mitigation. (Response provided in Section 2.2.6, Evaluation of Nonpermanent Activity Effects and Associated Avoidance, Minimization, and Mitigation Measures.)
- Additional effects on modeled habitat for the amphibian Covered Species may occur. (Response provided in Section 2.2.7, Additional Effects on Modeled Habitat May Occur.)
- The Draft TU MSHCP does not include measures to minimize the spread of disease among amphibian populations. (Response provided in Section 2.2.8, Measures to Minimize the Spread of Disease.)
- Preconstruction surveys for the amphibian Covered Species must be conducted and not left to the discretion of the project biologist. (Response provided in Section 2.2.9, Preconstruction Surveys.)

- **Tehachapi slender salamander**. The following substantive comments were provided specific to Tehachapi slender salamander (*Batrachoseps stebbinsi*). Responses to these comments are provided in Section 2.2.10, Tehachapi Slender Salamander.
    - The Federal listing status of the Tehachapi slender salamander should consider information regarding habitat loss and degradation and continuing threats, local extirpations, project development, and cumulative effects of development on Tejon Ranch, as well as ongoing ranch operations such as grazing, film production, recreation, and culvert, drainage, and utility maintenance.
    - There are discrepancies in the total acreage of suitable habitat for Tehachapi slender salamander presented in the Draft EIS and Draft TU MSHCP.
    - The Draft TU MSHCP recognizes a suite of threats for the Tehachapi slender salamander but fails to analyze those effects or mitigate for them.
- **Western spadefoot**. The following substantive comments were provided specific to western spadefoot (*Spea* [*Scaphiopus*] *hammondii*). Responses to these comments are provided in Section 2.2.11, Western Spadefoot.
    - The Draft TU MSHCP does not adequately analyze effects on nonriparian areas that may be habitat for western spadefoot.
    - It is unclear how the avoidance measure for western spadefoot under the Draft TU MSHCP would be effective (i.e., just avoidance of larvae (tadpoles) until they have metamorphosed).
    - Construction noise and vibration could cause western spadefoot to emerge prematurely from burrows.
    - The Draft TU MSHCP recognizes a suite of threats for the western spadefoot but fails to analyze those effects or mitigate for them.
- **Yellow-blotched salamander**. The following substantive comments were provided specific to yellow-blotched salamander (*Ensatina eschscholtzii croceater*). Responses to these comments are provided in Section 2.2.12, Yellow-Blotched Salamander.
    - It is unclear how effects on 4,381 acres of oak savannah and woodlands under the Draft TU MSHCP relate to the effects on 1,001 acres of modeled habitat for the yellow-blotched salamander.
    - The Draft TU MSHCP recognizes a suite of threats for yellow-blotched salamanderbut fails to analyze those effects or mitigate for them.

# 2.2 Responses to Substantive Comments

## 2.2.1 No Take of Amphibians Should Be Allowed

A commenter suggested that because amphibians are declining worldwide due to factors such as habitat loss and fragmentation, pollution, climate change, disease, and introdution of nonnative species, that no take of amphibians should be allowed on the Covered Lands. Although the Service acknowledges that amphibians as a group are declining worldwide, complete avoidance of all species is not warranted. For example, although California toad (*Anaxyrus* [*Bufo*] *boreas halophilus*),

Pacific treefrog (*Hyla regilla*)[1], and bullfrog (*Lithobates catesbeianus* [*Rana catesbeiana*]) were found in the Covered Lands during focused surveys of the TMV Planning Area in 2007 (Dudek 2007), these species are all extremely common species in California. The California toad is present virtually everywhere in California except the deserts and highest mountains, and almost any source of water can be used for reproduction (Zeiner et al. 1990, p. 64). The Pacific treefrog is the most common amphibian species in California and is only absent from desert regions (Zeiner et al. 1990, p. 78). Similar to the California toad, the Pacific treefrog can use almost any source of water for reproduction. The bullfrog is not native to the western states but is now common and widespread in California (Zeiner et al. 1990, p. 92). Because the California toad, Pacific treefrog, and bullfrog are so common and widespread in California and under no threat, specific avoidance of these amphibians is not necessary.

The two other amphibian species identified on site during the 2007 focused surveys—the Tehachapi slender salamander and yellow-blotched salamander—as well as the western spadefoot, which was not detected during the surveys, are included as Covered Species in the TU MSHCP. The western spadefoot is included as a Covered Species in the TU MSHCP because the Covered Lands are on the eastern edge of its documented range, suitable habitat is available on site, and the species is difficult to detect. The western spadefoot's aboveground activity is ephemeral and triggered by warm rain events, making it virtually undetectable during dry and/or cold times of the year. Therefore, western spadefoot could occur in the Covered Lands and/or be affected by implementation of the Covered Activities.

Four other special-status amphibians were also considered for coverage in the TU MSHCP: California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*), Kern Canyon slender salamander (*Batrachoseps simatus*), and arroyo toad (*Anaxyrus [Bufo] californicus*). These four species are considered to have a low potential to occur on the Covered Lands because there is limited modeled habitat present and because the Covered Lands are outside of their documented range. Therefore, no incidental take of these four species is anticipated, and they were not included for regulatory coverage under the TU MSHCP.

Background information and the status of Tehachapi slender salamander, western spadefoot, and yellow-blotched salamander on Covered Lands are provided in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 5.2.1, Amphibians, of the TU MSHCP (Dudek 2011). To evaluate potential development-related effects, suitable habitat was modeled for these species. Figure 3.1-9, Figure 3.1-10, and Figure 3.1-11 in Volume I of this Supplemental Draft EIS show that modeled habitat for the three species is broadly distributed throughout the Covered Lands, with Tehachapi slender salamander habitat primarily confined to drainages, western spadefoot habitat patchily distributed, and yellow-blotched salamander habitat more broadly distributed in upland areas. Based on the wide-ranging and scattered pattern of the modeled habitat distributions for Tehachapi slender salamander, western spadefoot, and yellow-blotched salamander, Tejon Ranchcorp (TRC) determined that it was not possible to delineate a development footprint that would result in 100% avoidance of modeled habitat for these species.

The effects analyses for Tehachapi slender salamander, western spadefoot, and yellow-blotched salamander are provided in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 6.2.1, Amphibians, of the TU MSHCP (Dudek 2011). The effects analyses include the acreage and percentage of modeled habitat and individuals (as applicable) that would be directly and permanently lost as a result of proposed Commercial and Residential Development Activities, and the effect of this loss on the species. This analysis considered the amount and proportion of

[1] Since the 2007 surveys, the taxonomy of this species has been revised to include the common, wide-ranging Baja California treefrog (*Pseudacris hypochondriaca*) and the Northern Pacific treefrog (*Pseudacris regilla*), which only occurs in the extreme northwestern portion of California (Crother 2008, CaliforniaHerps 2011).

modeled habitat on site that would be lost in relation to modeled habitat and known occurrences of the species that would be conserved and managed on Covered Lands under the TU MSHCP, as well as the effect in the context of the species' rangewide distribution and populations.

As described in Chapter 2, Proposed TU MSHCP and Alternatives, the Proposed TU MSHCP Alternative would preserve approximately 116,523 acres (approximately 82%) of the Covered Lands (consisting of 93,522 acres of Established Open Space Areas and 23,001 acres of TMV Planning Area Open Space). Additionally, the Existing Conservation Easement Areas (12,795 acres) would be permanently protected and managed as open space pursuant to the Ranchwide Agreement. In total, approximately 129,318 (91%) of the Covered Lands would be permanently preserved as open space under the Proposed TU MSHCP Alternative. As described in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and Section 7, Conservation Plan for Other Covered Species in the TU MSHCP, 96% of modeled habitat for the Tehachapi salamander would be conserved in the TU MSHCP Mitigation Lands and Existing Conservation Easement Areas; 97% of modeled habitat for the yellow-blotched salamander would be conserved in these areas; and 90% of modeled habitat for western spadefoot would be conserved in these areas. Documented occurrences of Tehachapi slender salamander and yellow-blotched salamander in the Covered Lands would be avoided; there are no documented occurrences of western spadefoot in the Covered Lands.

The Proposed TU MSHCP Alternative would include several development-related and long-term operations-related conservation measures to further avoid and minimize effects on covered amphibian species and their associated habitats. These conservation measures are stated as biological goals and objectives for each of the species in Section 7, Conservation Plan for Other Covered Species, of the TU MSHCP (Dudek 2011), and summarized in Table 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS. For short-term construction-related effects, these measures would include preconstruction surveys and a reasonable effort by a Service-approved Tejon Ranch Biologist to capture and relocate any observed individuals to suitable habitat that is the closest distance to the Disturbance Area from where the individuals were removed; preconstruction meetings with the contractor and other key construction personnel; ongoing biological construction monitoring, flagging or fencing of disturbance/grading perimeters to ensure the approved construction area is properly identified in the field; and implementation of best management practices (BMP) to protect surface water quality from pollutants, sedimentation, and erosion, as required under the Federal Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act. Conservation measures that would avoid and minimize potential long-term operations-related effects would include implementation of project design features such as setbacks to avoid and minimize introduction of nonnative species and directing lighting away from open space areas to reduce glare; preparation of a grazing management plan to maintain existing habitats for salamanders and western spadefoot; provision of educational information to Home Owners Associations regarding acceptable recreational activities, pets, wildlife, and open space areas; minimization of infrastructure effects on open space areas; and selection of appropriate locations for public access, trails, and facilities in open space areas.

In summary, although the Proposed TU MSHCP Alternative would not result in complete avoidance of modeled habitat for amphibian species in the Covered Lands, it would include avoidance, minimization, and mitigation measures to reduce potential construction and operations-related effects on those species, as well as provisions for conserving in perpetuity approximately 96% of the modeled habitat for Tehachapi slender salamander, 97% of modeled habitat for yellow-blotched salamander, and 90% of modeled habitat for western spadefoot in the Covered Lands. All known occurrences of these amphibian species would be avoided and preserved in open space areas. It is anticipated that these measures would also benefit common native amphibian species found within the Covered Lands.

## 2.2.2 Overview: Identification of Effects and Mitigation Measures

A commenter suggested that because a decline in amphibians in the San Joaquin Valley was reported more than 10 years ago (Fisher and Schaffer 1996), careful evaluation of the proposed action and effective avoidance, minimization, and mitigation must be incorporated for this suite of rare amphibian species.

Both quantitative and qualitative methods were used to analyze effects on the amphibian Covered Species. Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and Section 6, Potential Biological Impacts / Take Assessment, in the TU MSHCP (Dudek 2011), provide a comprehensive assessment of the potential effects of the Covered Activities on the Tehachapi slender salamander, yellow-blotched salamander, and western spadefoot. Quantitative methods used in the assessment included modeling suitable habitat and calculating direct permanent effects on modeled habitat from Commercial and Residential Development Activities using a geographic information system (GIS)-based approach; overlaying documented occurrences of the species within the commercial and residential Development Envelope; estimating potential additional occurrences in modeled habitat (to the extent feasible based on life history information) and estimating potential effects on the species based on this extrapolation; estimating effects on individuals to the extent feasible; and estimating the reduction in effects on individuals and modeled habitat, to the extent feasible, with application of avoidance, minimization, and mitigation measures.

A qualitative discussion of potential short-term construction-related effects and long-term operational effects on amphibians are provided in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 6.2.1, Amphibians, of the TU MSHCP. These documents qualitatively describe potential direct construction-related effects on amphibian habitat and individuals (including western spadefoot breeding ponds); potential effects associated with urban development, such as water quality degradation, dust and other pollutant generation, exotic plant and animal introductions, and adverse effects associated with lighting; grazing-related effects; and effects associated with maintenance of culverts and drainages, utility lines, film production, and public recreation (e.g., habitat degradation, collection, and possible mortality of individuals). The analysis of these potential effects is qualitative (in contrast to the calculation of the permanent modeled habitat loss in the predefined commercial and residential development planning envelope) because a discrete impact footprint for these activities has not been delineated.

Prior to making a decision on the proposed action, the Service will review the conservation strategy for compliance with the Federal Endangered Species Act (ESA) (Section 1.4.1.1, Federal Regulatory Provisions Relating to Issuance of an Incidental Take Permit, in Volume I of this Supplemental Draft EIS). This evaluation will be used to determine if an incidental take permit (ITP) will be issued to TRC for take of any or all of the Covered Species included in the TU MSHCP.

## 2.2.3 Evaluation of Operational Effects and Associated Avoidance, Minimization, and Mitigation Measures

A commenter stated that Goal 5 for the Tehachapi slender salamander and yellow-blotched salamander and Goal 4 for the western spadefoot fail to identify long-term (operational) effects from roads, including roadkill and runoff, and that more comprehensive mitigation is needed to reduce potential road-related effects, including requiring tunnels under roadways with drift fences. The commenter indicated that mitigation proposed under the Draft TU MSHCP would leave operational effects to be mitigated by unidentified design features, incorporated at the boundary between modeled habitat and development areas, and that because these design features are not identified in

the Draft TU MSHCP, it is impossible to determine if they would adequately avoid, minimize, and/or mitigate for these effects.

A discussion of potential effects on amphibians from road construction and use are described in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 6.2, Amphibians of the TU MSHCP . As described in those sections, urban runoff may result in the transport of sediment and toxins into water bodies in the Covered Lands, which may both directly and indirectly affect amphibians. Amphibians are susceptible to changes or degradation of water quality because of integument (skin) permeability. There is clear evidence that chemical contamination such as pesticides and herbicides can affect amphibian development, reproduction, and survival (e.g., Hayes et al. 2003; Bridges and Semlitsch 2000). Section 7.1, Biological Goals and Objectives for Covered Species, of the TU MSHCP provides objectives for each of the amphibian species covered under the TU MSHCP, including the requirement for design features to avoid and minimize the effects of runoff (Objective 5.1 for the Tehachapi slender salamander and yellow-blotched salamander and Objective 4.1 for the western spadefoot). As discussed below, design features would be developed on a project-specific basis. For example, urban runoff design requirements for the TMV Project, as provided in the Tejon Mountain Village Environmental Impact Report (TMV EIR), require stenciling storm drain inlets with dumping prohibitions and installing inserts to collect trash (Mitigation Measure 4.8-9); designing, constructing, and maintaining water quality basins to provide adequate treatment controls (Mitigation Measure 4.8-25); using vegetated and open area buffers, including roadside swales and vegetated strips, to the maximum extent practicable (Mitigation Measures 4.8-33 and 4.8-28); assigning an entity for water quality facility management and compliance requirements to implement an operations and management system (Mitigation Measure 4.8-29); preserving open space to the extent feasible, while reducing use of impervious surfaces (Mitigation Measure 4.8-34); and designing crossings of drainages to adequately protect flows, span natural streams, and protect embankments (Mitigation Measure 4.8-39). Appendix J to this Supplemental Draft EIS includes a table summarizing mitigation measures required as part of the TMV EIR, including the measures listed above.

With respect to effects from roadkill, it is important to understand that the TU MSHCP conservation strategy is primarily based on avoidance and that the large majority of modeled habitat for the amphibian Covered Species would be protected and managed as open space. The intersection of roads with suitable habitat would affect a very small percentage of the total modeled habitat for these species, and, therefore, the potential for significant roadkill would be small. For the TMV Project, road design features would include culverts under road connections in Tehachapi slender salamander suitable habitat, and all roads would be designed in coordination with a Service-approved biologist to prevent this species from entering roads (Kern County 2009; Mitigation Measures 4.4-38). This mitigation measure for Tehachapi slender salamander would also benefit the western spadefoot and yellow-blotched salamander, as well as other common amphibian species, in areas where their suitable habitat overlaps that of the Tehachapi slender salamander.

With respect to the commenter's concern that specific project design features were not enumerated, making it impossible to determine whether the features would adequately avoid, minimize, and mitigate effects, it is important to recognize that design features would be required to meet specific parameters (i.e., reduce effects from introduction of exotic plant and animal species and urban runoff) and would be location-specific (i.e., they would be established when specific development is planned). The requirement for design features that meet specific parameters is commensurate with the specificity of the Covered Activities described in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS. For the TMV Specific Plan Area, the analysis assumes that the 5,082 acres of development could occur anywhere within the potential Development Envelope of approximately 7,860 acres. Because the actual location of the home sites and roads has not been determined, it is not possible to describe detailed project and site-specific design features, with the exception of lighting (refer to Objective 5.2 for Tehachapi slender

salamander and yellow-blotched salamander and Objective 4.2 for western spadefoot in Section 7.1, Biological Goals and Objectives for Covered Species, of the TU MSHCP). Objective 5.1 for Tehachapi slender salamander and yellow-blotched salamander and Objective 4.1 for western spadefoot specifically require design features that would avoid and minimize the introduction of exotic plant and animal species, such as Argentine ant, and urban runoff in adjacent natural areas, and are intended to minimize potential adverse effects (e.g., increased urban runoff and introduction of invasive species) on amphibians as a result of proposed action. Such design features are not open-ended and are likely to include setbacks, urban runoff controls like water quality basins, use of swales, plant and landscape requirements, and lighting controls at the boundary of open space. The use of design features would be enumerated through the compliance monitoring program associated with the TU MSHCP (i.e., the program that verifies that TRC is carrying out the terms of the TU MSHCP and Implementing Agreement) and tracked through the effectiveness monitoring program for the TU MSHCP (i.e., the program used to determine the effectiveness of the TU MSHCP management measures in promoting species survival and recovery) (Section 7.3, Monitoring Measures, in the TU MSHCP discussion of Compliance and Effectiveness Monitoring in the TU MSHCP).

Additionally, this Supplemental Draft EIS and the TU MSHCP recognize that design requirements and restrictions would likely be required of development activities through separate, project-specific permitting processes, including those associated with the CWA, Porter-Cologne Water Quality Control Act, California Endangered Species Act (CESA), and various local approval processes for Kern County. Although the exact nature of any terms and conditions prescribed during those processes are unknown, it is anticipated that TRC would be required to avoid and minimize effects on jurisdictional waters, beneficial uses, and special-status species habitats. These requirements are described as required mitigation, where appropriate, in the effects analysis provided in Chapter 4, Environmental Consequences, in Volume I of this Supplemental Draft EIS.

## 2.2.4 Evaluation of Grazing Effects and Associated Avoidance, Minimization, and Mitigation Measures

One commenter stated that Goal 6 for the Tehachapi slender salamander and yellow-blotched salamander and Goal 5 for the western spadefoot fail to identify effects on amphibian species from grazing and fail to adequately mitigate those effects by relying on a “future grazing plan,” which is not included as a component of the TU MSHCP. The commenter stated that this makes it impossible to identify if the unidentified effects would be adequately avoided, minimized, and mitigated.

Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and Section 6.2.1, Amphibians, of the TU MSHCP, describe potential effects on amphibians from cattle use on the Covered Lands. As described in those sections, cattle may graze and congregate in areas used by amphibians, including wetland or aquatic breeding areas and adjacent uplands where amphibians may forage, aestivate, and hibernate. In these locations, cattle may trample soils, riparian and wetland vegetation, burrows, or amphibian individuals, and may disturb breeding pools that support egg masses and tadpoles at critical phases of their life cycle. Cattle congregating in wetland and aquatic habitat can also impair water quality (e.g., via turbidity, urine, and feces). These effects may both degrade habitat quality and directly affect amphibian reproductive success and recruitment into the local population.

Grazing has been ongoing at the ranch for over 100 years. The Tejon Ranch Conservancy approved and adopted the Interim Ranchwide Management Plan (RWMP) in September 2009 (Tejon Ranch Company 2009), which includes the initial grazing, pest management, and public access plans for the Established Open Space Areas and Existing Conservation Easement Areas; the same grazing and pest management plans have also been adopted for the TMV Planning Area Open Space. Pursuant to the

Ranchwide Agreement, all subsequent RWMPs would be required to similarly BMPs that protect the conservation values of the land, as reflected in the conservation easements required by the Ranchwide Agreement. These initial plans set forth the BMPs that have helped create the current mix of habitat types and species diversity on the Covered Lands. General grazing BMPs described in the Interim RWMP (Section 3.3.1.3) include appropriate numbers and balance of livestock (sex, breed, and type) related to movement and distribution on the ranch to ensure acceptable environmental and grazing conditions; water resources management; and maintenance of a reasonable amount of residual dry matter, with a light-to-moderate grazing regime and seasonal rotation. BMPs to reduce grazing effects on riparian and stream resources include planning and distribution of water resources across the land to reduce demand from stream and riparian areas and to avoid or minimize cattle congregating in streambank riparian and wetland areas, thus preventing soil erosion and compaction and protecting water quality from sediments, manure, and urine; and widespread distribution and placement of salt and mineral supplement blocks away from water sources to draw away livestock and distribute them more evenly across the landscape, thus avoiding or minimizing livestock effects on riparian and stream resources. The Interim RWMP preserves the practices currently employed on the ranch to manage grazing actions, all of which TRC will continue to implement as a condition of the Ranchwide Agreement.

As noted in Master Response 15, Procedural Considerations, these plans have been incorporated into the TU MSHCP. Nonetheless, to ensure that the ongoing grazing practices continue to support the Covered Species, Section 7.2.1, Measures to Avoid and Minimize Impacts, of the TU MSHCP provides for adoption of a grazing management plan. Specifically, a grazing management plan would be submitted to the Service for review and approval and would incorporate two main principles:

1. Cattle grazing would be consistent with light-to-moderate grazing levels comparable to past and current grazing practices (existing grazing operations accommodates approximately 14,500 head of cattle that are seasonally rotated).
2. Grazing practices would be consistent with those practices that maintain high levels of biodiversity and species populations and may include specific protective measures, such as establishing exclusion fencing in riparian areas and implementing seasonal grazing and related rotational practices, to protect resources.

The Service-approved grazing management plan would implement the conservation measures set forth in the TU MSHCP. If, as a result of effectiveness monitoring, corrective actions are identified, the adaptive management program in the TU MSHCP allows for adjustments to grazing management to ensure protection of the Covered Species, including amphibians, as necessary.

### 2.2.5 Evaluation of Human Recreation and Pet Effects and Associated Avoidance, Minimization, and Mitigation Measures

A commenter stated that Goal 7 for the Tehachapi slender salamander and yellow-blotched salamander and Goal 6 for the western spadefoot fail to identify effects from human recreation and pets, and the requirement to provide educational information regarding restrictions on activities and pets is not an adequate mitigation measure. The commenter further stated that domestic pets have been documented to affect native wildlife, including amphibians, on a significant scale. Meaningful mitigation would reduce predation by domesticated animals and animals that benefit from human development (e.g., ravens, skunks, coyotes). Additionally, the commenter stated that pets must be confined to preclude take, cats must be kept indoors, and domestic dogs must be confined to a yard when unattended or leashed and not allowed in salamander habitat.

Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and Sections 5.2.1, Amphibians, and 6.2, Potential Take and Impacts to Other Covered Species, of the TU MSHCP, describe potential effects on amphibians from human recreation and pets in the Covered Lands. Specifically, the EIS and TU MSHCP state that urban development may result in an increase in urban-related predators, such as cats and dogs, and that increased human activity in open space areas could affect essential behaviors and physiology of wildlife. In addition, the use of recreation trails could result in effects on vegetation communities, wildlife habitats, and wildlife species, including trampling of vegetation, creation of unauthorized trails, increased human presence and potential harassment of or harm to wildlife (e.g., causing abandonment of nest sites, collection of animals, crushing by bicycles and horses), potential harassment of or harm to wildlife by pets, contact with pet fecal material, and potential for transmission of diseases and parasites as well as trash and debris.

For each of the amphibian Covered Species, the primary mitigation associated with the proposed action is the dedication and preservation of the TU MSHCP Mitigation Lands, which are comprised of 93,522 acres in Established Open Space Areas and 23,001 acres in the TMV Planning Area Open Space (see Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS). In addition, the Existing Conservation Easement Areas would be managed in accordance with the terms of the applicable conservation easement. These areas contain 96% of modeled habitat for Tehachapi slender salamander (3,921 acres[2]), 97% of modeled habitat for yellow-blotched salamander (33,988 acres), and 90% of modeled habitat for western spadefoot (1,055 acres). Unconstrained public access for recreation, including pets, is currently not permitted on the Covered Lands and would continue to be restricted under the TU MSHCP. Nevertheless, potential effects from human presence and recreational use are possible, and would be minimized through implementation of Objective 7.1 in the TU MSHCP for Tehachapi slender salamander and yellow-blotched salamander and Objective 6.1 in the TU MSHCP for western spadefoot. These objectives require that Home Owners Associations be provided with educational materials regarding acceptable recreation activities, pets, wildlife, and open space areas. As noted in Section 2.1, Plan Description, of the TU MSHCP, individual residential and commercial development covered under the TU MSHCP would require individual project approvals from the local jurisdiction. For example, the TMV Project, which was approved by Kern County on October 5, 2009, requires additional restrictions on pets, including that pets must be leashed while using the designated trail system and/or in any areas adjacent to open space, and that stray and feral cats and dogs may be trapped and deposited with the local Society for the Prevention of Cruelty to Animals, the Kern County Department of Animal Control, or Shelter on the Hill Humane Society (Kern County 2009; Mitigation Measure 4.4-17). Restrictions similar to these would be included in the educational material required by the TU MSHCP, would be developed on a project-specific basis, and would be tracked through the Compliance and Effectiveness Monitoring programs for the TU MSHCP.

Regarding mesopredators such as opossum, raccoon, and skunks around residential areas, if long-term monitoring reveals the need to control native and/or nonnative animals, such control would be conducted in accordance with the integrated pest management plan (IPMP) and/or adaptive management plan, as described in Section 7.3.2, Effectiveness Monitoring, of the TU MSHCP.

[2] The habitat model for TSS was revised to include vegetation communities that contain yucca based on new information (e.g., Sweet 2011).

## 2.2.6 Evaluation of Nonpermanent Activity Effects and Associated Avoidance, Minimization, and Mitigation Measures

A commenter stated that Goal 8 for the Tehachapi slender salamander and yellow-blotched salamander and Goal 7 for the western spadefoot are confusing and inappropriate in that they reference "nonpermanent activities" and include inappropriate activities, such as infrastructure and public trails, and fail to adequately identify potential effects on amphibian species. The commenter further stated that surveys should not be considered a mitigation strategy, and that surveys should have been done to inform what the commenter considered an "inadequate" modeling effort. The commenter stated that the usefulness of the surveys is unclear. Finally, the commenter stated that the Draft TU MSHCP failed to identify what infrastructure, access, trails, and facilities are proposed in the areas identified as amphibian Covered Species habitat, making an evaluation of the impacts and identification of mitigation measures not possible.

Goal 8 for the Tehachapi slender salamander and yellow-blotched salamander and Goal 7 for the western spadefoot relate to the Plan-Wide Activities, including passive recreation, and use, maintenance, repair, replacement, and construction of new of utility infrastructure (see Section 7, Conservation Plan for Other Covered Species, in the TU MSHCP). Recreation activities would include equestrian activities, such as horseback riding, breeding, boarding, feeding, training, and events at the equestrian facility located near the southern end of Castac Lake; non-motorized biking on roads or trails; camping; hiking; walking; climbing; bird and wildlife watching; photography; astronomy; archery and target shooting; cross-country, snow skiing, snow shoeing, and sledding; fishing and water-based recreational activities under the control of TRC; and all travel on the Covered Lands associated with these recreational activities. Covered Activities associated with utility infrastructure would include maintenance or replacement of utilities in existence as of the effective date of the ITP throughout the Covered Lands in their current locations; relocation of two existing utilities within 1,000 feet of existing locations in the TMV Planning Area; development of new and expanded utilities other than above ground transmission lines in the commercial and residential development areas (i.e., undergrounded powerlines and aboveground water tanks, electrical substations, and water and sewage treatment facilities); and maintenance of underground utilities within roadways or disturbed areas in the TMV Planning Area Open Space that are in existence as of the effective date of the ITP. These activities may have temporary or permanent effects on amphibian species in the Covered Lands.

With respect to the adequacy of the conservation strategy, Objective 8.1 in the TU MSHCP for Tehachapi slender salamander and yellow-blotched salamander and Objective 7.1 in the TU MSHCP for western spadefoot propose to establish the resource baseline for open space areas from which effectiveness monitoring can be measured (Section 7.1.1.1, Tehachapi Slender Salamander in the TU MSHCP). Additionally, Objectives 8.2 and 8.3 in the TU MSHCP for Tehachapi slender salamander and yellow-blotched salamander and Objectives 7.2 and 7.3 in the TU MSHCP for western spadefoot require efforts to minimize footprints, implement construction BMPs during installation of infrastructure within open space areas, and select appropriate locations for siting public access trails and facilities within open space areas. Because specific infrastructure and trails locations are not currently known, more specific requirements would be developed as the design of these facilities evolve.

In addition, as described in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS, the Proposed TU MSHCP Alternative would include provisions to underground most powerlines, limit relocation and construction of existing overhead powerlines, communication towers, and other utility infrastructure, and would require review and approval by the Service prior to the construction of any above ground powerlines. For trails and related

facilities, a public access plan would be developed as part of the Tejon Ranch Conservancy's public access program for the ranch (and possibly by an other easement holder, if applicable, for the TMV Planning Area Open Space). The public access plan(s) would be subject to review and approval by the Service for consistency with the TU MSHCP, the ESA, and applicable conservation easement restrictions. If the public access plan activities are determined to be beyond the scope of the authorized Covered Activities, further ESA authorization may be required at that time. The future public access plan would also be required to comply with all applicable legal requirements, including compliance with environmental and land use laws.

## 2.2.7 Additional Effects on Modeled Habitat May Occur

A commenter stated that Section 7, Conservation Plan for Other Covered Species, in the TU MSHCP shows additional effects on conserved modeled habitat for the amphibian Covered Species beyond those previously analyzed in Section 6, Potential Take and Impacts to Other Covered Species, in the TU MSHCP, including 3% of modeled habitat for the Tehachapi slender salamander, yellow-blotched salamander, and western spadefoot.

Objective 3.1 in the TU MSHCP for the Tehachapi slender salamander states:

> Construction in modeled suitable habitat in riparian/wetland areas will be avoided to the extent practicable (generally anticipated to be limited to road crossings and culverts and not anticipated to exceed 3% of modeled suitable habitat)(Section 7.1.1.1.1, Tehachapi Slender Salamander in the TU MSHCP).

Likewise, Objective 3.1 in the TU MSHCP for the yellow-blotched salamander states:

> Construction in modeled suitable habitat on north-facing (0° to 90° and 0° to 270°) slopes and canopy cover greater than 40% will be avoided to the extent practicable (generally anticipated to be limited to road crossings and culverts and not anticipated to exceed 3% of modeled suitable habitat) (Section 7.1.1.1.3, Yellow-blotched Salamander in the TU MSHCP).

The 3% referred to in Objective 3.1 for these two species is based on the estimated 143 acres (3.4% rounded to 3%) of permanent effects on the 4,071 acres of modeled habitat for the Tehachapi slender salamander and the estimated 1,179 acres (3.3% rounded to 3%) of permanent effects on the 33,988 acres of modeled habitat for the yellow-blotched salamander; these effects would not be in addition to those described in Section 6.2.1, Amphibians, in the TU MSHCP for these species. Furthermore, these calculations are based on a "worst-case assumption" that all of the area within the commercial and residential Development Envelope (i.e., 8,817 acres) would be affected, in addition to 200 acres of disturbance related to implementation of the Plan-Wide Activities, when the actual development footprint under the TU MSHCP would be 5,533 acres. With a smaller construction footprint than that analyzed in the TU MSHCP and implementation of the avoidance, minimization, and mitigation measures, it is likely that permanent effects on modeled habitat for the Tehachapi slender salamander and yellow-blotched salamander would be less than 3% of the total modeled habitat estimated to be lost under the worst-case assumption.

Objective 2.1 for the western spadefoot provided in the Draft TU MSHCP stated that ground disturbance in modeled habitat was "…not anticipated to exceed 10% of modeled habitat". This statement was made in error. The correct value is 3%, which is the percent estimated for loss of western spadefoot modeled habitat reported in Section 6.2.1.2.1, Discussion of Potential Take of Western Spadefoot, of the TU MSHCP (i.e., 30 acres of 1,175 acres of modeled habitat, or 2.6%, rounded to 3%). This has been corrected in the current draft of the TU MSHCP. As with the Tehachapi slender salamander and yellow-blotched salamander, this is not an additional effect beyond that reported in Section 6.2.1, Amphibians, of the TU MSHCP for the western spadefoot, and effects would likely be less with the anticipated smaller construction footprint and application of avoidance measures.

## 2.2.8 Measures to Minimize the Spread of Disease

A commenter stated that the Draft TU MSHCP failed to include measures to minimize the spread of disease among amphibian populations by humans and recommended that the guidance by the Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (U.S. Fish and Wildlife Service 2005) be included in the proposed action.

The design features (e.g., setbacks) and educational materials prescribed in TU MSHP are intended to reduce contact between humans and amphibians. These measures are described in Section 7, Conservation Plan for Other Covered Species, of the TU MSHCP. In addition, the TU MSHCP has been revised to include Objective 4.3 for Tehachapi slender salamander, Objective 3.3 for western spadefoot, and Objective 4.3 for yellow-blotched salamander, which state:

> To ensure that diseases are not conveyed between work sites by the project biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.

The following row was also added to Table 7-1 of the TU MSHCP:

| Action | Species | Assumptions / Notes |
|---|---|---|
| At the discretion of the Tejon staff project biologist, during surveys prior to grading, relocation of observed individual may be undertaken consistent with the appropriate scientific collection permits; all handling of amphibians shall be conducted in accordance with the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) | All amphibians | Species to be surveyed upon habitat suitability. |

## 2.2.9 Preconstruction Surveys

A commenter stated that preconstruction surveys for the amphibian Covered Species and animal removal must be required to avoid and minimize potential effects on Tehachapi slender salamander, yellow-blotched salamander, and western spadefoot. The commenter also stated that this requirement cannot be at the discretion of the project biologist.

The TU MSHCP proposes to conduct preconstruction surveys for the amphibian Covered Species at the discretion of the Service-approved Tejon Staff Biologist because the success of preconstruction survey methods, such as visual surveys and pitfall trapping, would depend on several factors such as season and weather conditions. All three of the amphibian Covered Species remain underground and inactive for much of the year, as described in Section 5.2.1, Amphibians, of the TU MSHCP. Therefore, visual surveys and pitfall trapping are only effective when environmental conditions are conducive to aboveground activity. Visual surveys or pitfall trapping for these species in late summer, for example, would likely be ineffectual because the chance of detecting or capturing individuals would be minimal.

For those species that are state-listed (e.g., Tehachapi slender salamander), it is likely that the parameters for determining when preconstruction surveys are justified and likely to be effective would be refined in coordination with the California Department of Fish and Game (CDFG)(e.g., under some combination of season, precipitation, and temperature).

Of note, the effects analysis in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS assumes full loss of modeled habitat in the Commercial and Residential Development Areas. Thus, while preconstruction surveys may further reduce loss of individuals, the conservation strategy for this species does not depend on 100% avoidance of individuals.

## 2.2.10 Tehachapi Slender Salamander

### 2.2.10.1 Federal Listing Status in Relation to Development and Other Threats

A commenter raised several related issues regarding the Federal listing status of the Tehachapi slender salamander in relation to proposed development on Tejon Ranch and continuing threats, as follows:

- The Service recently found slender salamander to be warranted for protection under the ESA (*Federal Register* [FR] E9-9220, Filed 4-21-09).
- The best available scientific information shows that the Tehachapi slender salamander has declined due to habitat loss and degradation and faces ongoing threats.
- The Tehachapi slender salamander has already become extirpated from the Tehachapi Pass area, likely as a result of highway construction, and the remaining populations in the Tehachapi Mountains are primarily on private lands, including Tejon Ranch.
- Rapid human population growth in the region is reported to be a significant threat to the Tehachapi slender salamander.
- Quoting Hansen and Wake (2005, p. 693): "Plans exist for the development of several new communities on the vast Tejon Ranch property. Owing to the small size and nature of Tehachapi slender salamander population, the Tejon Ranch sites appear especially vulnerable to habitat disturbance."
- Construction activities when coupled with other ranch activities such as cattle grazing; film production; culvert, drainage, and utility maintenance; and human presence constitute potentially significant cumulative impacts that could result in habitat degradation and possible mortality of the Tehachapi slender salamander.

With respect to the first issue, on April 22, 2009, the Service issued a 90-day finding (74 FR 18336) concluding that the petition presented substantial scientific or commercial information to indicate that listing the Tehachapi slender salamander *may be* warranted and initiated a status review of the species. The Service subsequently issued a 12 month finding that listing of the Tehachapi slender salamander as an endangered or threatened species under the ESA is not warranted. (76 FR 62900, October 11, 2011).

With respect to the second, third, and fourth issues, the Service disagrees that available scientific information indicates that the Tehachapi slender salamander has declined in population. The Service does not have demographic information or population size information to determine whether the species is declining, remaining stable, or increasing in number, nor does the best available scientific information indicate the Tehachapi slender salamander faces significant threats from habitat loss and degradation. The Service only has evidence that one occurrence has likely been extirpated from a particular known locality.

With respect to the final two issues, Section 7.1.1.1.1, Tehachapi Slender Salamander, in the TU MSHCP outlines biological goals and objectives for the Tehachapi slender salamander that are

intended to avoid, minimize, and mitigate the effects of the Covered Activities on this species. As described in that section, 96% (3,921 acres) of modeled habitat for Tehachapi slender salamander in the Covered Lands would be protected in perpetuity in Established Open Space Areas, the TMV Planning Area Open Space, and Existing Conservation Easement Areas. As described above, the potential loss of modeled habitat is based on a worst-case assumption that all of the area within the commercial and residential Development Envelope (i.e., 8,817 acres) would be affected, in addition to 200 acres of disturbance related to implementation of the Plan-Wide Activities, when the actual development footprint under the TU MSHCP would be 5,533 acres. With a smaller construction footprint, it is likely that fewer acres of modeled habitat would be affected. In addition, a variety of conservation measures would be implemented to address potential effects on the species related to the Covered Activities, and would apply to existing uses, such as grazing and film production, that are not currently regulated by such measures. Prior to making a decision on the proposed action, the Service will review the conservation strategy for compliance with the ESA (Section 1.4.1.1, Federal Regulatory Provisions Relating to Issuance of an Incidental Take Permit in Volume I of this Supplemental Draft EIS). This evaluation will be used to determine if an ITP will be issued to TRC for take of any or all of the Covered Species included in the TU MSHCP, including Tehachapi slender salamander.

### 2.2.10.2 Open Space Discrepancies

A commenter stated that according to the Draft TU MSHCP Section 6, Potential Biological Impacts / Take Assessment, 3,797 acres of potential modeled habitat for the Tehachapi slender salamander occurs in the Covered Lands and 108 acres would be permanently affected, thus affecting 216 individuals. Per the Draft TU MSHCP, conservation areas include 2,717 acres of Tehachapi slender salamander modeled habitat in Established Open Space Areas and 790 acres in the TMV Planning Area Open Space, totaling 3,507 acres of modeled habitat (92% of the Covered Lands). The commenter noted that the total conservation proposed in Section 7, Conservation Plan for Other Covered Species, of the TU MSHCP is 3,687 acres, not 3,507 acres. The commenter stated that this discrepancy in acreages needs to be clarified.

There was no discrepancy between Sections 6 and 7 in the Draft TU MSHCP. Both sections stated that 3,507 acres of Tehachapi slender salamander modeled habitat would be conserved within Established Open Space Areas and the TMV Planning Area Open Space. In addition, Objective 1.2 in Section 7 of the TU MSHCP providedthat an additional 180 acres of modeled habitat would be avoided within the area that was then referred to as the Potential Open Space Areas. . The conservation easements for these areas (which encompass 12,795 acres) have since been recorded. Additionally, the habitat models for the Tehachapi slender salamander have been updated in light of new information regarding its habitat requirements. As a result, a total of 3,921 acres (96%) of modeled habitat for Tehachapi slender salamander would be conserved under the current Proposed TU MSHCP Alternative. The acreages of modeled habitat preserved and modeled habitat lost for Tehachapi slender salamander are also provided in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS.

### 2.2.10.3 Other Effects Identified But Not Analyzed

A commenter stated that while Section 5, Other Covered Species, of the Draft TU MSHCP acknowledges a variety of threats, including feral pigs, road construction, mining, logging, cattle grazing, and flood control projects, only road construction is partially analyzed for its effect on the Tehachapi slender salamander. The commenter further stated that, even in the proposed conservation lands within Established Open Space Areas and the TMV Planning Area Open Space, many of these threats still remain; however, the Draft TU MSHCP failed to identify the potential effects on the Tehachapi slender salamander and to propose ways to avoid, minimize, or mitigate those effects.

Section 7.1.1.1.1, Tehachapi Slender Salamander, of the TU MSHCP presents biological goals and objectives for the threats to Tehachapi slender salamander that are associated with the Covered Activities, including cattle grazing. The objectives prescribed in that section are intended to avoid, minimize, and mitigate those threats. Existing threats identified in Section 5.2.1.1 for Tehachapi slender salamander that are not within the scope of the Covered Activities are not directly addressed in Section 7 of the TU MSHCP. For Tehachapi slender salamander, these threats include feral pigs, mining, logging, and flood control projects. Of those, only feral pigs could be considered relevant to the Covered Lands. However, the existence of feral pigs is an existing condition and feral pigs are hunted through the ranch's commercial hunting program, which is not a Covered Activity. Under the continuation of the hunting program, feral pigs would continue to be controlled. However, it is also recognized that this species may be addressed through the adaptive management program and the RWMP.

Please see Master Response 4, Covered Species Threats and Potential Effects from Covered Activities, for more detail.

## 2.2.11 Western Spadefoot

### 2.2.11.1 Failure to Analyze Effects on Nonriparian Habitats

A commenter stated the Draft TU MSHCP does not analyze effects on nonriparian habitat that may be used by western spadefoot, which spends most of its time away from breeding pools.

The commenter is accurate in stating that the western spadefoot spends much of its life history in terrestrial habitat. As described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, the species occurs in open areas with sandy or gravelly soils in a variety of habitats, including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, river floodplains, alluvial fans, playas, and alkali flats (Stebbins 2003, Holland and Goodman 1998), and riparian habitats with suitable water resources (Holland and Goodman 1998). However, the species is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas (Holland and Goodman 1998). Within these habitats, the species requires rain pools with water temperatures of between 9°C and 30°C (Brown 1966, 1967) that persist with more than 3 weeks of standing water in which to reproduce (Feaver 1971). Jennings and Hayes (1994) report that rain pools must lack fish, bullfrogs, and crayfish in order for successful reproduction and metamorphosis to occur; it is reasonable to assume that this predator-free condition would also apply to waters (e.g., backwater areas) within riparian areas used for breeding. Though little is known of the spatial behavior of western spadefoots, they likely do not move far from their breeding pool during the year (Zeiner et al. 1990, p. 56), and it is likely that their entire post-metamorphic home range is situated around a few pools.

The negative survey results for the western spadefoot in the TMV Planning Area (Dudek 2007) indicate that if it does occur on site, it is expected to occur in a very sporadic and patchy distribution in modeled habitat. It is fairly certain, therefore, that most, if not all, of the 1,175 acres of modeled riparian/wetland breeding habitat for western spadefoot is not actually occupied. The effect estimate of 30 acres of modeled habitat, therefore, is a conservative, worst-case scenario for this species and would accommodate any terrestrial habitat that may be affected at an occupied site; that is, it is highly unlikely that more than 30 acres of occupied habitat, including breeding and terrestrial habitat areas, would be affected by the Covered Activities associated with the TU MSHCP.

### 2.2.11.2 Preconstruction Surveys and Avoidance of Metamorphs

A commenter indicated that the Draft TU MSHCP is unclear about how effects on western spadefoot would be avoided if construction activities are postponed until larvae (tadpoles) have metamorphosed because the metamorphs could move onto the construction site.

Objective 3.1 for the western spadefoot, provided in Section 7.1.1.1.2, Western Spadefoot, of the TU MSHCP, describes how preconstruction surveys and setbacks (300 feet) from occupied areas would be implemented if egg masses and/or larvae are detected. In a situation where western spadefoots are breeding in proximity to construction activities, per Objective 3.2, construction monitoring would be included, and exclusionary fencing to prevent spadefoot from entering construction areas after they metamorphose would be erected, as necessary. In addition, avoidance monitoring measures during construction would be implemented, as necessary, to reduce the likelihood of spadefoots entering construction areas. The setbacks from modeled habitat that would be incorporated into the design of commercial and residential development at the boundary of open space areas would provide western spadefoot with nonriparian upland habitat for aestivation and hibernation after they metamorphose. The above measures are intended to minimize effects on western spadefoot metamorphs that may be located in close proximity to construction areas.

### 2.2.11.3 Noise and Vibration Effects

A commenter stated that the potential effect of low frequency noise and vibration during construction could result in premature emergence of the western spadefoot. While this potential effect is identified in Section 5, Other Covered Species, of the TU MSHCP, it is not addressed in Section 7.1.1.1.2, Western Spadefoot, which identifies the biological goals and objectives for the species.

With respect to noise and vibration impacts, visual surveys and pitfall trapping for amphibians would be ineffective at times of the year when the western spadefoot is below ground and, therefore, would not address the issue of premature emergence due to noise and vibration. The avoidance, minimization, and mitigation measures that addresses this potential effect are described under Objective 3.2, which provides for biological monitoring of construction activities located in modeled habitat. The Service-approved biologist or qualified monitoring biologist would be on site during construction so that if spadefoots do emerge from burrows, the biologist could prevent them from entering construction areas either directly or by erecting exclusion fencing.

### 2.2.11.4 Other Effects Identified But Not Analyzed

A commenter stated that while Section 5, Other Covered Species, of the Draft TU MSHCP acknowledges a variety of threats to the western spadefoot, including direct loss of aquatic and upland habitat, mosquito fish, predators (e.g., bullfrogs, crayfish, and fish) and urban-related predators (e.g., pets, strays, feral cats and dogs), the spread of predatory species into breeding sites, artificial lighting, noise, grazing, off-road vehicles, exotic plants, alteration of hydrology, other human-related degradation of habitat, insecticides that reduce insect prey, and rodenticides that reduce the number of burrowing animals and consequently the burrows for spadefoots, none of these issues are comprehensively analyzed in the Draft TU MSHCP. The commenter further stated that, even in the proposed conservation lands in Established Open Space Areas and the TMV Planning Area Open Space, many of these threats still remain; however, the Draft TU MSHCP failed to identify the potential effects on the western spadefoot and propose ways to avoid, minimize, or mitigate those effects.

The reasons for decline of western spadefoot identified in Section 5.2.1.2.1, Status and Distribution, of the TU MSHCP are based on the literature for the western spadefoot and represent the suite of

threats that have been identified for the species throughout its range. Based on the negative survey results for the TMV Planning Area (Dudek 2007) and the determination that the western spadefoot has a low potential to occur on site below 3,000 feet above mean sea level (amsl) and very low potential to occur above 3,000 feet amsl, a more detailed analysis of these threats from activities covered by the TU MSHCP would be speculative.

In general, and as described in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, the TU MSHCP would preserve 90% of modeled habitat for western spadefoot within Established Open Space Areas, the TMV Planning Area Open Space, and Existing Conservation Easement Areas. Section 7.1.1.1.2, Western Spadefoot, of the TU MSHCP identifies other goals and objectives intended to avoid, minimize, and mitigate long-term operational effects on the species resulting from implementation of the Covered Activities. Objective 4.1 for western spadefoot refers to design features, such as setbacks, that would be incorporated into the boundary between suitable habitat and development. These setbacks would minimize the introduction of exotic plant and animal species into open apace areas, and reduce urban runoff into suitable habitat for the western spadefoot and other Covered Species. BMPs for water quality protection would be incorporated into the project-specific designs, as required by the CWA and Porter-Cologne Water Quality Control Act. Lighting for commercial and residential development in the boundary between development and suitable habitat would be directed away from suitable habitat (Objective 4.2). Because grading plans and other details for residential and commercial development are not available, the specifications of these design features, which would be site-specific, cannot be provided in the TU MSHCP, but would be anticipated to be consistent with the general guidelines provided in the TU MSHCP, and subject to approval by other regulatory agencies, including the U.S. Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), CDFG, and Kern County.

Objectives 5.1 and 5.2 in the TU MSHCP refer to the grazing management plan and protection of resources and habitat potentially used by western spadefoot, including pre-activity surveys to determine presence/absence of western spadefoot prior to grazing operations and/or ranch activities that could adversely affect breeding habitat for the species, such as eliminating stock ponds. The grazing management plan would be subject to review and approval by the Service for consistency with the TU MSHCP, ESA, and applicable conservation easement restrictions.

Objective 6.1 in the TU MSHCP refers to human recreation and pets and requires that Home Owners Associations be provided with educational information regarding acceptable recreational activities, pets, wildlife, and open areas. Objective 7.3 refers to the selection of appropriate locations for access, trails, and facilities in open space areas per a public access plan, which would minimize effects on western spadefoot habitat located in or adjacent to public access areas. The public access plan would also be subject to review and approval by the Service for consistency with the TU MSHCP, the ESA, and applicable conservation easement restrictions.

An IPMP would be also prepared and implemented in the Covered Lands. The IPMP would be developed and implemented in conjunction with development, ranchwide operations, and management of open space. The IPMP would provide guidelines for the eradication of non-native, invasive species including bullfrogs and Argentine ant. A framework IPMP would be followed by project-specific pest management plans for specific development uses (commercial, residential, golf courses) and for specific ranch operations and open space management. The project-specific pest management plans would be prepared prior to initiation of related Covered Activities. The framework IPMP would include the guidelines and standards for subsequent project-specific pest management plans and would identify specific Covered Activities for which project-specific pest management plans would be prepared.

With respect to pesticides, Section 6.2.1, Amphibians, in the TU MSHCP identifies pesticides as a factor that can affect amphibians given their reliance on the aquatic or more mesic environment, and how the quality of the water in which they live can affect their growth, development, and survival.

As a result, BMPs to protect surface water quality, as well as design features to address urban runoff as discussed in Section 2.2.3, Evaluation of Operational Effects and Associated Avoidance, Minimization, and Mitigation Measures, above, are important. Additionally, although not identified as a specific objective for western spadefoot, the IPMP would address fertilizers and pesticides, as described in Section 7.2.1, Measures to Avoid and Minimize Impacts, of the TU MSHCP.

These avoidance, minimization, and mitigation measures, in combination with the conservation of the majority of modeled habitat for the western spadefoot, are intended to avoid, minimize, and mitigate any adverse effects on western spadefoot if it is found to occur on Covered Lands.

## 2.2.12 Yellow-Blotched Salamander

### 2.2.12.1 Analysis of Effects on Suitable Habitat

A commenter stated that the yellow-blotched salamander uses oak woodlands and that the Draft TU MSHCP is unclear how only 1,001 acres of effects on yellow-blotched salamander suitable habitat would occur, as stated in Section 6.2.1, Amphibians, of the TU MSHCP, when 4,381 acres of oak savannah and woodlands would be affected, as reported in the Draft EIS. The commenter quotes the species account in the Draft TU MSHCP that a major threat to this species is "development and cutting of oak woodlands in the Tehachapi Mountains."

The reference to development and cutting of oak woodland in the Tehachapi Mountains is to general threats and reasons for the decline of species, as provided in Jennings and Hayes (1994, p. 24); threats associated with development and cutting of oak woodland is not a specific reference to the potential effects of the activities proposed under the TU MSHCP. There is no direct correlation between modeled habitat for the yellow-blotched salamander and oak-dominated habitats. The analysis of effects on modeled habitat for the yellow-blotched salamander is based on the habitat model developed for the species, which incorporates parameters other than just oak communities, as described in Section 3.1.7.2, Amphibians, in the subsection entitled Yellow-Blotched Salamander, in Volume I of this Supplemental Draft EIS, and Section 5.2.1.3.2, Habitat Characteristics and Use, of the TU MSHCP. That is, the yellow-blotched salamander does not occur in all oak communities and also may occur in non-oak communities with adequate canopy cover on north-facing slopes (Hansen and Wake, pers. comm. 2008). Therefore, the modeled habitat acreage for the species includes a subset of oak woodlands on the Covered Lands, as well as all other vegetation communities with north-facing slopes ($0^{o}$ to $90^{o}$ and $0^{o}$ to $270^{o}$) and canopy cover of 40% or greater. Oak communities that do not meet the 40% canopy cover requirement, and/or do not occur on north-facing slopes, were not included in the habitat suitability model for the species. For this reason, the estimated effects on yellow-blotched salamander modeled habitat would be substantially less than the effects on oak savannah and oak woodlands reported in the Draft EIS.

### 2.2.12.2 Other Effects Identified But Not Analyzed

A commenter stated that while Section 5, Other Covered Species, of the Draft TU MSHCP acknowledges a variety of threats to yellow-blotched salamanders including development in and cutting of oak woodland in the Tehachapi Mountains, cattle grazing, hunting, camping, agriculture, mining, and feral pigs, none of these issues are comprehensively analyzed in the Draft TU MSHCP. The commenter further states that even in the proposed conservation lands in Established Open Space Areas and the TMV Planning Area Open Space, many of these threats still remain; however, the Draft TU MSHCP failed to identify the potential effects on the yellow-blotched salamander and propose ways to avoid, minimize, or mitigate those impacts.

Section 7.1.1.1.3, Yellow-blotched Salamander, of the TU MSHCP presents biological goals and objectives for the threats to yellow-blotched salamander that are associated with the Covered

Activities, including cattle grazing and public access, which may include camping. Implementation of the objectives prescribed in that section would avoid, minimize, and mitigate for those threats. Existing threats identified in Section 5.2.1.3, Yellow-blotched Salamander, of the TU MSHCP for yellow-blotched salamander that are not within the scope of the proposed action are not directly addressed in Section 7 of the TU MSHCP. For yellow-blotched salamander, these threats include hunting, feral pigs, agriculture, and mining. With respect to hunting and feral pigs, please refer to Section 2.2.10.3, Other Effects Identified But Not Analyzed, above. With regard to effects associated with agriculture, farming and irrigation systems are existing activities on Tejon Ranch, less than 15 acres of the Covered Lands support noncommercial, experimental grape and tree crops (most of TRC's farming activities area located in the San Joaquin Valley floor and are not located on Covered Lands). These activities would continue on the Covered Lands, but no new surface water diversions that could significantly impair habitat for the yellow-blotched salamander would be allowed. For trails and related facilities, a public access plan would be developed as part of the Tejon Ranch Conservancy's public access program for the ranch and would be required to comply with the TU MSHCP, ESA, and applicable conservation easement restrictions. Camping would be addressed by the public access plan, which would be subject to review and approval by the Service.

Please see Master Response 4, Covered Species Threats and Potential Effects from Covered Activities, for more detail.

The commenter states that of the 35,213 acres of modeled habitat for the yellow-blotched salamander, 1,001 acres would be permanently affected, 27,679 acres would be conserved in "potentially" unfragmented Established Open Space Areas, and 4,961 acres would be conserved in the "fragmented" TMV Planning Area Open Space. A total of 33,988 acres (96%) of modeled habitat for yellow-blotched salamander would be conserved in open space. As described in TU MSHCP and Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental EIS, the Established Open Space Areas account for 93,522 acres (66%) of existing undeveloped, natural lands within the 141,886 acres of Covered Lands. The TMV Planning Area Open Space includes 23,001 acres, bringing the total TU MSHCP Mitigation Lands to the 116,523 acres (82%). As described above, the current Proposed TU MSHCP Alternative would add management of the 12,795 acres of Existing Conservation Easement Areas (i.e., the Potential Open Space in the TU MSHCP) as open space in accordance with the TU MSHCP, resulting in approximately 129,318 acres (91%) of the Covered Lands in permanently preserved open space. Further, the TMV Planning Area Open Space includes two large habitat blocks of 6,660 acres and 7,550 acres and is generally contiguous with the Established Open Space Areas. Within the 129,318-acre open space system, the total conservation of modeled habitat for yellow-blotched salamander species would be 33,988 acres, or 96% of the total modeled habitat for the species. In addition, all currently known occurrences of yellow-blotched salamander would be conserved.

It should be noted that 24 acres of modeled habitat for yellow-blotched salamander are within the 145 acres of nondisturbance areas in the Lebec/Existing Headquarters Area. These 24 acres of modeled habitat are not included in the Established Open Space Areas, TMV Planning Area Open Space, or the Existing Conservation Easement Areas, but are expected to remain undeveloped due to the allowed development densities associated with the general plan land use designations. See Section 2.2.2.2, Activities Considered in the Analysis, of this Supplemental Draft EIS for a more detailed description of the nondisturbance areas. Refer also to Master Response 5, Habitat Suitability Model, regarding edge effects and wildlife connectivity.

# Master Response 3
# **Raptors**

**Table MR3-1. Comments Addressed in Master Response 3**

| Comment Number | Commenter |
|---|---|
| G2-19 | Environmental Protection Agency |
| G2-20 | Environmental Protection Agency |
| O4-61 | Center for Biological Diversity (Keats, Adam) |
| O4-151 | Center for Biological Diversity (Keats, Adam) |
| O4-152 | Center for Biological Diversity (Keats, Adam) |
| O4-153 | Center for Biological Diversity (Keats, Adam) |
| O4-154 | Center for Biological Diversity (Keats, Adam) |
| O4-155 | Center for Biological Diversity (Keats, Adam) |
| O4-156 | Center for Biological Diversity (Keats, Adam) |
| O4-157 | Center for Biological Diversity (Keats, Adam) |
| O4-158 | Center for Biological Diversity (Keats, Adam) |
| O4-159 | Center for Biological Diversity (Keats, Adam) |
| O4-160 | Center for Biological Diversity (Keats, Adam) |
| O4-161 | Center for Biological Diversity (Keats, Adam) |
| O4-162 | Center for Biological Diversity (Keats, Adam) |
| O4-163 | Center for Biological Diversity (Keats, Adam) |
| O4-164 | Center for Biological Diversity (Keats, Adam) |
| O4-165 | Center for Biological Diversity (Keats, Adam) |
| O4-166 | Center for Biological Diversity (Keats, Adam) |
| O4-167 | Center for Biological Diversity (Keats, Adam) |
| O4-168 | Center for Biological Diversity (Keats, Adam) |
| O4-169 | Center for Biological Diversity (Keats, Adam) |
| O4-170 | Center for Biological Diversity (Keats, Adam) |
| O4-171 | Center for Biological Diversity (Keats, Adam) |
| O4-172 | Center for Biological Diversity (Keats, Adam) |
| O4-173 | Center for Biological Diversity (Keats, Adam) |
| O4-174 | Center for Biological Diversity (Keats, Adam) |
| O4-175 | Center for Biological Diversity (Keats, Adam) |
| 04-176 | Center for Biological Diversity (Keats, Adam) |
| O5-2A | Defenders of Wildlife |
| O5-2B | Defenders of Wildlife |
| O5-5 | Defenders of Wildlife |

# 3.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP specific to raptors. Table MR3-1 provides a list of the commenters and a reference to the individual comment, as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

The comments specific to raptors generally expressed concern that the avoidance measures prescribed in the TU MSHCP were not adequate to avoid adverse effects on raptor breeding on Covered Lands. These comments address the following topics:

- Buffers and viewsheds for nesting, roosting, and perching sites related to human activities. (Response provided in Section 3.2.1, Buffers and Viewsheds.)
- Failure to identify long-term (operational) effects and reliance on unidentified design features. (Reponse provided in Section 3.2.2, Long-Term [Operational] Effects and Project Design Features.)
- Grazing management effects. (Response provided in Section 3.2.3, Cattle Grazing.)
- Recreation and pet impacts, including enforceability of measures to protect wildlife (Response provided in Section 3.2.4, Recreation, Pets, and Enforceability.)
- Infrastructure access, trails, and facilities impacts. (Reponse provided in Section 3.2.5, Infrastructure, Access, Trails, and Facilities.)
- Baseline surveys, the adequacy of the goals and objectives in the Draft TU MSHCP, and the adequacy of the proposed adaptive management strategy. (Response provided in Section 3.2.6, Goals and Objectives, Baseline Surveys, and Adaptive Management.)
- Pest management and the use of rodenticides, which can cause toxic buildups in higher-level carnivores such as raptors. (Response provided in Section 3.2.7, Pest Management, Rodenticides and Bubonic Plague.)
- Portrayal of Established Open Space as potentially unfragmented and the TMV Planning Area Open Space as fragmented. (Response provided in Section 3.2.8, Habitat Fragmentation.)
- Lack of definitions for habitat use types, such as secondary breeding and foraging habitat. (Response provide in Section 3.2.9, Habitat Type Definitions.)
- Avoidance of take of fully protected species (the American peregrine falcon, bald eagle, golden eagle, white-tailed kite) when a net loss of habitat would occur, including habitat degradation, and other indirect effects related to the Covered Activities. (Response provided in Section 3.2.10, Fully Protected Species and Lethal Take.)
- General threats to raptors versus TU MSHCP-related effects, including collisions with wind turbines, powerlines, and other physical structures. (Response provided in Section 3.2.11, Identification and Mitigation of Threats.)
- Loss of individuals and/or nesting pairs of golden eagles and burrowing owls. (Response provided in Section 3.2.12, Burrowing Owl, and Section 3.2.13, Golden Eagle.)
- Discrepancies in reported effect and conservation acreages for the white-tailed kite. (Response provided in Section 3.2.14, White-Tailed Kite.)
- Direct and indirect effects on bald eagle habitat, including potential reduction of Castac Lake levels. (Response provided in Section 3.2.15, Bald Eagle.)

# 3.2 Responses to Substantive Comments

## 3.2.1 Buffers and Viewsheds

Comments suggested the proposed setback buffers and viewsheds for raptors in the TU MSHCP are inadequate, are not based on the best available science, and would not avoid adversely affecting raptor behavior, including reproduction.

There are five raptor species covered in the TU MSHCP and analyzed in Section 4.1, Biological Reources, of this Supplemental Draft EIS: the American peregrine falcon (*Falco peregrinus anatum*), the bald eagle (*Haliaeetus leucocephalus*), the burrowing owl (*Athene cunicularia*), the golden eagle (*Aquila chrysaetos*), and the white-tailed kite (*Elanus leucurus*). Section 7.1.1.2, Birds, in the Draft TU MSHCP describes the species-specific protection measures that would be implemented to minimize effects on raptors, including implementation of buffers and viewshed protections between raptor nesting, roosting, and perching sites and construction and long-term operational activities. This response summarizes the likely habitat present for each species and the corresponding setback and buffer to protect nesting, roosting, and perching sites.

The occurrence and suitable habitat information regarding the five raptor species on Covered Lands is described in Section 3.1, Biological Resources, of Volume I of this Supplemental Draft EIS, and Section 5.2.2, Birds, of the TU MSHCP. Golden eagles nest and forage on the Covered Lands, with three active nests observed in the TMV Planning Area in 2007. The American peregrine falcon, bald eagle, burrowing owl, and white-tailed kite have been observed to use portions of the Covered Lands during the winter for foraging, but none of these species has been documented to nest on the Covered Lands. However, there is modeled nesting habitat on the Covered Lands for the peregrine falcon (a very limited amount), the burrowing owl, and the white-tailed kite, and these species are considered to have at least some potential to breed on site because the Covered Lands are within their known breeding range. The bald eagle is expected only to winter and forage on Covered Lands in the vicinity of Castac Lake; it is not expected to nest on site.

Nesting golden eagles are sensitive to human disturbance (Remsen 1978, p. 32; Thelander 1974, p. 11). The TU MSHCP proposes several measures that would avoid, minimize, and mitigate the effects on nesting golden eagles. As stated in Objective 6.1, surveys would be conducted for active nests in modeled primary breeding and breeding/foraging habitat during the breeding season (January through August) prior to approval of the grading plan for each phase of development. The results of these surveys would be used during site development and would take into consideration viewshed and distance factors to protect nest sites. Objective 6.2 for golden eagle includes several criteria to protect active (primary and/or alternate) nest sites from disturbance. No development, new trails or recreational activities would be allowed within 0.25 mile of an active nest site, within or outside the viewshed, and no development would be allowed within the viewshed that is also within 0.5 mile of an active nest. Development would be restricted to low-density development within the viewshed up to 1 mile from the active nest. For development within 0.5 to 1 mile of an active nest site, siting and design criteria would be established to avoid and minimize effects on modeled foraging habitat, primarily through clustering of development. Objective 9.2 states that trail use would be restricted between 0.25 and 0.5 mile within the viewshed of an active nest site during the primary nesting season (generally February 1 through July 30), when birds would be sensitive to human activities, unless a qualified, Service-approved biologist determines that the nest site has become inactive and would not affect nesting golden eagles. These objectives were developed cooperatively between the Service and TU MSHCP consultant team, including raptor biologist Pete Bloom, and are based on many years of field experience and observation by professional biologists.

A commenter expressed concern that the buffers and setbacks are not based on the best available science and that viewsheds for both nesting and hunting habitats should have been calculated using a three-dimensional geographic information system (GIS) tool. Spatial and temporal buffer zones have been suggested as a means to minimize the effects of recreational and other human activities on breeding raptors. In particular, a zone of 333 meters (0.2mi) radius has been suggested for golden eagles when birds are rearing young and exposed to various human activities (Suter and Jones 1981). Other recommendations include establishing spatial nest buffers from 0.13 to 1.0 mile depending on the terrain and nest location (Richardson and Miller 1997). However, a viewshed approach has been suggested as a more realistic application to buffering active nest sites since flushing distances (from nests, perches, roosts) of adult eagles can be reduced when eagles are visually shielded (by vegetation and/or topographical features) from human activities. A viewshed approach to managing disturbances may require less protected area than standardized buffer zones (Camp, et al, 1997). For golden eagles, a three-dimensional viewshed analysis using GIS was conducted for active golden eagle nests within the TMV Planning Area. This is the only raptor Covered Species documented to nest in proximity to development areas. The analysis took into consideration topography, vegetation cover and height, elevation, distance from the nest tree, and nest height. The analysis included distances measured at 0.25, 0.5, and 1 mile from the nest. A maximum of 1 mile was used since that is the outer range of buffer zones listed in the literature as appropriate for golden eagles (Richardson and Miller 1997).The results of this analysis was considered in determining the TMV Development Envelope boundary and would be incorporated into the final site development plans for the TMV Project. In addition, and, as discussed previously, the viewshed guidelines (summarized above) would apply to any future golden eagle nests that are discovered during surveys that would be conducted prior to ground disturbance activities within the TMV Specific Plan Development Envelope. However, the viewshed tool is not practical for use in foraging habitat because hunting by most raptors is carried out on such a broad scale and opportunistically in relation to food sources. For example, the size of golden eagle foraging territories is related to prey density and is quite variable. In southern California, estimated territories are approximately 23,000 acres, and, in northern California, they are approximately 30,700 acres (Zeiner et al. 1990, p. 142).

For the other raptors with some potential to breed on site (the American peregrine falcon, white-tailed kite, and burrowing owl), because there are no known nest sites, surveys prior to construction would be conducted, as discussed below, and appropriate measures set forth in Section 7.1.1.2 of the TU MSHCP would be undertaken. Specifically, prior to Commericial and Residential Development Activities, preconstuction surveys in breeding habitat would be conducted. If any of these species are found nesting in proximity to Disturbance Areas prior to construction, setbacks from active nests would be established during the nesting period as follows.

- An 0.25-mile protection zone would be established around each active peregrine falcon nest (Objective 4.2 of Section 7.1.1.2.1, American Peregrine Falcon, in the TU MSHCP). This setback distance is based on the variable response of nesting peregrine falcons to human activities. Birds that nest in urban areas or highly visited areas become habituated to close human activities, while birds nesting in isolated areas tend to be more sensitive to disturbance (White et al. 2002, p. 1). In addition, there is very limited potential nesting habitat for the peregrine falcon on Covered Lands, it is only expected to forage on site during the winter, and the Covered Lands are not considered to be important breeding habitat for this species. Also, White et al. (2002, p. 1) indicate that human disturbance of nesting sites does not appear to be a significant factor in population declines of the peregrine falcon.
- For the white-tailed kite and the burrowing owl, a setback of 500 feet and 300 feet, respectively, would be established around each active nest site (Objective 4.3 of Section 7.1.1.2.3, Burrowing Owl, and Objective 4.3 of Section 7.1.1.2.11, White-Tailed Kite, of the TU MSHCP, respectively). Once construction activities have been initiated, nesting attempts by the burrowing owl within

300 feet of construction activities would not be subject to the 300-foot setback, although no nests would be directly disturbed. These setbacks may be reduced at the discretion of the Service-approved biologist depending on site conditions (e.g., viewshed or natural noise barriers resulting from topography).

The adequacy of a 500-foot setback guideline for the white-tailed kite is supported by empirical data. A recent study of white-tailed kite nesting and roosting behavior in Santa Barbara County (Rincon 2010, p. 5) indicates that individuals of this species are tolerant of urban development and other human activities within 500 feet of nests and roost sites. However, it is likely that white-tailed kites, like peregrine falcons and many other raptor species, exhibit individual tolerances or habituation to urban settings and human activities. Rincon (2010, p. 5) examined historic nest site locations in Goleta Valley in relation to different types of disturbances, including development (roads, fencing, walls, and fuel management zone), active nonmotorized recreational uses such as equestrian and bicycling, and passive recreation such as walking and bird watching. The data used for the analysis were based on 2008 and 2009 surveys on More Mesa and historic nests and roosts dating back to 1963, backgound literature, and consultation with local experts. Of 42 nest sites, 17 occurred within 500 feet of some type of urban disturbance, indicating some level of tolerance by individuals of this species to human activities. White-tailed kites generally were more tolerant of nonstructural human activities (e.g., recreation), with 9 of the 17 nest sites located within 140 feet of a structure (Rincon 2010, p. 5). Thirteen of the 17 nest sites were within 125 feet of a road, yard, agricultural field, trail, or other nonstructural type of human disturbance. Based on this analysis, Rincon (2010, p. 6) developed nest and roosting buffer guidelines, including the following:

- 1–125 feet: minimum area of no human activity
- 125–200 feet: passive recreation (walking and bird watching)
- 200–265 feet: active recreation (equestrian, bicycling – no motorized vehicles)
- 265–340 feet: roads, fencing, walls, lawns, 100-foot fuel management zone
- 340–525 feet: structures

For the burrowing owl, the proposed 300-foot buffer to protect nesting sites is consistent with and exceeds the guidelines set forth by California Burrowing Owl Consortium's *Burrowing Owl Survey Protocol and Mitigation Guidelines* prepared in 1993 and submitted to the California Department of Fish and Game (CDFG) (Burrowing Owl Consortium 1993). The Consortium recommends that no disturbance should occur within 75 meters (approximately 250 feet) of a nest burrow during the breeding season (Burrowing Owl Consortium 1993, p. 7). Avoidance also requires that a minimum of 6.5 acres of foraging habitat be preserved contiguous with occupied burrow sites for each pair of breeding burrowing owls (with or without dependent young) or single unpaired resident bird (Burrowing Owl Consortium 1993, p. 7). Although these setback guidelines have not been formally adopted by CDFG, they are provided on CDFG's weblink for survey protocols and monitoring guidelines (California Department of Fish and Game 1993).

Preactivity surveys related to the long-term effects of Plan-Wide Activities, such as recreation, would also be conducted during the breeding season of the American peregrine falcon and the white-tailed kite. Commenters requested that preactivity surveys be required for fuel management involving tilling or disking. Although tilling and disking is not anticipated in conjunction with fuel management activites, preactivity surveys would be conducted in the 1,773 acres of development-related fuel management activities in open space areas. Setbacks would be established from active nest sites (1,000 feet for the peregrine falcon [Objective 6.2] and 500 feet for the white-tailed kite for passive recreation activities [Objective 7.2]) until all young have fledged and are no longer dependent on the nest for survival. The commenter specifically questioned the 1,000-foot setback for the American peregrine falcon, recommending

that a site-specific analysis be done and that the setback be increased beyond 1,000 feet, if needed. The sufficiency of the 1,000-foot setback is discussed above. As noted, peregrine falcons have successfully bred in urban areas.

- For the bald eagle (which does not breed on site), measures would be implemented to reduce effects on overwintering individuals that may perch, roost, and forage on the Covered Lands. Objective 3.2 in Section 7.1.12.2, Bald Eagle, of the TU MSHCP requires preconstruction surveys for wintering individuals and mapping of preferred diurnal perches and roosting sites if present. Preferred diurnal perches and roosting sites would be conserved according to a protocol described in Objective 3.2, including a consideration of tree size (larger trees are better) and distance from Castac Lake, replacement of affected large trees near Castac Lake, and girdling of some trees to create snags for perching. Objective 3.4 for the bald eagle requires adequate setbacks from preserve roosting areas. These would be determined by a qualified Service-approved biologist based on focused surveys for wintering bald eagles conducted prior to approval of the grading plan for each phase of development within 1 mile of Castac Lake. Objective 3.4 specifies that uses within the roost area and setback would be limited to those approved by the qualified Service-approved biologist in the bald eagle wintering period between October 15 and March 16. Recreational uses would be excluded from the roosting and setback area. Objective 7.3 for the bald eagle specifies that the minumum setback during this period would be 300 feet, but the setback may be adjusted by the qualified Service-approved biologist based on site conditions (e.g., topography). In addition, as stated in Objective 4.1 for the bald eagle, construction-related ground disturbances in wetland habitat associated with Castac Lake and woodland habitat within 1 mile of Castac Lake would be avoided from October through March.

  A commenter stated that measures to minimize effects on the bald eagle are vague and that Section 7, Conservation Plan for Other Covered Species, of the Draft TU MSHCP refers to a 300-foot setback, while Section 6, Potential Biological Impacts / Take Assessment, of the Draft TU MSHCP refers to a 500-foot setback. The commenter suggested that the setback should be 250 to 400 meters (820 to 1,312 feet), citing Stalmaster and Newman (1978) and Craig (2002). The commenter suggests a management zone of 1,360 to 1,400 meters (4,462 feet to 4,593 feet), citing Buehler et al. (1991).

  The reference to 500 feet in Section 6.2.2.2.2, Analysis of Potential Impacts to Bald Eagle, of the Draft TU MSHCP was an error has been corrected to reflect a setback distance of 300 feet. The TU MSHCP provides a management zone of 1 mile and a minimum setback of 300 feet, which can be increased depending on site-specific considerations. As described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 5.2.2.2.3, Occurrence in the Covered Lands, of the TU MSHCP, bald eagle occurrences on site are infrequent foraging observations. Because this species has been observed infrequently during the winter, bald eagle presence on site is not considered to be a wintering congregation. The TU MSHCP setback is generally consistent with Stalmaster and Newman's recommendation for bald eagle wintering grounds in Disturbance Areas.

  Specifically, the Stalmaster and Newman (1978, pp. 506–513) study focused on the response of bald eagle wintering populations to simulated disturbances in three land covers (vegetation zone, riverbank, and river channel). In vegetation buffer zones, the observer was visible to the bald eagles at between 75 and 100 meters (247 to 329 feet). In the riverbank zones, the bald eagles flushed when the observer was within 251 to 300 meters (826 to 987 feet). In the river channel zones, the bald eagles flushed when the observer was within approximately 300 meters (987 feet). For vegetated wintering grounds where disturbances are common, Stalmaster and Newman (1978, p. 512) recommend a buffer of 75 to 100 meters (247 to 329 feet). In open areas, the authors recommend a larger buffer of 250 meters (820 feet) to protect a congregating

bald eagle wintering population; a combination of buffer and vegetation being preferable. The Stalmaster and Newman (1978, p. 512) study also noted that bald eagles can adjust to routine human activities.

The Craig (2002, pp. 1–6) study is not based on empirical data. Craig (2002) provides recommendations for buffer zones and seasonal restrictions for Colorado raptors, including buffers and setbacks for nesting, roosting, and/or perching raptors, including the bald eagle. Craig (2002, p. 2) recommends a buffer of 0.25 mile (400 meters, 1,320 feet) for winter night roosts between November 15 and March 15. Craig (2002, p. 1) also states that buffer zones can be adjusted depending on vegetation screens and terrain that obscure the activity. Craig (2002, p. 2) also recommends protection of diurnal perches in association with foraging areas and notes that he is aware of two management plans that recommend zones ranging from 0.13 mile (200 meters, 660 feet) to 0.25 mile (400 meters, 1,320 feet).

Consistent with Stalmaster and Newman, the 300-foot setback is proposed under the TU MSHCP, in combination with the conservation and management of diurnal roosts and perches, for three main reasons:

- the bald eagle is an infrequent winter visitor on site;
- the Covered Activities in proximity to the wintering habitat would be primarily recreational (trail and golf course) and residential, activities to which the returning eagles can likely adjust; and
- 795 acres (55%) of wintering habitat and 506 acres (99%) of foraging habitat would be protected in perpetuity in open space areas.

Regarding the proposed management of lakeside vegetation for the benefit of wintering bald eagles, Buehler et al. (1991, p. 279) recommends management in communal roosting forest stands of 190 hectares (470 acres). The 190 hectares exceeds the minimum communal roost forest stand size of 110 hectares (272 acres) (Buehler et al. 1991, p. 279). The management recommendation was proposed for Chesapeake Bay undeveloped shoreline forest stands extending a minimum of 1,400 meters (4,606 feet, 0.87 mile) inland, with a minimum of 1,360 meters of shoreline edge. Buehler et al. (1991, p. 279) recommended protection of existing tall, large-diameter trees and the promotion of stands of trees where lacking. The TU MSHCP would include the conservation of 795 acres (55%) of wintering habitat for the bald eagle within the Covered Lands, which greatly exceeds the Buehler et al. (1991, p. 279) minimum communal roosting acreage of 272 acres. In addition, the Covered Lands do not support a communal roosting site for the bald eagle; this species is an infrequent winter visitor. Section 7.1.1.2.2, Bald Eagle, of the TU MSHCP includes conservation of preferred diurnal perches and high-quality roost trees for the bald eagle within 1 mile of Castac Lake and the promotion of stands of trees within 100 feet of Castac Lake; this exceeds the Buehler et al. (1991) recommended management zone of 1,400 meters (4,606 feet, 0.87 mile). Thus, the proposed bald eagle Goal 3 and associated objectives would protect diurnal perches and roosts, and would exceed the Buehler et al. (1991, p. 279) minimum communal roosting acreage and management zone recommendations.

## 3.2.2 Long-Term (Operational) Effects and Project Design Features

A commenter indicated that the TU MSHCP fails to identify what the long-term (operational) effects on raptors are and that the avoidance and minimization of these effects rely on unidentified project design features.

Long-term (operational) effects with potential nonpermanent effects on raptors and other birds are identified in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 6.2.2, Birds, of the TU MSHCP and include introduction of exotic plant and animal species and urban runoff into habitat used by the species. These long-term (operational) effects could result in degradation of breeding, perching, roosting, and foraging habitat (e.g., introduction of nonnative plant species or urban runoff into riparian and woodland areas used by these species) and could introduce potential urban-related predators, such as dogs and cats that may prey on or harass burrowing owls and other foraging raptors. Lighting could also result in long-term (operational) effects on raptors because it may increase predation and cause adverse effects on the behavior and physiology (e.g., increased stress levels) of raptors. The design features identified in Section 7, Conservation Plan for Other Covered Species, of the TU MSHCP to avoid and minimize effects from nonnative species and urban runoff generally provide for setbacks between suitable habitat and the Development Envelope. Lighting would be directed away from suitable habitat.

## 3.2.3 Cattle Grazing

Commenters indicated that potential effects from cattle grazing are not identified for the raptors and that the grazing plan should be included in the TU MSHCP in order to evaluate its adequacy as a basis for avoiding, minimizing, and mitigating effects.

Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 6.2.2, Birds, in the TU MSHCP, describe the effects that cattle grazing in the Covered Lands could have on raptor species, including habitat degradation when cattle congregate and otherwise trample suitable breeding and foraging habitat. However, both the Supplemental Draft EIS and the TU MSHCP recognize that cattle grazing is an existing condition and, as such, is considered part of the environmental baseline for purposes of analysis under the National Environmental Policy Act (NEPA). Specifically, the effects of continued cattle grazing are considered in the discussion of Existing Ranch Uses under the No Action Alternative and under the discussion of Plan-Wide Activities for the Proposed TU MSHCP Alternative.

Similar to existing grazing practices, the TU MSHCP would limit grazing to historic light-to-moderate levels to protect range quality, including environmental (e.g., water quality, riparian areas, and species biodiversity) and grazing conditions. Specific and ongoing provisions to protect range quality are provided in the Interim Ranchwide Management Plan (RWMP), which was approved by the Tejon Ranch Conservancy in 2009 (Tejon Ranch Company 2009) and is appended to the TU MSHCP. Successor RWMPs would be subject to the same requirements to preserve and protect existing conservation values that govern the Interim RWMP. The Interim RWMP includes the initial grazing, pest management, and public access plans for the open space areas managed by the Tejon Ranch Conservancy (currently the Established Open Space Area and Existing Conservation Easements Areas, both of which are included in the permanent open space under the Proposed TU MSHCP Alternative). The TMV Project adopted the same grazing and pest management plan for the TMV Planning Area Open Space. These initial plans set forth the existing best management practices (BMPs) that have helped create the current mix of habitat types and species diversity on the Covered Lands, including foraging, perching, and roosting habitat for the five raptor Covered Species and nesting habitat for the golden eagle. In addition, a grazing management plan with the BMPs, including techniques and practices such as seasonal grazing, exclusions, and rotational practices that are consistent with high levels of biodiversity and maintenance of suitable conditions for raptor foraging and nesting (e.g., grazing intensities that maintain high prey abundance and wetland/riparian exclusion fencing where necessary), would be submitted for review and approval by the Service. The provision requiring Service approval of the grazing management plan is provided in Section 7.3.2, Effectiveness Monitoring, of the TU MSHCP and the Implementing Agreement.

The presence of three active golden eagle nest sites in the TMV Planning Area in 2007 (Dudek 2007) indicates that the current cattle operation and historic and current light-to-moderate grazing practices on Tejon Ranch are compatible with golden eagle nesting and foraging, and that these grazing practices do not prevent the maintenance of adequate prey for golden eagle on the site. The observations of winter use of the Covered Lands for foraging by the American peregrine falcon, bald eagle, burrowing owl, and white-tailed kite in 2007 also indicate that grazing practices on Covered Lands are compatible with their use of the site for foraging and wintering. The scientific literature also indicates that the burrowing owl commonly forages on grazed lands (Haug et al. 1993, p. 1). As a result, the Service anticipates that cattle grazing under the TU MSHCP, at levels comparable to existing conditions, would not result in adverse effects on nesting or foraging raptors.

## 3.2.4 Recreation, Pets, and Enforceability

One commenter indicated that potential effects on raptors related to human recreation and pet activities are not identified in the Draft TU MSHCP and that the mitigation proposed for these potential effects, such as educational material, is not mitigation. The commenter suggests that additional information, including identification of potential effects and avoidance, minimization, and mitigation measures need to be included. Another commenter suggested that prohibitions on feeding bald eagles and other prohibitions to protect wildlife need to be made enforceable through law or ordinance and should be noted on signage.

Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 6.2.2, Birds, of the TU MSHCP consider the effects that increased human activity and domestic pets may have on the Covered Species, including each of the raptor species. Specifically, human presence and associated passive and active recreation could result in habitat degradation and disturbance of the raptors. To address these potential effects, public access, trails, and facilities would be sited to minimize effects on open space areas. The setbacks to nesting, perching, and roosting sites discussed previously would be implemented, including seasonal restrictions on recreational and hunting activities, and prohibitions on use of trails with 0.25 mile of an active golden eagle nest. Additional objectives described in Section 7.1.1.2, Birds, of the TU MSHCP for each of the raptor species would be implemented to further reduce potential effects on raptors by humans and pets. These additional measures include a requirement that a Homeowners Association educational program be implemented to provide educational information regarding acceptable recreational activities, pets, wildlife, and open space areas. These measures would reduce potential effects on raptors (and other native wildlife). An integrated pest management plan (IPMP) would also be required as a general mitigation measure under the TU MSHCP, as described in Section 7, and is expected to benefit all Covered Species.

With respect to signage, Objective 7.2 in the TU MSHCP for bald eagles prohibits intentional feeding, and Objective 7.5 refers to interpretive and educational signage about the species at Castac Lake. Signs would inform the public about bald eagles, their habitat requirements, and their sensitivity to human disturbance. By educating the public about eagle vulnerabilities and proper human behavior around eagles, such signs can be expected to reduce effects on eagles caused by recreational users.

The commenter recommended that all prohibitions to protect wildlife, including this prohibition against feeding bald eagles, be made enforceable by ordinance and that any signage include a notice that it is enforceable by law or ordinance. Here, as noted in Table 2-3 in Volume I of this Supplemental Draft EIS, the feeding prohibition of bald eagles would be enforced through the terms of conservation easements, covenants, conditions and restrictions (CC&Rs), which are legally binding contracts, and are enforceable through prescribed notices and hearings and ultimately through the civil courts. In response to this comment, the Draft TU MSHCP has been revised to include information on signage about enforceable prohibitions against feeding wildlife as follows:

Objective 7.2: Intentional feeding of bald eagles will be prohibited on the Covered Lands, and language will be included in the CC&Rs that prohibits the feeding of this species and other wildlife species on the Covered Lands. The project biologist will install signage adjacent to Castac Lake indicating that feeding bald eagles is prohibited. Such signage will indicate that prohibitions will be enforceable for all residents and guests.

Additionally, with respect to enforceability of the prohibitions to protect wildlife generally, all the prohibitions prescribed in the TU MSHCP would be enforceable under the Federal Endangered Species Act (ESA). Under Section 10(a)(2)(B) of the ESA, the Service must receive assurances that the HCP would be implemented prior to issuing an incidental take permit (ITP). Through the TU MSHCP, including the Implementing Agreement, and enforceable conditions in the ITP, the mitigation, avoidance, and minimization measures in the TU MSHCP would be ensured of being implemented and would be enforceable by Service. The TU MSHCP Implementing Agreement clarifies that the ITP does not shield third parties from liability under the ESA for take of Covered Species, or limit the authority of the state or Federal government to enforce endangered species laws.

## 3.2.5 Infrastructure, Access, Trails, and Facilities

One commenter indicated that the Draft TU MSHCP does not identify what infrastructure, access, trails, and facilities are proposed, making evaluation of effects on the raptors impossible. The commenter specifically requested the acreage amount for road crossings and culverts in open space areas.

While infrastructure and other requirements for the TMV Project are generally known, the final design and siting of these elements have not been completed for all proposed Commerical and Residential Development Activities, or for all of the Plan-Wide Activities. The precise acreage of road crossings and culverts in open space is also not known. However, development areas are identified for the Commerical and Residential Development Activities, and 200 acres of land disturbance related to Plan-Wide Activities in open space (including road and utility infrastructure installation) would be allowed under the TU MSHCP. This Supplemental Draft EIS analyzes how this development activity would affect all Covered Species, including raptors, in Section 4.1, Biological Resources. The TU MSHCP provides guidelines to avoid and reduce effects on raptors from open space infrastructure and trail facilities. Road and utilities infrastructure activities, including construction, repair, maintenance, and use, would include efforts to minimize disturbance footprints and use BMPs for design and installation of such facilities. For example, as described above for golden eagle, there would be restrictions on development in proximity to active nest sites. The location of recreational trails is not yet known; however, the TU MSHCP requires BMPs for the design and location of trails and requires that a public access plan that includes such BMPs be subject to Service review and approval for consistency with the TU MSHCP and the ESA.

## 3.2.6 Goals and Objectives, Baseline Surveys, and Adaptive Management

Comments indicated that a meaningful adaptive management strategy has not been provided for raptors in the Draft TU MSHCP and that it is unclear how the goal of avoiding effects of "other non-permanent Covered Activities" (e.g., Goal 10 for golden eagle) would in part be met by conducting environmental baseline surveys (e.g., Objective 10.1 for golden eagle).

Section 7.5, Adaptive Management Strategy, of the TU MSHCP describes the proposed adaptive management approach for the TU MSHCP as focusing on achieving the measurable goals and objectives of the conservation plan, including those provided in Section 7.1, Biological Goals and

Objectives for Other Covered Species. Under the TU MSHCP, 82% of the Covered Lands (116,523 acres) would be reserved as TU MSHCP Mitigation Lands and an additional 9% (12,795 acres), comprised of the Existing Conservation Easement Areas, would be retained in permanent open space (see Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS). This land conservation approach is the basis for the adaptive management strategy in the TU MSHCP and focuses on continuing the existing open space land practices within the Covered Lands, and avoiding the effects of the nonpermanent activities so that high-quality habitat for the raptors and other Covered Species is maintained.

Specific to raptor species, adaptive management strategies would be directed toward avoiding and minimizing potential effects associated with increased human presence and proximity to open space. The open space baseline surveys and effectiveness monitoring described in Section 7.3.2, Effectiveness Monitoring, of the TU MSHCP would provide the link between the goals and objectives for raptors, and adaptive management approach. Monitoring would assess the biological conditions in the open space system and the effectiveness of the avoidance and minimization measures provided in the TU MSHCP, and would provide the information needed to identify and implement appropriate adaptive management measures, as appropriate. Open space baseline surveys would be used to establish existing resources conditions, including the status of the raptor Covered Species, which would provide the "measuring stick" for the effectiveness monitoring to identify adverse changes or trends in resource conditions that may affect these species. Effectiveness monitoring would include vegetation community mapping updates, selective on-the-ground monitoring for invasive and nonnative species, and monitoring of Plan-Wide Activities so that activities can be modified, if needed, through the adaptive management program (e.g., grazing exclusion fencing, trail closure).

## 3.2.7 Pest Management, Rodenticides, and Bubonic Plague

One commenter indicated that the Draft TU MSHCP does not analyze the effects of pesticides and other contaminants on the burrowing owl and specifically the effects of rodenticides on higher level carnivores, including raptors. The comment ties the use of rodenticides to controlling potential exposure of humans to bubonic plague, which may be carried by ground squirrels that are common prey for large raptors.

Both the Supplemental Draft EIS and the TU MSHCP recognize that all species, including raptors, may be affected by increased human presence. As described in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, increased human presence could result in more chemical use, including rodenticides, which could affect habitat and be toxic to species. Use of pesticides and rodenticides related to agricultural use is specifically noted as a threat to the burrowing owl, which may be directly poisoned or indirectly poisoned by prey contamination.

At present, pesticides are not a threat to raptors. The vast majority of the Covered Lands are grazed, and irrigated cultivation of agricultural lands, where use of rodenticides is more common, is limited to approximately 6,750 acres of agricultural fields and orchards on Tejon Ranch, located primarily near the southeastern end of the San Joaquin Valley near the existing ranch headquarters, on the western portion of Tejon Ranch in the Grapevine area, and in Los Angeles County, near Highway 138 and 300th street (much of this land is located outside of the Covered Lands). As such, because the widespread use of rodenticides in open space areas is not anticipated, effects on raptors foraging in grazed, open space areas would be minimal.

Tejon Ranch currently conducts pest management activities on the Covered Lands. The current pest management plan, which was approved as a part of the Interim RWMP by the Tejon Ranch Conservancy in 2009, applies to the Conservancy-managed open space areas and includes BMPs for use of pesticides (including rodenticides) in those areas. As part of the Kern County TMV Project

Approvals, the County also made the pest management plan, referred to as the grazing and pest management plan, applicable to the TMV Planning Area Open Space (Kern County 2009). The BMPs in that plan allow pesticide use near barns and human structures in compliance with legal requirements, specify that pesticides may only be used when determined necessary under recommendation of a Certified Pest Control Adviser or other appropriately trained personnel, require that employees are trained or certified as appropriate, and require that the best practice guidelines established by the manufacturer be followed.

Under the TU MSHCP, rodenticide use, if any, would be associated with development areas, rather than open space. As described in Section 7.2.1, Measures to Avoid and Minimize Impacts, the TU MSHCP would require development of an IPMP, which would likely benefit raptor and other Covered Species by providing prescriptions for controlling invasive species, ensuring that pest management activities do not conflict with native burrowing animals, and minimizing potential effects on water quality. Any use of rodenticide to control ground squirrels that may carry bubonic plague would be addressed inthe IPMP. A framework IPMP would be completed for review by the Service following permit issuance, followed by project-specific pest management plans for specific development uses, specific ranch operations, and open space management. All such plans must be reviewed and approved by the Service, as set forth in Implementing Agreement Sections 5.1.1(d) and 5.2.4, and meet the requirements of Section 7.2.1 of the TU MSHCP. Revisions to these pest management plans would be required to implement the performance standards set forth in the TU MSHCP mitigation measure, and be reviewed by the Service, as provided in the Implementing Agreement.

## 3.2.8 Habitat Fragmentation

Comments related to the conservation of raptor habitat on Covered Lands characterize Established Open Space as “potentially unfragmented” and the TMV Planning Area Open Space as “fragmented.”

Established Open Space accounts for 93,522 acres (66%) of existing undeveloped, natural lands in the 141,886 acres of Covered Lands and is unfragmented (see Figure 1-3 of the TU MSHCP). The TMV Planning Area Open Space encompasses 23,001 acres, including two large, unfragmented habitat blocks of approximately 6,660 and 7,550 acres. A figure has been added to the TU MSHCP and Supplemental Draft EIS identifying this area as the TMV Planning Area Initial Mitigation Lands (see Figure 2-4 in Volume I of this Supplemental Draft EIS). In addition, the remaining areas of the TMV Planning Area Open Space would provide important habitat connectivity, because the TMV Planning Area Open Space is generally contiguous with the Established Open Space, as well as the Existing Conservation Easement Areas, thus expanding the total area of unfragmented habitat.

## 3.2.9 Habitat Type Definitions

Commenters indicated that different habitat use types, such as secondary breeding and foraging habitat, are not defined for some of the raptor species.

The different habitat functions for raptors are described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Appendix D. In general, habitat types include foraging, wintering, breeding, breeding and foraging, and secondary breeding and foraging.

## 3.2.10 Fully Protected Species and Lethal Take

Commenters suggested that loss of habitat, including loss of potential suitable breeding habitat, for the American peregrine falcon, bald eagle, golden eagle, and white-tailed kite, all California fully protected species, would result in cumulative “lethal take” due to displacement of individuals from their foraging areas, loss of potential breeding habitat, and a net loss of habitat.

It is the responsibility of the applicant to comply with state law, including the California Endangered Species Act (CESA) and fully protected species statutes. The Service is not responsible for interpreting or administering state laws and the issuance of a Federal ITP does not insulate an applicant from the requirements of state law. The potential effects of the TU MSHCP and ITP on raptors are analyzed in this Supplemental Draft EIS, and will be considered in the ESA Section 7 biological opinion issued in connection with the ITP application. The reader is directed to Master Response 8, Regulatory Considerations, for more detail regarding take issues, and Section 4.1.1.1, Regulatory Setting of this Supplemental Draft EIS, for additional discussion of relevant state and Federal laws.

## 3.2.11 Identification and Mitigation of Threats

One commenter indicated that, while the Draft TU MSHCP identified a suite of threats to raptors, none are comprehensively analyzed in the document, those threats will continue even within open space areas, and the document presents a "cookie-cutter" approach that fails to propose ways to avoid, minimize, or mitigate those threats.

The reader is directed to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities, for a full discussion of how species threats and the potential effects of the Covered Activities are addressed in the TU MSHCP and this Supplemental Draft EIS. Master Response 4, Covered Species Threats and Potential Effects from Covered Activities, includes a matrix (Table MR4-2) that summarizes the threats to the Covered Species rangewide, and the potential indirect effects of the Covered Activities (e.g., effects of grazing, invasive species, urban runoff, etc.) as they relate to the species-specific threats, and summarizes the goals and objectives proposed to avoid, minimize, and mitigate the effects of the Covered Activities that would be authorized by an ITP. This section summarizes the approach of this Supplemental Draft EIS and the TU MSHCP to analyzing threats to the raptor Covered Species and generally discusses the goals and objectives to address the effects associated with the Covered Activities.

General threats to raptors and reasons for their decline are identified for each species in Section 3.1, Biological Resources, of Volume I of this Supplemental Draft EIS and Section 5.2.2, Birds, of the TU MSHCP. It should be noted that the reasons for decline of the species described in these sections are based on threats for the particular species identified throughout its range, as reported in the scientific literature, some of which may not occur in the Covered Lands. The potential effects on raptors in the Covered Lands as a result of Covered Activities are further analyzed in Section 4.1, Biological Resources, of this Supplemental Draft EIS, and Section 6.2.2, Birds, of the TU MSHCP. Avoidance, minimization, and mitigation measures are identified in both Section 4.1, Biological Resources, of this Supplemental Draft EIS and Section 7.1.1, Wildlife Species, of the TU MSHCP. For example, a main threat to the bald eagle identified in Section 3.1, Biological Resources, of this Supplemental Draft EIS and Section 5.2.2 of the TU MSHCP is dichlorodiphenyltrichloroethane (DDT) contamination, which causes thinning of eggshells and greatly lowers reproductive success. However, use of DDT is not a Covered Activity or expected to be used under the TU MSHCP, and therefore is not addressed further in the TU MSHCP. Conversely, human disturbance of nesting sites and potential wintering sites due to recreation and other human activities was also identified as a threat to the bald eagle. Because this species winters on the Covered Lands and construction and other human activities (e.g., passive and active recreation) could occur in proximity to perching and roosting sites during this period, these activities have the potential to affect this species. Biological goals and objectives for the bald eagle to avoid and reduce these effects would include conservation of diurnal perches and high-quality roost trees (Goal 3) and avoidance of disturbances of foraging and winter roosting habitat during construction activities (Goal 4). These examples demonstrate that the TU MSHCP does identify a range of potential threats to raptors, identifies those that could

occur in association with Covered Activities, and proposes measures to avoid and reduce effects associated with the Covered Activities.

As noted by the commenter, wind turbines, powerlines, and other physical structures have the potential to affect raptors as a result of collisions and electrocutions. These potential threats are addressed in detail in Master Response 1F, California Condor Collisions with Powerlines and Structures, in Volume 2 of this Supplemental Draft EIS; Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS; and Section 4.4.1.4, Collisions With Powerlines and Artificial Structures, of the TU MSHCP. Under the TU MSHCP, restrictions on design and placement of antennae outside existing antenna farms would be required. All new antennae and phone towers would be designed and operated with antiperching devices. No wind farms would be constructed on Covered Lands or on the nearby Gorman Ranch, over which Tejon Ranchcorp (TRC) has a negative easement. Installation of wind turbines would be prohibited on all residential and commercial lots and on all TU MSHCP Mitigation Lands, except for individual turbines that serve the generation needs on site, and only if reviewed and approved by the Service. During their review, the Serivce would review the strucuture design to ensure that it would protect condors and raptors. No new aboveground high-voltage towers, tranmission lines, or other aerial obstructions would be built in the TMV Planning Area or in the Covered Lands generally, unless approved by the Service. Permanent relocation of two existing high-voltage transmission lines and associated towers within 1,000 feet of existing facilities would be allowed as described in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS, as long as the potential for effects on condors (and likely other raptors) would be avoided. In addition, as described in Section 4.4.1.5 of the TU MSHCP, structures in the TMV Planning Area would be low profile; that is, buildings would be in scale with the surrounding landscape and composed of structural forms fitted to the topography and natural surroundings, thus reducing the chances for collisions with buildings by other raptor species.

## 3.2.12 Burrowing Owl

One commenter indicated that no estimate of the number of burrowing owls that would be affected is provided in the TU MSHCP or EIS.

As described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, the burrowing owl may occur on the Covered Lands as an uncommon but likely regular winter visitor. An estimate of anticipated take of burrowing owl individuals is not presented because the species' use of the Covered Lands is intermittent and transitory. As described in Section 7.3.1, Compliance Monitoring, of the TU MSHCP, it is anticipated that the Service would measure the effects of such Covered Species in terms of "habitat acres affected by Covered Activities..." Specific measures described in Goal 4 for the burrowing owl would be implemented to avoid effects on any breeding owls, including preconstruction surveys, CDFG-approved evacuation and relocation methods, and setbacks from active nest burrows, as described above in this response.

At the conclusion of the NEPA and ESA processes, the Service will make an independent assessment of the effects of the Covered Activities on the Covered Species, including the burrowing owl, to determine potential levels of incidental take.

## 3.2.13 Golden Eagle

A commenter questioned how the goal of conserving all active golden eagle nests and accommodating the need for alternative nests is consistent with the statement in the Draft TU MSHCP that habitat loss would decrease the carrying capacity of the Covered Lands for one or two nesting pairs.

The comment regarding the number of nest sites on Covered Lands misinterprets the occurrence of nesting golden eagles on Covered Lands and, as a result, mischaracterizes the proportion of nest sites potentially affected by habitat loss. The comment states that there are three nesting golden eagle pairs on Tejon Ranch and that a 33% decrease in the nesting population would occur. Four nest sites were observed in the TMV Planning Area during focused surveys conducted in 2007, of which three were active (Dudek 2007). The TMV Planning Area accounts for approximately 28,253 acres (20%) of the 141,886-acre Covered Lands. Tejon Ranch is approximately 270,000 acres, so the TMV Planning Area is only about 10% of the entire Tejon Ranch. As described in Section 3.1, Biological Resources, of this Supplemental Draft EIS and Section 5.2.2.4.3, Occurrence Within the Covered Lands, of the TU MSHCP, golden eagle are expected to occur throughout Covered Lands in suitable habitat based on observations within the TMV Planning Area. That is, aassuming home ranges of 5,000 to 8,000 acres, conservation of 61,763 acres of modeled breeding/foraging and modeled foraging habitat in Covered Lands could support an additional 8 to 12 pairs. As such, the loss of suitable habitat supporting one nesting pair on Covered Lands would actually affect from 6% to 11% of the potential nesting population, substantially less than 33% of the nesting population as stated in the comment. Under the Proposed TU MSHCP Alternative, conservation of golden eagle modeled habitat in Established Open Space, TMV Planning Area Open Space, and Existing Conservation Easement Areas would include 94% of modeled primary breeding habitat, 94% of modeled breeding/foraging habitat, and 91% of modeled foraging habitat (Table 4.1-3 in Volume I of this Supplemental Draft EIS). The combined high level of habitat conservation and the specific protections for active nest sites through project design standards and construction-related measures would maintain the golden eagle population on Covered Lands.

## 3.2.14 White-Tailed Kite

A commenter noted that the Draft TU MSHCP incorrectly summarized acreage losses for the white-tailed kite.

As described in Appendix D of this Supplemental Draft EIS, the modeled foraging habitat estimate for the white-tailed kite was revised after publication of the 2009 TU MSHCP to reflect changes in the model parameter for streams from the perennial stream data set. This adjustment of the model increased the modeled foraging habitat acreage from the 7,841 acres to 9,251 acres. Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 5.2.2.11.3, Occurrence in the Covered Lands, of the TU MSHCP have been revised to amend this total modeled foraging habitat acreage for the white-tailed kite. With the adjusted model reflected in the Proposed TU MSHCP Alternative, a total of 1,874 acres (21%) of modeled foraging habitat would be permanently lost and 7,021 acres (78%) of modeled foraging habitat would be conserved in Established Open Space, TMV Planning Area Open Space, and Existing Conservation Easement Areas. Of the remaining 85 acres (1%), approximately 22 acres are in the Lebec/Existing Headquarters Area and approximately 63 acres are riparian vegetation that would be avoided. Sections 3.1, Biological Resources and 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS have been revised to amend these totals for affected and conserved habitat, as have Sections 6.2.2.11.2 and 7.1.1.2.11 of the TU MSHCP.

A commenter also indicated that the perennial water sources associated with Castac Lake and Grapevine Creek are critical to the white-tailed kite's use of the Covered Lands because of the lack of perennial water sources elsewhere on Covered Lands. As recognized by the commenter, Castac Lake and Grapevine Creek would be preserved under the TU MSHCP. In addition, the TMV Project would not rely on groundwater, and the existing hydrology of Castac Lake and Grapevine Creek would not be significantly affected by implementation of that project. Potential indirect effects on the perennial water sources of Castac Lake and Grapevine Creek are addressed in Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS.

## 3.2.15 Bald Eagle

A comment characterized the elimination of 45% (662 acres) of bald eagle wintering habitat as a "significant" effect. The comment indicated that it is not clear whether the 45% loss of habitat is due to direct effects or if it includes indirect effects. The comment also suggests that the evaluation of effects on bald eagle foraging habitat does not include indirect effects because the effect on groundwater from the TU MSHCP on lake levels was not analyzed. In addition, the comment states a concern about human activity around Castac Lake, including activities on the lake itself, such as boating.

Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS states that the Proposed TU MSHCP Alternative would result in the permanent loss of 839 acres (43%) of modeled habitat for the bald eagle in Covered Lands, including 834 acres (58%) of modeled wintering habitat and 5 acres (1%) of modeled foraging habitat. These are considered direct effects because they refer to the actual removal of habitat through clearing and grading activities. Avoidance, minimization, and mitigation measures to reduce these direct effects, as well as indirect effects associated with the Proposed TU MSHCP Alternative, would include preserving 42% (604 acres) of bald eagle wintering habitat and 99% (499 acres) of foraging habitat, preserving and enhancing preferred diurnal perches and high-quality roost trees associated with Castac Lake, and restricting human activity within 300 feet of such roost sites between late October and March. Please see the response provided above in Section 3.2.1, Buffers and Viewsheds, regarding setbacks for the bald eagle.

The concern regarding indirect effects on the perennial water sources of Castac Lake and Grapevine Creek and associated bald eagle foraging habitat (and how these relate to groundwater and lake levels) are addressed in Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS. The TMV Project, which would be adjacent to Castac Lake and Grapevine Creek, would not rely on groundwater for water supplies. Implementation of the TU MSHCP, which would include restrictions on groundwater use from the Ranchwide Agreement, would not result in effects on groundwater that could alter the lake levels and, by extension, foraging habitat for the bald eagle.

The comment regarding human activity around Castac Lake and in proximity to bald eagle perching, roosting, and foraging habitat is addressed above, in Section 3.2.1, Buffers and Viewsheds. A component of the TMV Project Approvals provided by Kern County requires that boating, swimming, or similar recreational activity be permanently prohibited on Castac Lake (Kern County 2009, Mitigation Measure 4.8-31). In 2009, the Tejon Ranch Conservancy approved the initial public access plan for Tejon Ranch, which sets a process by which public access activities will be reviewed and approved. Per the terms of the TU MSHCP, subsequent public access plans by the Tejon Ranch Conservancy or other easement holder in the TMV Planning Area Open Space, if applicable, must be reviewed and approved by the Service (in perpetuity). The public access plan(s) together with the Kern County provisions would benefit the bald eagle.

Master Response 4

# Covered Species Threats and Potential Effects from Covered Activities

**Table MR4-1. Comments Addressed in Master Response 4**

| Comment Number | Commenter |
|---|---|
| O4-37 | Center for Biological Diversity (Keats, Adam) |
| O4-38 | Center for Biological Diversity (Keats, Adam) |
| O4-44 | Center for Biological Diversity (Keats, Adam) |
| O4-134 | Center for Biological Diversity (Keats, Adam) |
| O4-142 | Center for Biological Diversity (Keats, Adam) |
| O4-149 | Center for Biological Diversity (Keats, Adam) |
| O4-161 | Center for Biological Diversity (Keats, Adam) |
| O4-165 | Center for Biological Diversity (Keats, Adam) |
| O4-168 | Center for Biological Diversity (Keats, Adam) |
| O4-172 | Center for Biological Diversity (Keats, Adam) |
| O4-176 | Center for Biological Diversity (Keats, Adam) |
| O4-181 | Center for Biological Diversity (Keats, Adam) |
| O4-184 | Center for Biological Diversity (Keats, Adam) |
| O4-188 | Center for Biological Diversity (Keats, Adam) |
| O4-192 | Center for Biological Diversity (Keats, Adam) |
| O4-196 | Center for Biological Diversity (Keats, Adam) |
| O4-199 | Center for Biological Diversity (Keats, Adam) |
| O4-203 | Center for Biological Diversity (Keats, Adam) |
| O4-206 | Center for Biological Diversity (Keats, Adam) |
| O4-209 | Center for Biological Diversity (Keats, Adam) |
| O4-212 | Center for Biological Diversity (Keats, Adam) |
| O4-216 | Center for Biological Diversity (Keats, Adam) |
| O4-219 | Center for Biological Diversity (Keats, Adam) |
| O4-223 | Center for Biological Diversity (Keats, Adam) |
| O4-226 | Center for Biological Diversity (Keats, Adam) |
| O4-228 | Center for Biological Diversity (Keats, Adam) |
| O4-230 | Center for Biological Diversity (Keats, Adam) |
| O4-233 | Center for Biological Diversity (Keats, Adam) |
| O4-236 | Center for Biological Diversity (Keats, Adam) |

# 4.1 Summary of Substantive Comments Received

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP specific to threats to Covered Species and the potential effects of the Covered Activities on Covered Species and their habitat. Table MR4-1 provides a list of the commenters and a reference to the individual comment, as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The range of identified effects on Covered Species and their habitats is inadequate, and there is insufficient information to determine how direct and indirect effects were characterized. (Response provided in Section 4.2.1, Inadequate Range and Characterization of Effects.)
- Implementation of the TU MSHCP would result in a net loss of habitat for Covered Species and a net loss of individuals. (Response provided in Section 4.2.2, Net Loss of Habitat and Individuals.)
- Identified threats to Covered Species are not thoroughly analyzed. (Reponse provided in Section 4.2.3, Identified Threats Not Adequately Analyzed.)
- Many of the threats and effects on species from the Covered Activities would remain in the proposed conservation lands (i.e., Open Space), and the Draft TU MSHCP fails to propose ways to avoid, minimize, and mitigate these effects. (Reponse provided in Section 4.2.4, Threats Will Remain in Open Space.)

# 4.2 Responses to Substantive Comments

## 4.2.1 Inadequate Range and Characterization of Effects

Comments indicate that the range of identified effects on Covered Species and their habitats resulting from proposed development under the TU MSHCP are inadequate, that many effects characterized as nonpermanent would be permanent, and that short-term effects are a subset of these effects.

The introduction to the TU MSHCP (i.e., Definitions) defines the terms *Covered Activities*, *Non-Permanent Effects*, and *Permanent Effects a*s follows.

**Covered Activities.** Certain activities (e.g., commercial and residential development, ongoing ranching) carried out or conducted by permittees within the Covered Lands that may result in the incidental take of Covered Species (wildlife), and/or effects on Covered Species (plants), for which an incidental take permit (ITP) is sought. A more detailed description of the activities covered under the TU MSHCP is provided in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS.

**Nonpermanent Effects.** Nonpermanent effects are those involving ground disturbance resulting in nonpermanent loss of habitat, such as livestock grazing and range management activities; film production; maintenance and construction of underground utilities; recreation, with the exception of hunting; continued use of existing structures; farming and irrigation systems; and repair, maintenance, and use of roads. Nonpermanent effects include those that are of short duration, such as construction and maintenance activities; of a cyclical nature, such as ranching activities and grazing, which may shift in location on a seasonal basis; or of longer duration, such as ground disturbance that is returned to predisturbance conditions (e.g., reclaimed by natural vegetation). These effects also include effects on non-habitat areas that do not cause habitat loss of any kind (e.g.,

repair of existing roads or uses of existing buildings). In this Supplemental Draft EIS, nonpermanent effects are referred to as temporary effects.

**Permanent Effects.** Permanent effects are those involving ground disturbance resulting in permanent loss of habitat, such as grading and/or land alteration for residential, commercial, or resort development or other land development activities. Permanent effects may result in direct effects, such as loss of habitat, as well as indirect effects associated with introduction of permanent new uses (e.g., land development and mineral extraction) in proximity to habitat and species.

Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS and Section 2, Plan Description and Activities Covered by Permit, of the TU MSHCP provides detailed information on the potential sources of permanent and nonpermanent effects under the TU MSHCP. Permanent effects include direct disturbance of up to 5,533 acres in the TMV Planning Area as a result of Commercial and Residential Development Activities, including 5,252 acres in the TMV Planning Area/Oso Canyon, potential development of 265 acres in the Lebec/Existing Headquarters Area, and 16 acres for the Tejon Castac Water District (TCWD) facilities operations and expansion. However, the effects and conservation analysis in the Draft TU MSHCP and EIS are conservatively based on permanent effects in the TU MSHCP Development Envelope, rather than the smaller Disturbance Area, because the exact location of development is not known at this time. The Development Envelope encompasses 8,366 acres in the TMV Planning Area (including 7,860 acres in the TMV Specific Plan Area and 506 acres in Oso Canyon), 170 acres for West of Freeway, 265 acres for Lebec/Existing Headquarters Area, and 16 acres for the TCWD facilities. A total of 8,817 acres were included in the Development Envelope for the effects analysis included in this Supplemental Draft EIS and the TU MSHCP.

Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 6, Potential Biological Impacts / Take Assessment, of the TU MSHCP analyze the permanent loss and conservation of modeled habitat for each of the other Covered Species (i.e., all species except the California condor) that would result from implementing the TU MSHCP. Nonpermanent (temporary) effects would be associated with Plan-Wide Activities that have occurred historically on the ranch, and are planned to continue without significant change under the TU MSHCP. Up to 200 acres of ground disturbance would result from Plan-Wide Activities; these additional acres of disturbance are discussed qualitatively as no specific location for the activities can be determined. All ground disturbance activities associated with Plan-Wide Activities would be consistent with the Ranchwide Agreement such that no activity would significantly impair the conservation value of the affected land. In addition to the nonpermanent effects defined above, Covered Activities include monitoring and management to implement the goals and objectives for Covered Species, and such activities may include habitat restoration that involves temporary disturbances.

With the exception of the 200 acres of ground disturbance described above, all other effects associated with the Plan-Wide Activities are considered nonpermanent and thus are not quantified in the TU MSHCP. The applicant, Tejon Ranchcorp (TRC) has stated this is because the effects:

- do not involve new ground- and vegetation-disturbing impacts beyond existing uses (e.g., cattle grazing, farming, and irrigation);
- are temporary or short-term in nature (e.g., film production, monitoring, and management activities);
- would require further authorization under the Federal Endangered Species Act (ESA) if the scope of the activity extended beyond the scope of Covered Activities (e.g., enhanced public access programs, including relocation of the Pacific Crest National Scenic Trail, a state park, or a University of California Nature Reserve, if and to the extent formally proposed in the future);

- involve relocation, rather than expansion or new construction, of existing utilities (expansion or construction of new utilities is not a Covered Activity and would require further ESA authorization; third-party utilities would not receive incidental take coverage under ITP); and
- restrict expansion, construction, relocation, and removal of ancillary ranch structures, limited to load chutes, holding and feeding fields, corrals, and catch pens, to *de minimis* activities, (*de minimis* activities do not include construction of new barns, roads, water facilities that are not minor, power transmission lines, and other such facilities).

Of note, these activities and their potential effects are qualitatively described in this Supplemental Draft EIS under the No Action Alternative, and as a part of the analysis of Plan-Wide Activities for the Proposed TU MSHCP Alternative.

It is unclear whether the comment considers short-term effects to be permanent or nonpermanent effects. As used in the TU MSHCP, short-term effects refer to effects expected to occur during construction and that are temporary in nature. These typically include construction-generated dust, noise, water quality effects, lighting, and disturbances from increased human activity. The short-term construction-related effects for wildlife Covered Species are described by taxonomic group (i.e., amphibians, birds, invertebrates, mammals, and reptiles) and by species, as appropriate, in Section 6.2, Potential Take and Impacts to Other Covered Species, of the TU MSHCP. In Section 7.1, Biological Goals and Objectives for Other Covered Species, of the TU MSHCP, the Goals and Objectives under the subsection Management of Threats for each of the Covered Species state the avoidance and minimization measures that would be implemented during construction. These measures generally include best management practices (BMPs), fencing or flagging of disturbance and grading perimeters, preconstruction training of contractor and construction personnel, preconstruction surveys and relocation of collected individuals to suitable areas outside construction zones, and monitoring of construction activities and exclusion fencing, if appropriate, in modeled habitat for Covered Species.

As discussed above, long-term effects can also be considered to be nonpermanent effects, and could be associated with the introduction of exotic plant and animal species, urban runoff, lighting, and cattle grazing and use of open space areas. The goals and objectives under the Management of Threats subsection for each of the Covered Species in the TU MSHCP state the avoidance and minimization measures that would be implemented for these long-term effects. These measures generally include design features at the boundary between habitat for Covered Species and development to avoid the adverse effects of exotic plant and animal species, urban runoff, and lighting. A grazing management plan would be prepared to regulate grazing and range management activities. Homeowners' Associations would be provided with educational information regarding acceptable recreational activities, pets, wildlife, and open space.

For the purposes of the Service's National Environmental Policy Act (NEPA) analysis, Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS considers the effects of both temporary and permanent short- and long-term effects on Covered Species and other biological resources, both as a result of Existing Ranch Uses and Plan-Wide Activities, and of construction and operation of developed areas as part of the proposed Commercial and Residential Development Activities. Conservation measures included in the TU MSHCP are considered in that analysis to assess the relative effects of the Covered Activities. In addition, mitigation measures are described to reduce potential effects not otherwise addressed by the TU MSHCP conservation measures.

## 4.2.2 Net Loss of Habitat and Individuals

A commenter stated that the proposed TU MSHCP would result in a net loss of habitat for Covered Species as well as the loss of individuals, and, in some cases, a significant loss to the species population.

This comment is accurate in that modeled habitat for Covered Species would be lost and individuals would potentially be directly taken as a result of the Covered Activities. A comprehensive assessment of the potential effects of the Proposed TU MSHCP Alternative (and other alternatives considered in this EIS) on the Covered Species and their habitat is provided in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS. As described in that section, the Service found that, with application of the conservation measures in the TU MSHCP, as well as the BMPs and use restrictions provided pursuant to the Ranchwide Agreement, none of the Covered Species or their critical habitat would be substantially adversely affected by the Covered Activities. Please refer to Section 4.1 for a more detailed discussion of the potential effects of the Covered Activities on biological resources.

## 4.2.3 Identified Threats Not Adequately Analyzed

Comments indicated that while threats were identified for the other Covered Species (i.e., excluding the California condor, which is addressed separately in Master Responses 1A through 1I), the Draft TU MSHCP failed to adequately analyze these threats.

General known and suspected threats and reasons for decline of each of the other Covered Species are described in the species accounts in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 5, Other Covered Species, of the TU MSHCP Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 6, Potential Biological Impacts/Take Assessment, of the TU MSHCP analyze the effects of the Covered Activities on the Covered Species. These analyses address threats that are related to the Covered Activities. Threats for a particular Covered Species identified in Section 5, Other Covered Species, of the TU MSHCP, that are not known or expected to occur on the Covered Lands as a result of Covered Activities, are not analyzed in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS or Section 6, Potential Biological Impacts/Take Assessment, of the TU MSHCP. For example, logging is an identified threat to Tehachapi slender salamander, but does not occur on Covered Lands and therefore is not addressed in the analysis in this Supplemental Draft EIS or the TU MSHCP. Also, there may be existing threats to the Covered Species on the Covered Lands that are not related to the Covered Activities, and, therefore, are not considered in the assessment of the potential effects of the TU MSHCP. For example, feral pigs on the Covered Lands have the potential to adversely affect Tehachapi slender salamander and yellow-blotched salamander. Feral pigs are hunted on the ranch as part of the managed commercial hunting program. However, hunting in general and, more specifically, management of feral pigs is not a Covered Activity under the TU MSHCP. As a result, the potential effects of feral pig use or management on these amphibian species are not considered in the EIS or TU MSHCP assessment. Of note, and specific to this potential effect, the Tejon Ranch Conservancy and TRC will develop a Ranchwide Management Plan (RWMP) to preserve and manage the conservation values of the open space on the ranch and to help facilitate public access and educational programs. Continued management of feral pigs within the ranch may be addressed through the adaptive management program of the RWMP, as described in Section 7.4, Other Management Measures, of the TU MSHCP. The RWMP would also be subject to review and approval by the Service for consistency with the TU MSHCP and ESA.

For each wildlife taxonomic group (i.e., amphibians, birds, invertebrates, mammals, and reptiles), potential short-term construction-related and long-term threats are described in Section 6 of the TU

MSHCP. For example, in Section 6.2.1, Amphibians, short-term construction-related effects, such as effects on water quality and fugitive dust, are identified, and their potential effects on amphibians are generally described (e.g., absorption of toxins through species' skin, disruption of oxygen diffusion by dust). Potential long-term effects on amphibians identified in Section 6.2.1 include exotic plant and animal introduction, urban runoff, lighting and glare, and cattle-related effects. In addition to the description of effects at the taxonomic level for wildlife Covered Species, an additional discussion of effects on each of the Covered Species is presented in the species-specific effects analyses. For example, for Tehachapi slender salamander, in addition to direct development-related permanent loss of modeled habitat, the TU MSHCP identifies potential effects on the species associated with cattle grazing, maintenance of culverts and drainages, utility maintenance, film production, increased human presence, and associated passive and active recreation. These types of activities could result in habitat degradation, collection, and possible mortality of Tehachapi slender salamander. Of note, these kinds of nonpermanent effects cannot be quantified in terms of acreage or number of individuals affected because it is not known exactly where they would occur in the Covered Lands.

For the purposes of the Service's NEPA analysis, Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS considers the effects of both temporary and permanent short- and long-term effects on Covered Species and other biological resources, both as a result of Existing Ranch Uses and Plan-Wide Activities, and of construction and operation of developed areas as part of the proposed Commercial and Residential Development Activities. Conservation measures included in the TU MSHCP are considered in that analysis to assess the relative effects of the Covered Activities. In addition, mitigation measures are described to reduce potential effects not otherwise addressed by the TU MSHCP conservation measures.

Table MR4-2 provides a summary of the threats that are identified and addressed in the Draft TU MSHCP for each of the other Covered Species (i.e., excluding the California condor). The table summarizes the threats that were identified for each species under the heading Reasons for Decline in Section 5.2, Wildlife, and Section 5.3, Plants, with reference to where these discussions can be found in the TU MSHCP. The table also summarizes the threats that may be associated with the Covered Activities, as identified in Section 6.2, Wildlife, and provides the Draft TU MSHCP page numbers for these discussions. As described above, it is important to note that not all threats identified in Section 5.2 are expected to occur as a result of Covered Activities (e.g., mining and logging). Also, there may be some threats that were not identified in the literature review as a reason for the decline of a particular Covered Species, but which could occur in association with Covered Activities. For example, nonnative species are not an identified threat to yellow-blotched salamander in Section 5.2 of the TU MSHCP but are considered to be a potential threat to the species, because nonnative species (e.g., bullfrogs, nonnative fish) have been implicated in the decline of amphibians in general. Finally, the table summarizes the goals and objectives proposed to avoid and minimize potential effects on the Covered Species from the Covered Activities. The table includes the section number in the Draft TU MSHCP where full descriptions of the goals and objectives can be found.

In summary, the avoidance, minimization, and mitigation measures to address the potential short-term construction-related and long-term effects of the Covered Activities on the Covered Species are described Section 7.1 of the TU MSHCP. The RWMP prepared by the Tejon Ranch Conservancy would address a broader range of issues related to conserving and managing conservation values on Tejon Ranch, and would be subject to review and approval by the Service. Prior to making a decision on the proposed action, the Service will review the conservation strategy provided in the TU MSHCP for compliance with the ESA (Section 1.4.1.1, Federal Regulatory Provisions Relating to Issuance of an Incidental Take Permit, in Volume I of this Supplemental Draft EIS). This evaluation will be used to determine if an ITP will be issued to TRC for take of any or all of the Covered Species included in the TU MSHCP.

### 4.2.4 Threats Will Remain in Open Space

Commenters indicated that many of the effects identified in the Draft TU MSHCP would remain in the open space areas, and that the Draft TU MSHCP failed to propose ways to avoid, minimize, and mitigate these effects.

Section 7.1, Biological Goals and Objectives for Other Covered Species, of the TU MSHCP presents biological goals and objectives for each of the Covered Species affected by the Covered Activities. Implementation of the species-specific objectives would serve to avoid, minimize, and mitigate these Covered Activity-related effects. As noted above, certain threats that are only part of the existing setting are not analyzed as an effect of the Covered Activities. However, as described above, such threats may be addressed through the adaptive management program and through implementation of the RWMP.

This response uses the Tehachapi slender salamander as an example of how conservation strategies for the each of the Covered Species were developed, based on the potential effects of the Covered Activities included in the TU MSHCP. In Section 6.2, Potential Take and Impacts to Other Covered Species, of the TU MSHCP, short-term potential construction-related effects on the salamander in open space adjacent to construction areas are identified as including effects on water quality and increased levels of fugitive dust, as well as inadvertent effects on habitat and individuals. Goal 3 for the Tehachapi slender salamander was developed to avoid and minimize these construction-related effects, to the extent possible, by avoiding modeled habitat except as necessary for road crossing and culverts (Objective 3.1); implementing BMPs to protect surface water quality (Objective 3.2); installing fencing or flagging disturbance and grazing perimeters to avoid unauthorized impacts (Objective 3.3); and conducting preconstruction meetings and training for personnel on TU MSHCP compliance and recognition and reporting protocols for Covered Species (Objective 3.4). Additional avoidance and minimization of effects on Tehachapi slender salamander individuals would be accomplished through Goal 4, which includes measures for preconstruction surveys and relocation of individuals (Objective 4.1), monitoring, and installation of exclusion fencing, if appropriate, to exclude salamander from construction areas (Objective 4.2). Potential long-term effects attributed to the Covered Activities are also addressed in Section 7.1 through species-specific goals and objectives. For Tehachapi slender salamander, project design features, including setbacks, would be used to avoid and minimize direct and indirect effects on habitat (Objective 5.1), and lighting would be directed away from modeled habitat (Objective 5.2). For example, the Tejon Mountain Village Environmental Impact Report (EIR) (Kern County 2009) includes Mitigation Measure 4.4-38 that specifies that within occupied or modeled habitat for Tehachapi slender salamander, culverts shall be placed under road connections and the roads shall be designed, in coordination with a Service-approved biologist, to prevent this species from entering the on-site roads from areas where this species occurs on the TMV Project. Other small Covered Species, such as yellow-blotched salamander, also would be expected to use such culverts. A grazing management plan compatible with maintaining existing habitat for Tehachapi slender salamander would also be prepared (Objective 6.1). The effects of increased human activity and pets would be avoided and minimized through Homeowners Association educational materials (Objective 7.1), as well as appropriate siting of public access, trails, and facilities (Objective 8.3). Installation of infrastructure in open space areas would include efforts to minimize the footprint and use BMPs to avoid and minimize effects on modeled habitat (Objective 8.2).

Similar objectives to reduce potential construction-related and long-term effects on Covered Species from the Covered Activities are provided in Section 7.1 of the TU MSHCP.

**Table MR4-2. Proposed TU MSHCP Alternative - Other Covered Species Potential Indirect Effects Matrix**

| Species | Subject | Cattle Grazing | Nonnative Species | Lighting | Meso- and Urban-Related Predators | Noise, Vibration | Construction-Related and Long-Term Human Disturbance and Recreation | Altered Hydrology, Urban Runoff, Construction-Related Dust | Pesticides (Including Rodent Controls), Contaminants | Road and Utility Construction, Maintenance | Collisions, Electrocution | Off-Road Vehicles | Feral Pigs | Mining | Logging | Flood Control, Water Impoundment, Conveyance | Disease | Fire and Fire Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tehachapi slender salamander | Reasons For Decline ( Section 5.2.1.1.1) | ♦ | | | | | | | | ♦ | | | ♦ | ♦ | ♦ | ♦ | | |
| | Covered Activity Threat (Section 6.2.1.1) | ♦ | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.1.1) | 6.1 | 5.1 | 5.2 | 7.1 | | 3.1, 3.3, 3.4, 4.1, 4.2, 7.1, 8.3 | 3.2, 5.1 | Preparation of integrated pest management plan (IPMP) – was not identified specifically for all Covered Species | 3.1. 8.2 | | | | | | | | |
| Western spadefoot | Reasons For Decline (Section 5.2.1.2.1) | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | | ♦ | | | | | | |
| | Covered Activity Threat (Section 6.2.1.2) | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.1.2) | 5.1, 5.2 | 4.1 | 4.1 | 6.1 | 3.1, 3.2 | 2.1, 2.3, 3.1, 3.2, 6.1, 7.3 | 2.2, 4.1 | IPM | 2.1. 7.2 | | | | | | | | |
| Yellow-blotched salamander | Reasons For Decline (Section 5.2.1.3.1) | ♦ | | | | | ♦ | | | | | | ♦ | ♦ | ♦ | | | |
| | Covered Activity Threat (Section 6.2.1.3) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.1.3) | 6.1 | 5.1 | 5.2 | | | 3.1, 3.3, 3.4, 4.1, 4.2, 7.1, 8.3 | 3.2, 5.1 | IPM | 3.1, 8.2 | | | | | | | | |
| American peregrine falcon | Reasons For Decline (Section 5.2.1.4.1) | | | | | | ♦ | | ♦ | | | | | | | | | |
| | Covered Activity Threat (Section 6.2.2.1) | ♦ | ♦ | | | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.1) | 7.1 | 5.1 | | | | 3.1, 4.1, 4.2, 6.1, 6.2, 8.1, 9.3 | 3.2 | IPM | 3.1, 9.2 | | | | | | | | |

| Species | Subject | Cattle Grazing | Nonnative Species | Lighting | Meso- and Urban-Related Predators | Noise, Vibration | Construction-Related and Long-Term Human Disturbance and Recreation | Altered Hydrology, Urban Runoff, Construction-Related Dust | Pesticides (Including Rodent Controls), Contaminants | Road and Utility Construction, Maintenance | Collisions, Electrocution | Off-Road Vehicles | Feral Pigs | Mining | Logging | Flood Control, Water Impoundment, Conveyance | Disease | Fire and Fire Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bald eagle | Reasons For Decline (Section 5.2.1.5.1) | | | | | | ♦ | | ♦ | | ♦ | | | | | | ♦ | |
| | Covered Activity Threat (Section 6.2.2.2) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | Addressed in Section 4.4.1.4 in relation to the California condor | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.2) | 6.1 | 5.1 | 5.2 | | | 3.1, 3.2, 3.3, 3.4, 4.1, 4.3, 4.4, 7.1, 7.2, 7.3, 7.4, 7.5, 8.3 | 4.2 | IPM | 8.2 | | | | | | | | |
| Burrowing owl | Reasons For Decline (Section 5.2.1.6.1) | | | | ♦ | | ♦ | | ♦ | | | | | | | ♦ | | |
| | Covered Activity Threat (Section 6.2.2.3) | ♦ | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.3) | 6.1 | 5.1 | 5.2 | | | 3.1, 4.1, 4.2, 4.3, 7.3 | | IPM | 7.2 | | | | | | | | |
| Golden eagle | Reasons For Decline (Section 5.2.1.7.1) | | | | | | ♦ | | ♦ | | ♦ | | | | | | ♦ | |
| | Covered Activity Threat (Section 6.2.2.4) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | Addressed in Section 4.4.1.4 in relation to the California condor | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.4) | 8.1 | 7.1 | 7.2 | | | 5.1, 6.1, 6.2, 9.1, 9.2, 10.3 | 10.2 | IPM | 10.2 | | | | | | | | |
| Least Bell's vireo | Reasons For Decline (Section 5.2.1.8.1) | ♦ | ♦ | | | ♦ | | ♦ | ♦ | | | | | ♦ | | ♦ | | |
| | Covered Activity Threat (Section 6.2.2.5) | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.5) | 5.1 | 4.1 | 4.2 | | 3.2 | 2.1, 2.3, 2.4, 3.1, 3.2, 6.1, 7.3 | 2.2 | | 2.1, 7.2 | | | | | | | | |

| Species | Subject | Cattle Grazing | Nonnative Species | Lighting | Meso- and Urban-Related Predators | Noise, Vibration | Construction-Related and Long-Term Human Disturbance and Recreation | Altered Hydrology, Urban Runoff, Construction-Related Dust | Pesticides (Including Rodent Controls), Contaminants | Road and Utility Construction, Maintenance | Collisions, Electrocution | Off-Road Vehicles | Feral Pigs | Mining | Logging | Flood Control, Water Impoundment, Conveyance | Disease | Fire and Fire Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Little willow flycatcher | Reasons For Decline (Section 5.2.1.9.1) | ♦ | ♦ | | | | ♦ | | ♦ | | | | | | | ♦ | | |
| | Covered Activity Threat (Section 6.2.2.6) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.6) | 4.1 | 3.1 | 3.2 | | | 2.1, 2.3, 2.4, 5.1, 6.3 | 2.2 | IPM | 2.1, 6.2 | | | | | | | | |
| Purple martin | Reasons For Decline (Section 5.2.1.10.1) | | ♦ | | | | | | | | | | | | | | | |
| | Covered Activity Threat (Section 6.2.2.7) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.7) | 5.1 | 4.1 | 4.2 | | | 2.1, 2.3, 2.4, 3.1, 3.2, 6.1, 7.3 | 2.2 | IPM | 7.2 | | | | | | | | |
| Southwestern willow flycatcher | Reasons For Decline (Section 5.2.1.11.1) | ♦ | ♦ | | | | ♦ | | ♦ | | | | | | | ♦ | | |
| | Covered Activity Threat (Section 6.2.2.8) | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.8) | 5.1 | 4.1 | 4.2 | | 3.2 | 2.1, 2.3, 2.4, 3.1, 3.2, 6.1, 7.3 | 2.2 | IPM | 2.1, 7.2 | | | | | | | | |
| Tricolored blackbird | Reasons For Decline (Section 5.2.1.12.1) | | | | ♦ | | ♦ | | ♦ | | | | | | | ♦ | | |
| | Covered Activity Threat (Section 6.2.2.9) | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.9) | 6.1 | 5.1 | 5.2 | 7.1 | 4.2 | 3.1, 3.3, 3.4, 4.1, 4.2, 7.1, 8.3 | 3.2 | 9.1 (IPM) | 3.1, 8.2 | | | | | | | | |
| Western yellow-billed cuckoo | Reasons For Decline (Section 5.2.1.13.1) | ♦ | | | | | | ♦ | ♦ | | | | | | | ♦ | | |
| | Covered Activity Threat (Section 6.2.2.10) | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.10) | 5.1 | 4.1 | 4.2 | | 3.2 | 2.1, 2.3, 2.4, 3.1, 3.2, 6.1, 7.3 | 2.2 | IPM | 2.1, 7.2 | | | | | | | | |

| Species | Subject | Cattle Grazing | Nonnative Species | Lighting | Meso- and Urban-Related Predators | Noise, Vibration | Construction-Related and Long-Term Human Disturbance and Recreation | Altered Hydrology, Urban Runoff, Construction-Related Dust | Pesticides (Including Rodent Controls), Contaminants | Road and Utility Construction, Maintenance | Collisions, Electrocution | Off-Road Vehicles | Feral Pigs | Mining | Logging | Flood Control, Water Impoundment, Conveyance | Disease | Fire and Fire Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| White-tailed kite | Reasons For Decline (Section 5.2.1.14.1) | | | | | | ♦ | | ♦ | | | | | | | | | |
| | Covered Activity Threat (Section 6.2.2.11) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.11) | 6.1 | 5.1 | 5.2 | | | 3.1, 3.3, 3.4, 4.1, 4.2, 7.1, 7.2, 8.3 | 3.2 | IPM | 3.1, 8.2 | | | | | | | | |
| Yellow warbler | Reasons For Decline (Section 5.2.1.15.1) | ♦ | ♦ | | | | | | | | ♦ | | | | | | | |
| | Covered Activity Threat (Section 6.2.2.12) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | Addressed in Section 4.4.1.4 in relation to the California condor | | | | | | | |
| | Goals & Objectives (Section 7.1.1.2.12) | 6.1 | 5.1 | 5.2 | | | 3.1, 3.3, 3.4, 4.1, 4.2, 7.1, 8.3 | 3.2 | IPM | 3.1, 8.2 | | | | | | | | |
| Valley elderberry longhorn beetle | Reasons For Decline (Section 5.2.1.16.1) | ♦ | ♦ | | | | ♦ | ♦ | ♦ | | | | | | | ♦ | | |
| | Covered Activity Threat (Section 6.2.3.1) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.3.1) | 4.1 | 3.1 | 3.2 | | | 2.1, 2.3, 2.4, 5.1, 6.3 | 2.2 | 7.1 (IPM) | 2.1, 6.2 | | | | | | | | |
| Ringtail | Reasons For Decline (Section 5.2.1.17.1) | | | ♦ | ♦ | | ♦ | ♦ | ♦ | | | | | | | | | |
| | Covered Activity Threat (Section 6.2.4.1) | ♦ | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | | |
| | Goals & Objectives (Section 7.1.1.4.1) | 5.1 | 4.1 | 4.2 | 6.1 | | 2.1, 2.2, 2.3, 3.1, 3.3, 3.4, 6.1, 7.3 | 3.2 | | 3.1, 7.2 | 3.1, 7.2 | | | | | | | |

| Species | Subject | Cattle Grazing | Nonnative Species | Lighting | Meso- and Urban-Related Predators | Noise, Vibration | Construction-Related and Long-Term Human Disturbance and Recreation | Altered Hydrology, Urban Runoff, Construction-Related Dust | Pesticides (Including Rodent Controls), Contaminants | Road and Utility Construction, Maintenance | Collisions, Electrocution | Off-Road Vehicles | Feral Pigs | Mining | Logging | Flood Control, Water Impoundment, Conveyance | Disease | Fire and Fire Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tehachapi pocket mouse | Reasons For Decline (Section 5.2.1.18.1) | ♦ | ♦ | ♦ | ♦ | | ♦ | | ♦ | | | ♦ | | | | | | |
| | Covered Activity Threat (Section 6.2.4.2) | ♦ | ♦ | ♦ | ♦ | | ♦ | | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.4.2) | 5.1 | 4.1 | 4.2 | 6.1 | | 2.1, 3.1, 3.2, 6.1, 7.3 | | IPM | 7.2 | | | | | | | | |
| Coast horned lizard | Reasons For Decline (Section 5.2.1.19.1) | ♦ | ♦ | | ♦ | | ♦ | | | ♦ | | ♦ | | | | | | ♦ |
| | Covered Activity Threat (Section 6.2.5.1) | ♦ | ♦ | | | | ♦ | | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.5.1) | 7.1 | 6.1 | | | | 4.1, 4.2, 5.1, 5.2, 8.1, 9.3 | | IPM | 9.2 | | | | | | | | |
| Two-striped garter snake | Reasons For Decline (Section 5.2.1.20.1) | | ♦ | | | | ♦ | ♦ | | ♦ | | | ♦ | | | ♦ | | |
| | Covered Activity Threat (Section 6.2.5.2) | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | | | | | | | | |
| | Goals & Objectives (Section 7.1.1.5.2) | 6.1 | 5.1 | 5.2 | | | 3.1, 3.3, 3.4, 4.1, 4.2, 7.1, 8.3 | 3.2 | IPM | 3.1, 8.2 | | | | | | | | |
| Fort Tejon woolly sunflower | Reasons For Decline (Section 5.2.1.21.1) | ♦ | | | | | | | | ♦ | | | | | | | | |
| | Covered Activity Threat (Section 6.3.1) | | | | | | | | | | | | | | | | | |
| | Goals & Objectives (Section 7.1.2.1) | 6.1 | 5.1 | | | | 3.2, 3.3, 4.1, 4.2, 7.1 | 3.1 | | 8.2 | | | | | | | | |
| Kusche's sandwort | Reasons For Decline (Section 5.2.1.22.1) | | | | | | ♦ | | | ♦ | | ♦ | | ♦ | | | | ♦ |
| | Covered Activity Threat (Section 6.3.2) | | | | | | | | | | | | | | | | | |
| | Goals & Objectives (Section 7.1.2.2) | 6.1 | 5.1 | | | | 3.2, 3.3, 4.1, 4.2, 7.1, 8.3 | 3.1 | | 8.2 | | | | | | | | |
| Round-leaved filaree | Reasons For Decline (Section 5.2.1.23.1) | ♦ | ♦ | | | | | | | ♦ | | ♦ | ♦ | | | ♦ | | |
| | Covered Activity Threat (Section 6.3.3) | | | | | | | | | | | | | | | | | |
| | Goals & Objectives (Section 7.1.2.3) | 6.1 | 5.1 | | | | 3.2, 3.3, 4.1, 4.2, 7.1, 8.3 | 3.1 | | 8.2 | | | | | | | | |

| Species | Subject | Cattle Grazing | Nonnative Species | Lighting | Meso- and Urban-Related Predators | Noise, Vibration | Construction-Related and Long-Term Human Disturbance and Recreation | Altered Hydrology, Urban Runoff, Construction-Related Dust | Pesticides (Including Rodent Controls), Contaminants | Road and Utility Construction, Maintenance | Collisions, Electrocution | Off-Road Vehicles | Feral Pigs | Mining | Logging | Flood Control, Water Impoundment, Conveyance | Disease | Fire and Fire Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Striped adobe lily | Reasons For Decline (Section 5.2.1.24.1) | ♦ | ♦ | | | | | | | ♦ | | | | | | | | |
| | Covered Activity Threat (Section 6.3.4) | | | | | | | | | | | | | | | | | |
| | Goals & Objectives (Section 7.1.2.4) | 5.2 | 5.1 | | | | 3.2., 3.3, 4.1, 4.2 , 4.3, 7.1, 8.3 | 3.1 | | 8.2 | | | | | | | | |
| Tehachapi buckwheat | Reasons For Decline (Section 5.2.1.25.1) (note: threats identified for related species but not Tehachapi buckwheat) | | ♦ | | | | | ♦ | | ♦ | | | | ♦ | | | | |
| | Covered Activity Threat (Section 6.3.5) | | | | | | | | | | | | | | | | | |
| | Goals & Objectives (Section 7.1.2.5) | 6.1 | 5.1 | | | | 3.2, 3.3, 4.1, 4.2, 4.3, 4.4, 7.1, 8.3 | 3.1 | | 8.2 | | | | | | | | |
| Tejon poppy | Reasons For Decline (Section 5.2.1.26.1) | ♦ | ♦ | | | | | | | | | | | | | | | |
| | Covered Activity Threat (Section 6.3.6) | | | | | | | | | | | | | | | | | |
| | Goals & Objectives (Section 7.1.2.6) | 5.1 | 4.1 | | | | 2.2, 2.3, 3.1, 3.2, 6.1, 7.3 | 2.1 | | 7.2 | | | | | | | | |

IPM = Integrated pest management

[1] The sections cited in this column refer to relevant sections in the TU MSHCP.

[2] The diamonds in the Reasons for Decline and Covered Activity Threats rows indicate that this particular threat or indirect effect from Covered Activities applies to this species.

[3] The sections cited in the table refer to the relevant section in the TU MSHCP (Tejon Ranchcorp 2011).

[4] The cell entry refers to the specific Goal & Objective number for the species in the TU MSHCP).

**Table MR5-1. Comments Addressed in Master Response 5**

| Comment Number | Commenter |
|---|---|
| O1-4 | California Native Plant Society (Suba, Greg) |
| O1-8 | California Native Plant Society (Suba, Greg) |
| O1-9 | California Native Plant Society (Suba, Greg) |
| O1-10 | California Native Plant Society (Suba, Greg) |
| O1-11 | California Native Plant Society (Suba, Greg) |
| O4-40 | Center for Biological Diversity (Keats, Adam) |
| O4-41 | Center for Biological Diversity (Keats, Adam) |
| O4-54 | Center for Biological Diversity (Keats, Adam) |
| O4-55 | Center for Biological Diversity (Keats, Adam) |
| O4-56 | Center for Biological Diversity (Keats, Adam) |
| O4-135 | Center for Biological Diversity (Keats, Adam) |
| O4-150 | Center for Biological Diversity (Keats, Adam) |
| O4-171 | Center for Biological Diversity (Keats, Adam) |
| O4-204 | Center for Biological Diversity (Keats, Adam) |
| 04-207 | Center for Biological Diversity (Keats, Adam) |
| 04-220 | Center for Biological Diversity (Keats, Adam) |
| O4-224 | Center for Biological Diversity (Keats, Adam) |
| 04-227 | Center for Biological Diversity (Keats, Adam) |
| O4-229 | Center for Biological Diversity (Keats, Adam) |
| O4-235 | Center for Biological Diversity (Keats, Adam) |
| O4-335 | Center for Biological Diversity (Keats, Adam) |
| O4-336 | Center for Biological Diversity (Keats, Adam) |
| O4-337 | Center for Biological Diversity (Keats, Adam) |
| O4-339 | Center for Biological Diversity (Keats, Adam) |
| O4-338 | Center for Biological Diversity (Keats, Adam) |
| O4-340 | Center for Biological Diversity (Keats, Adam) |
| O4-341 | Center for Biological Diversity (Keats, Adam) |
| O4-342 | Center for Biological Diversity (Keats, Adam) |
| O4-343 | Center for Biological Diversity (Keats, Adam) |
| O4-344 | Center for Biological Diversity (Keats, Adam) |
| O4-345 | Center for Biological Diversity (Keats, Adam) |
| O4-346 | Center for Biological Diversity (Keats, Adam) |
| O4-347 | Center for Biological Diversity (Keats, Adam) |
| O4-348 | Center for Biological Diversity (Keats, Adam) |
| O4-349 | Center for Biological Diversity (Keats, Adam) |
| O4-350 | Center for Biological Diversity (Keats, Adam) |

| Comment Number | Commenter |
|---|---|
| O4-351 | Center for Biological Diversity (Keats, Adam) |
| O4-354 | Center for Biological Diversity (Keats, Adam) |
| O4-355 | Center for Biological Diversity (Keats, Adam) |
| O4-357 | Center for Biological Diversity (Keats, Adam) |
| O4-358 | Center for Biological Diversity (Keats, Adam) |
| O4-359 | Center for Biological Diversity (Keats, Adam) |
| O4-362 | Center for Biological Diversity (Keats, Adam) |
| O4-363 | Center for Biological Diversity (Keats, Adam) |
| O4-364 | Center for Biological Diversity (Keats, Adam) |
| O4-365 | Center for Biological Diversity (Keats, Adam) |
| O4-366 | Center for Biological Diversity (Keats, Adam) |
| O4-367 | Center for Biological Diversity (Keats, Adam) |
| O4-368 | Center for Biological Diversity (Keats, Adam) |
| O4-369 | Center for Biological Diversity (Keats, Adam) |
| O4-370 | Center for Biological Diversity (Keats, Adam) |
| O4-371 | Center for Biological Diversity (Keats, Adam) |
| O4-372 | Center for Biological Diversity (Keats, Adam) |
| O5-22 | Defenders of Wildlife (Flick, Pamela) |
| O5-23 | Defenders of Wildlife (Flick, Pamela) |
| O6-1 | Kern County California Native Plant Society (Clark, Lucy) |
| O6-3 | Kern County California Native Plant Society (Clark, Lucy) |
| O6-8 | Kern County California Native Plant Society (Clark, Lucy) |

# 5.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and TU MSHCP specific to the habitat suitability models for the other Covered Species (i.e., excluding the California condor). Table MR5-1 provides a list of the commenters and a reference to the individual comment as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided. An overview of the approach to habitat suitability modeling and analyzing and interpreting the results is provided in Section 5.2.1, Overview.

- The habitat modeling process should be transparent and all biological information should be included and made available to the public. An independent scientific advisory committee should be created to review biological data upon which the TU MSHCP is based, including the habitat models. (Response provided in Section 5.2.2, Transparency of Habitat Modeling, Use of All Available Data, and Independent Scientific Review.)
- Habitat modeling should be done for a species' entire range because the scale of Tejon Ranch may be too small and the number of species' occurrence data points may be too few to accurately model a species' habitat. Additional data sets should be used and occurrence data should be shown on maps. (Response provided in Section 5.2.3, Spatial Scale, Available Occurrence Locations, and Additional Data Sets for Habitat Modeling.)
- Field ground-truthing and verification studies and iterative testing of the model results should have been conducted. (Response provided in Section 5.2.4, Field Ground-Truthing and Verification Studies.)
- Habitat modeling should be based on more advanced techniques such as MaxEnt (Elith et al. 2006, pp. 130–135). (Response provided in Section 5.2.5, Advanced Modeling Techniques.)
- Climate variables (e.g., temperature and precipitation), vegetation, and soils and geology data should be used for many of the Covered Species. (Response provided in Section 5.2.6, Climate Variables; Section 5.2.7, Vegetation Data; and Section 5.2.8, Soils and Geological Data.)
- Habitat may have been over- or underestimated for some species because of the inadequacies of the models. (Response provided in Section 5.2.9, Habitat Overestimation and Underestimation.)
- Plant models should have included aspect. (Response provided in Section 5.2.10, Plant Models and Aspect.)
- Species-specific model recommendations should be provided. (Response provided in Section 5.2.11, Species-Specific Recommendations.)

# 5.2 Responses to Substantive Comments

## 5.2.1 Overview

The methods for developing the habitat models for Covered Species are described in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS. This appendix lists the various sources used for developing the habitat models. The habitat models are primarily based on documented habitat relationships from both print and online sources, as well as the professional judgment of the biologists familiar with the Covered Lands. Each species was modeled with relevant habitat variables, such as vegetation cover types, elevation, and slope. A few species had additional data layers such as drainages, seeps, pools, and soils. Species occurrence data from wildlife and botanical surveys conducted in the TMV Planning Area in 2007 (Dudek 2007a, 2007b) were considered in developing the habitat models, but were not explicitly used as parameters in the models, nor were they used to formally test the accuracy of the models, because the TMV Planning Area cannot be assumed to be a statistically representative sample area for the entire Covered Lands. Because the habitat models are based on broad parameters such as vegetation communities, soils, elevation, and slope, and do not incorporate important habitat or microhabitat features for some species (e.g., talus slopes for Tehachapi slender salamander) due to a lack of comparable data for the entire Covered Lands, they are necessarily conservative and in most cases likely overestimate the amount of occupied habitat (as addressed in more detail later in this Master Response).

## 5.2.2 Transparency of Habitat Modeling, Use of All Available Data, and Independent Scientific Review

A commenter suggested that the process for developing the TU MSHCP needs to be open and transparent to ensure that all available biological information is included and made available to the public. A commenter also suggested that a scientific advisory committee should be created to review the biological data on which the TU MSHCP is based.

The methods to construct the habitat models for the Covered Species are described in detail in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS, and were made available to the public for review and comment in both the Draft EIS and Draft TU MSHCP. Based on comments from independent reviewers, Section 1.2.1, Covered Species Occurrence Data, of this appendix has been revised to include the survey methods for the Covered Species occurrence data collected during the various surveys in portions of the Covered Lands (Dudek 2007a, 2007b). The Covered Species habitat models incorporated the comprehensive biological and physical database that was available for the Covered Lands, and describe in detail sources for, and limitations of, the various data layers that were used, including Covered Species occurrence data from various surveys of portions of the Covered Lands (Dudek 2007a, 2007b); occurrence data from the California Natural Diversity Databases (CNNDB) (California Department of Fish and Game 2007); vegetation communities, including the Tejon Ranch-wide vegetation composite and project-level vegetation mapping for the TMV Planning Area; a geographic information system (GIS) canopy cover database (Tejon Ranch Company 2007); water features and drainages; a digital terrain model (Intermap Technologies 2005); soils (U.S. Department of Agriculture 1981, 1999); and imagery, including geographically referenced U.S. Geological Survey (USGS) topographic quadrangle maps and full-color aerial images. These information sources are discussed in more detail below in relation to specific comments.

A variety of available literature sources, including peer-reviewed sources, were used to determine species' ranges, distributions, and habitat relationships in California. These sources are documented in the Covered Species accounts in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and Section 5, Other Covered Species, of the TU MSHCP. This general information, in combination with the site-specific data, was reviewed by qualified biologists knowledgeable of the various Covered Species ranges, habitat requirements, behavioral patterns, and other information relevant to the habitat models. These biologists determined the appropriate data type and model input parameters uniquely suited to each of the Covered Species, and revisions were made where improvements or adjustments were determined to be necessary. The habitat models were then generated by overlaying this information and intersecting the data (e.g., combinations of certain vegetation and soils types). This is a standard, well-accepted method used in large-scale habitat conservation planning in California that has met the data standards for federally approved habitat conservation plans (HCP) (e.g., San Diego County Multiple Species Conservation Program [San Diego County 1997], Western Riverside County Multiple Species Habitat Conservation Plan [Riverside County 2007] , Orange County Southern Subregional Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan [Orange County 2006]), Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan [Coachella Valley Association of Governments 2007]).

Because of the limited occurrence data for several of the Covered Species for Tejon Ranch, the primary information for assessing potential take and proposed conservation strategies is known ranges and habitat relationships based on the available information in the scientific literature. When specific information was available, the habitat modeling was refined to capture the habitat factors that are necessary for the species (e.g., buffers around USGS blueline streams for Tehachapi slender salamander), but in most cases the habitat models are coarse-grained because they may not include unmapped microhabitat features that are important for a species, such as north-facing slopes with talus piles used by the Tehachapi slender salamander (Hansen and Wake pers. comm. 2008). Therefore, the habitat models were designed to identify habitat that could be occupied by the Covered Species, with the goal of including the vast majority of potentially occupied habitat. For that reason, many of the models conservatively include secondary habitat that may be less frequently used for life history needs (e.g., foraging, nesting) and which itself may not be adequate to support the species.

As noted above, this Supplemental Draft EIS includes all of the information related to the modeling assumptions in Appendix D, Habitat Suitability Criteria Methods, and a discussion of the survey methods for the Covered Species is included in Appendix E, Covered Species Survey Methods. Assembly and participation of an independent scientific advisory committee in the HCP planning process is not a requirement of the Federal Endangered Species Act (ESA), nor required to inform a legally adequate NEPA analysis. The public review process provides the opportunity for independent review.

## 5.2.3 Spatial Scale, Available Occurrence Locations, and Additional Data Sets for Habitat Modeling

The habitat modeling was only conducted for the Covered Lands, which some commenters suggest is too small a spatial scale and contains too few occurrence data points to assess effects or conservation. It was suggested that additional data sets should have been used in the conservation analysis, citing studies done by the Conservation Biology Institute (CBI) (2003a, 2003b), South Coast Wildlands (South Coast Wildlands) (2003), and CBI and South Coast Wildlands (2006).

The purpose of the modeling was to identify habitat areas with the potential to support the Covered Species on the Covered Lands and provide a quantitative basis for evaluating the potential effects of

the Covered Activities in the TU MSHCP. As habitat requirements for a given species can vary spatially and temporally, the focus in developing the site-specific models was to identify suitable habitat for each Covered Species on the Covered Lands by using information from comparable areas within the southern California range of the target species.

It is important to analyze the potential effects of the TU MSHCP in the context of a given species' geographic range, and the species' status within that range; however, delineating potential habitat for Covered Species beyond the boundaries of the Covered Lands is not necessary for an adequate analysis of effects of implementation of the TU MSHCP. The suitable habitat modeling for neotropical migrants (e.g., least Bell's vireo, willow flycatcher), for example, provides no insight into the winter habitat requirements for these species. Similarly, modeled habitat for ringtail on the Covered Lands (lake, riparian scrub, riparian woodland, riparian/wetland, wash, and wetland) is very different from the habitat used by the species in the desert southwest (juniper woodland, montane coniferous forest, and dry tropical habitats) (Poglayen-Neuwall and Toweill 1988, p. 4).

The habitat models are based primarily on vegetation communities and other factors (e.g., elevation, slope) that, based on the available literature, are associated with species presence and for which there were comparable data for the entire Covered Lands. Plant and wildlife surveys were conducted in 2007 for the TMV Planning Area to support an analysis of the effects of the TMV Project (Dudek 2007a, 2007b). However, it is not assumed the results of these surveys are representative of the entire Covered Lands, and reliance on such information in the model would underestimate species occurrence. Furthermore, standard reconnaissance and single-year protocol-focused surveys (e.g., for least Bell's vireo and southwestern willow flycatcher) are not as useful for habitat modeling because of a general lack of sufficient spatial and temporal sampling data to determine occupancy rates, especially when detection probabilities are low (MacKenzie et al. 2002, p. 2253).

Specifically, the plant and wildlife species surveys in the TMV Planning Area were conducted in 2007 for the TMV Project and according to established field methods for the different taxonomic groups and species (Dudek 2007a, 2007b). For special-status plants, the field survey methods conformed to California Native Plant Society (CNPS) botanical survey guidelines (2001) and California Department of Fish and Game (CDFG) Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (2000). The plant survey coverage rates varied depending on potential presence of special-status species (determined through the pre-survey review of existing literature and databases), topography, and suitability of habitat being surveyed. Meandering transects were walked, and transect paths were recorded on field maps. Surveys for federally and state-listed or fully protected wildlife species were conducted in accordance with available official protocol methods or other accepted methods when official protocol survey methods were not available. These plant and wildlife protocols are designed to provide an adequate depiction of the biological resources for a defined project or study area (in this case, the TMV Planning Area) but cannot be used to make statistical inferences about areas that have not been systematically surveyed (in this case, the remaining Covered Lands). For these reasons, the TMV Project survey data do not meet the criterion of an unbiased sample of the remaining Covered Lands that would be required to statistically test the accuracy of habitat models. The occurrence data for the TMV Planning Area are not depicted on the maps because comparable surveys have not been conducted on the remainder of Covered Lands. A lack of occurrence data on Covered Lands outside the TMV Planning Area could erroneously portray these areas as unoccupied by Covered Species. However, the TU MSHCP has been revised to summarize all occurrence data from all past surveys, incidental sightings, and California Natural Diversity Database (CNDDB) reports (see Section 5, Other Covered Species, of the TU MSHCP). The additional information has also been added to the environmental setting information provided in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS.

As noted in the comments, additional data have been compiled and applied to Tejon Ranch. However, the additional data sets identified in the comment (Conservation Biology Institute 2003a, 2003b; South Coast Wildlands 2003; Conservation Biology Institute and South Coast Wildlands 2006) are not specifically relevant to the habitat modeling conducted for the TU MSHCP conservation analysis and do not include information that would have improved or supplemented the species-specific habitat models. The primary purposes of these studies were to characterize the relative conservation values on the entire Tejon Ranch to help direct reserve design and to identify important landscape-level habitat linkages.

CBI (2003a) did conduct habitat suitability models for two of the plant Covered Species—striped adobe lily and Tejon poppy—using vegetation, elevation, and soils data in a manner similar to the models described in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS. CBI (2003a) also modeled habitat for Tehachapi pocket mouse using the same elevation parameter but somewhat different vegetation community parameters. It should be noted that the FRAP vegetation coverage updated by CBI (2003a) (using satellite imagery and aerial photography) is a regional vegetation coverage and does not have the detail and mapping precision of the vegetation data used for the TU MSHCP modeling, which was based on ground surveys. Therefore, with the more detailed vegetation available for the habitat models, the updated FRAP vegetation is not an appropriate or useful data set for the models.

CBI (2003b) primarily focused on the conservation value of Tejon Ranch, with the goal of raising the awareness of the public and decision-makers about the significance of the ranch and the need to conduct comprehensive, landscape-level resource planning on the ranch. As noted on page 1 of that report, CBI (2003b) does not advocate a particular open space or reserve design. It describes the high biological diversity and high species endemism of the ranch and the importance of the ranch for evolutionary processes such as divergence and speciation. As such, this report does not provide specific information that would supplement or improve the habitat models.

The focus of the SC Wildlands (2003) study was to identify a landscape habitat linkage across Tejon Ranch using landscape permeability analyses[1] for nine focal species: mountain lion, American badger, San Joaquin kit fox, mule deer, western gray squirrel, Tipton kangaroo rat, Tehachapi pocket mouse, California spotted owl, and blunt-nosed leopard lizard. Of these, the mountain lion, badger, deer, squirrel, pocket mouse, and spotted owl occur on the Covered Lands, but only the Tehachapi pocket mouse is a Covered Species under the TU MSHCP. As noted above, the models for Tehachapi pocket mouse used the same elevation parameter but somewhat different vegetation parameters. Because the focus of the SC Wildlands (2003) study was on identifying landscape linkages using a specific analytic technique (the permeability analysis), it is not relevant to the habitat models for the Covered Species. The reader is referred to the Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity for a discussion of the landscape habitat linkage and relevant aspects of SC Wildlands (2003).

CBI and SC Wildlands (2006) identify conservation objectives and propose a reserve design for Tejon Ranch using the information developed by CBI (2003a) and SCW (2003). The habitat modeling conducted for the Covered Species in the TU MSHCP was not intended to inform reserve design; the purpose of the habitat models was to analyze the potential effects of the Covered Activities, and conservation of suitable habitat for each of the Covered Species. Therefore, the information contained in the CBI and SC Wildlands (2006) study is not directly applicable to the habitat models.

[1] As defined by SCW (2003), "Landscape permeability analysis is a GIS technique that models the relative cost for species to move between core areas based on how each species is affected by habitat characteristics such as slope, elevation, vegetation, and road density" (p. 8).

The habitat suitability model will be used by the Service to assess potential direct and indirect effects on the Covered Species from the Covered Activities, and to identify potentially suitable habitat for each Covered Species in order to inform their evaluation of the proposed conservation strategy.

## 5.2.4 Field Ground-Truthing and Verification Studies

Commenters suggested that field ground-truthing and verification studies and iterative testing of the model results should have been conducted.

While ground-truthing and verification of habitat modeling results can increase confidence in a model and in conclusions drawn from a model, in the absence of formal truthing and verification efforts, the Service must proceed using the best available science. The habitat modeling approach described in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS, and the species-specific surveys of the TMV Planning Area represent the best available data to inform our analysis in accordance with Federal standards for information pursuant to the ESA. Species specific survey data are available for the TMV Planning Area and were used to check the accuracy of the model, as described above.

## 5.2.5 Advanced Modeling Techniques

A commenter suggested that advancements in suitable habitat modeling can provide a better understanding of a species distribution across the landscape. One commenter referred to work by Elith et al. (2006, pp. 129–151), which lists a number of techniques that the commenter suggests would perform a better analysis than the one performed for the TU MSHCP, which used a general GIS analysis with overlay techniques. The commenter indicates that one such technique—the MaxEnt technique—could provide a much more detailed understanding of a species' suitable habitat and notes that MaxEnt supports modeling of rare species and outperforms other modeling techniques. Species with limited occurrence data and those with little to no absence data would benefit the most.

The Service is required to use the best available scientific and commercial data when making decisions. The methods used to model habitat in the Covered Lands are well established and commonly used. The process of developing an alternative, validated, predictive habitat model for even a single species is very rigorous. Elith et al. (2006, p. 147) indicate that partial occurrence sampling within a species' range may not capture important environmental conditions that affect the species distribution, especially for species with large ranges. Therefore, development, testing, and validation of an alternative model should be done across the entire range of the species. Most of the Covered Species have a geographic range that extends well beyond the Covered Lands, and development of a habitat model outside the Covered Lands is outside the scope of our analysis.

The Service has determined that certain limitations of the Elith et al. models prevent their application to the Covered Species. These reasons are based on Elith et al.'s (2006, p. 147-148) descriptions of the models' limitations and include:

1. No one model performed well across species and regions;
2. All 16 habitat modeling approaches reviewed by Elith et al. (2006) were tested over large spatial scales (e.g., Australian wet tropics; birds of Ontario, Canada; northeast New South Wales, Australia; plants of New Zealand), and it is unclear if these modeling approaches would be appropriate at the scale of the Covered Lands or for all Covered Species;

3. The results provided by the Elith et al. (2006) models do not appear to be an improvement over the current models, because they "…do not accurately predict probability of presence…Rather, they provide relative indices of suitability (p.148)";
4. The data required to remedy the immediately preceding limitation are not available;
5. The data used for the models "required considerable grooming and manipulation" to create consistency both within and between regions (Elith et al. 2006, p. 131); and
6. The models are still in a refinement phase and require additional investigations, testing, analysis, and evaluation.

The Service believes the habitat models considered in this EIS and in the TU MSHCP represent the best scientific and commercial data currently available, in accordance with Federal standards for information pursuant to ESA.

## 5.2.6 Climate Variables

Commenters suggested that climate variables such as temperature and precipitation be incorporated into the habitat models for several of the Covered Species, including Tehachapi slender salamander, western spadefoot, yellow-blotched salamander, American peregrine falcon, western yellow-billed cuckoo, Fort Tejon woolly sunflower, striped adobe lily, and Tejon poppy.

The direct relationship of climatic variables such as temperature and precipitation to occurrence of Covered Species is difficult to determine, especially when considered at coarse scales. Fine-scale data showing variation in rainfall and temperature in the Covered Lands are not available. While there are several examples of temperature and precipitation requirements as they relate to life history stages, such as Tehachapi slender salamanders remaining underground during subfreezing temperatures or western spadefoot waiting until water temperature is at least 10°C before egg deposition, many Covered Species are more reliant on certain microclimates created by habitat structure than general climatic variables. For example, adequate cover and moisture retention by detritus and soil under that cover is likely more important to amphibian species distribution than rainfall or daytime air temperature. Therefore, adding general climatic data to the models is unlikely to further inform the models and improve the understanding of the Covered Species distribution on Covered Lands.

The habitat models are based primarily on vegetation communities and other abiotic factors (e.g., elevation, slope) with which each Covered Species is associated. The Service believes that vegetation communities, by proxy, can reflect the climatic requirements of a given Covered Species. Also, elevation, aspect, and slope tend to be correlated with temperature and precipitation on a local scale. Because these abiotic variables were incorporated into the models for each Covered Species based on known habitat requirements, the Service believes the climatic requirements for each species are accounted for in the models.

## 5.2.7 Vegetation Data

Commenters suggested that vegetation data be included for all species. One commenter stated that vegetation cover detailed enough to identify vegetation structure for each specific polygon should be included in the models for bird species, such as least Bell's vireo, willow flycatcher, and western yellow-billed cuckoo. This comment indicated that the Normalized Difference Vegetation Index (NDVI) has been used for many studies of bird suitable habitat modeling, has provided useful insight, and should be included in the habitat models. Comments suggested that the NDVI should also be used in the habitat models for the ringtail and Tehachapi pocket mouse. Comments also recommended that drainages, seeps, and ponds be included in the models of bird species

specializing in riparian and wetland habitats (including tricolored blackbird) and that elderberry plants should be included in the model for valley elderberry longhorn beetle.

Vegetation communities were included in the models for all of the Covered Species. As described in Appendix D, Habitat Suitability Criteria Methods, to this Supplemental Draft EIS, vegetation communities used in the models included two data sources: the ranch-wide vegetation composite map and the vegetation map created for the TMV Planning Area in 2007. The NDVI referenced in the comments is an index of relative vegetative productivity derived from data collected satellite-based sensors that capture visible and infrared light reflected from the Earth's surface. The NDVI can indicate the presence of live green vegetation and, as noted in the comment, has proven useful in adding information in large-scale habitat modeling. The NDVI is also used to track and predict trends in land use, drought, and weather patterns (e.g., El Niño). The spatial resolution of available data from which an NDVI can be calculated currently varies between 30 meters and 1 kilometer depending on the data source.

Mapping in the TMV Planning Area included a minimum mapping unit of 1 acre for special-status vegetation communities (i.e., vegetation communities listed as a high priority for mapping by the CNDDB, including riparian areas) and 2.2 acres for other vegetation communities. Vegetation mapping for the Covered Lands outside of the TMV Planning Area (i.e., the Tejon Ranch-Wide Vegetation Composite described in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS) was also ground-based and reflects several surveys conducted between 1980 and 1994, and in 2000 to fill in gaps in the vegetation map. The resolution of vegetation mapping data collected for the Covered Lands falls within the range of data resolution available for an NDVI. In addition, the data for the Covered Lands contains greater species-specific detail than satellite-based data. Therefore, the Service does not anticipate that an NDVI would add information to the vegetation database that is not already reflected in the models for the Covered Species.

Remote sensing data, including high-resolution aerial photography, is usually inadequate to identify species or delineate vegetation structure within a riparian corridor. Likewise, the vegetation mapping data for the Covered Lands do not include a sufficient level of detail on a polygon-by-polygon basis to identify specific vegetation structure suitable for the Covered Species, including the least Bell's vireo, willow flycatcher, western yellow-billed cuckoo, Tehachapi pocket mouse, and ringtail. This is noted in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and in the species accounts in Section 5.2.2, Birds, of the TU MSHCP. Although the TMV Planning Area vegetation mapping for riparian areas was conducted with a minimum mapping unit of 1 acre, this vegetation information was combined with the ranch-wide vegetation composite map, which generally was mapped at broader mapping scales using more generalized community types. Refer to Section 3.1.3.1, Mapping Methods, in Volume I of this Supplemental Draft EIS for a discussion of how and why the Tejon ranchwide vegetation layer was crosswalked with vegetation mapping of the TMV Planning Area.

With regard to the comment that drainages, seeps, and ponds should be included in the habitat models for the riparian and wetland species, the riparian zones that provide habitat for riparian and wetland birds have been delineated. Seeps, ponds, and drainages do not always support woody riparian vegetation suitable for riparian-obligate bird species; however, any riparian vegetation associated with drainages, seeps, and ponds was mapped as such and included in relevant species models. Wetland nesting habitat for the tricolored blackbird is discussed in detail below under Section 5.2.11, Species-Specific Recommendations.

The habitat model for valley elderberry longhorn beetle relies on the vegetation communities typically associated with the presence of elderberry, including oak woodland and savanna, California buckeye woodland, and intermixed conifer within 300 feet of USGS blueline streams (150 feet on either side) at elevations between 1,900 feet and 3,000 feet above mean sea level (amsl) on the Covered Lands. Elderberry was only specifically mapped in the TMV Planning Area, and mapping

data for elderberry vegetation is lacking for the rest of the Covered Lands. For this reason, it is likely that some modeled habitat may not contain the microhabitat (i.e., elderberry shrubs and trees) required by this species, resulting in an overestimate of the amount of suitable habitat for the valley elderberry longhorn on the Covered Lands. The following points should be noted:

- Focused surveys for the species in 2005 and 2007 in the TMV Planning Area were negative (Dudek 2009).
- There are no known locations of valley elderberry longhorn beetle on the Covered Lands (California Department of Fish and Game 2007).
- The majority of the Covered Lands are above the elevation range of the species.
- The Covered Lands are located at the extreme southern edge of the species' geographical range.

## 5.2.8 Soils and Geological Data

Comments suggested that soils and geology data be incorporated into the habitat models for all species, and specifically for Tehachapi slender salamander (talus slopes), western spadefoot (sandy and gravelly soils), yellow-blotched salamander (loamy soils), ringtail (rock piles and talus slopes), coast horned lizard (loose, sandy soils), two-striped gartersnake (streams with rocky or sandy beds), burrowing owl (no soil type identified in comment), and Kusche's sandwort (quartz monzonite, alluvial terraces, and debris flows).

The construction of the habitat models, including whether or not soils should be considered, relied on the best available print and online literature for each of the species. Where the literature clearly identified soil or geology as a factor in species distribution, and those data were available for the Covered Lands, they were included as parameters in the habitat models. This occurred for Kusche's sandwort (granitic soils), round-leaved filaree and striped adobe lily (clay soils), and Tehachapi buckwheat (Anaverde Gravelly Loam, Xerorthents-Rock Outcrop Complex, Very Steep or Lebec Rocky Loam). Soils and geology factors were not included in the habitat models for Tehachapi slender salamander, ringtail, western spadefoot, yellow-blotched salamander, coast horned lizard, two-striped gartersnake, or burrowing owl, for the reasons discussed below.

For Tehachapi slender salamander and ringtail, data regarding the presence or absence of talus substrates and rock piles are not available for the Covered Lands. The geology data available for the Covered Lands are USGS data, which are too coarse to identify specific locations for talus slope microhabitats that could be used by Tehachapi slender salamander and talus slopes and rock piles potentially used by ringtail. Similarly, the geotechnical study completed by ENGEO (2008) for the TMV Planning Area was too coarse to identify specific locations for rock pile and talus slope microhabitats that could be used by these species.

Western spadefoot are seasonally associated with multiple soil types. The species may breed in vernal pools, other ephemeral pools underlain by clay soils, and riparian zones that support breeding pools. Sandy or gravelly soils may be a necessary condition for aestivation and hibernation habitat. However, the Service is not aware of any studies describing the extent to which each soil type is a predictor of species occurrence. Adding soils and geologic features to the model for this species is unlikely to improve the understanding of the western spadefoot's potential distribution on Covered Lands.

Similar to issues identified for western spadefoot, an association between yellow-blotched salamander and loamy soils, soils which likely occur much more broadly than the distribution of salamanders, suggest that it would not be an important predictor of occupied habitat for this species.

Coast horned lizards may commonly occur in sandy washes and areas with loose soils, but also may occur on other substrates, including gravelly loams and clays where harvester ant prey is available, as long as patchy areas of loose soils are available (note that there is very little clay soil on the Covered Lands; see Figure 3.1-1in Volume I of this Supplemental Draft EIS). Similarly, two-striped garter snakes use a variety of soils associated with riparian and aquatic sites in addition to streams with rocky and sandy substrates (Zeiner et al. 1990). Using the soil type recommended by the commenter to refine the habitat models for these species likely would remove areas that are suitable for the species.

For the burrowing owl, the availability of small mammal burrows is an important factor in whether habitat will support the species. Although small mammal burrows are usually associated with the availability of friable soils, this definition of suitable soils is too broad to be a useful predictor in the habitat model for the owl because presence of friable soils may or may not indicate the presence of small mammal burrows that are suitable for the species. The actual location of small mammal burrow distribution would be a better predictor; however, burrowing mammal location data (e.g., California ground squirrel colonies) are not available for the Covered Lands.

## 5.2.9 Habitat Overestimation and Underestimation

Commenters and specific habitat model recommendations indicate that the habitat models may have overestimated habitat for some species and underestimated habitat for others, and in some cases overestimated some habitat types supporting one phase of a species' life history and underestimated habitat supporting another phase of the species' life history (e.g., least Bell's vireo and willow flycatcher).

The comments and habitat model recommendations for least Bell's vireo and willow flycatcher suggest that suitable habitat may have been overestimated for breeding activity and underestimated for migration. The comments suggested using more detailed vegetation structure for riparian polygons that could support breeding, which would reduce habitat estimates, but including migration habitat (e.g., upland communities), which would increase habitat estimates.

Species for which the comments and habitat model recommendations imply that suitable habitat may have been overestimated, and for which model refinements likely would reduce habitat estimates, include the following: Tehachapi slender salamander, burrowing owl, tricolored blackbird, western yellow-billed cuckoo, valley elderberry longhorn beetle, ringtail, coast horned lizard, two-striped garter snake, Kusche's sandwort, round-leaved filaree, striped adobe lily, Tehachapi buckwheat, and Tejon poppy. Species for which the comments and habitat model recommendations imply that suitable habitat may have been underestimated, and for which model refinements likely would increase habitat estimates, include the following: western spadefoot, bald eagle, and Tehachapi pocket mouse. Species-specific comments are addressed below in Section 5.2.1.1, Species-Specific Recommendations.

A challenge in developing habitat models is to include the habitat parameters that are considered to be most important for species' presence and use, without inappropriately overestimating or underestimating suitable habitat for the species. At the same time, a habitat model should focus on the habitat features necessary to meet the relevant life history requirements of a species in a particular area and therefore may not include all areas that could ever be used by a species during its lifetime. This requires incorporating the available information for a species, and in some cases extrapolating from the available information to identify other habitat features that might be important to a species. If studies of a species are limited, restricting the habitat model to only the habitat features of sites where the species was documented could easily overlook important habitat. In this case, a conservative habitat model is an appropriate starting point until additional information can be used to refine the model. Better understood species present a different

challenge. Even though a species may occur in a habitat area occasionally, the area may not be important or critical to the species and other available areas may fulfill the species' needs; that is, the occurrence or habitat type may be a statistical outlier and should not be included in the model. Habitat models that attempt to account for 100% of a species' occurrences or use areas may overestimate the amount and distribution of important habitats.

For the purpose of the EIS and TU MSHCP habitat models, the Service determined that overestimates of suitable habitat are preferable to underestimates for the following reasons:

- Important habitat information may not be available for a species that allows for refinements to the models. For this reason, the habitat model must rely on broader habitat parameters that are considered necessary conditions for the species. Because these broader habitat parameters may be necessary but not sufficient conditions for species presence, in the models may overestimate suitable habitat.
- Habitat models for species that may have low detection probabilities should be conservative in order to avoid excluding potentially occupied habitat. Standard reconnaissance and even protocol focused surveys, if conducted in a single year, may not be useful for habitat modeling, because they lack sufficient spatial and temporal sampling to estimate occupancy rates, especially when detection probabilities are low. If sufficient data are not available to estimate occupancy rates, models that tend to overestimate occupied habitat are preferable to models that may underestimate occupied habitat. It is more likely that habitat areas that meet important life history requirements of a species will be included in a model that overestimates suitable habitat versus a model that underestimates suitable habitat.

Some comments expressed concern that some models may underestimate habitat and that the input parameters should be expanded. For example, willow flycatchers may occasionally use nonriparian vegetation communities during migration (Sogge et al. 1997, p. 13); therefore, other communities should have been included in the model for the species. This comment was also applied to least Bell's vireo.

The habitat models are intended to model the habitat considered to be most important to a species. As described above, including habitats that may occasionally be used in the model could greatly overestimate the amount of important habitat on Covered Lands used by species. In the case of the willow flycatcher and least Bell's vireo, which may use nonriparian habitat during migration, expanding the model to include all these habitats would reduce the value of the model for analyzing the alternatives considered in the EIS. Where supported by the literature and based on input from the biology working group that reviewed the model parameters, suitable habitat was refined into different habitat use types as appropriate, including:

- Suitable (meets all life history needs)
- Primary breeding
- Wintering
- Breeding and foraging
- Secondary breeding and foraging (less frequently used and alone may not be adequate to support the species)
- Foraging
- Secondary foraging

Although there is some level of uncertainty inherent in habitat modeling, the approach used in the EIS and TU MSHCP is an acceptable and reasonable method in accordance with Federal standards for information pursuant to the ESA.

## 5.2.10 Plant Models and Aspect

A comment indicated that aspect is critically important to plants, but is not considered in the habitat models for these species.

As noted above, the habitat models are primarily based on documented habitat relationships from both print and online sources, as well as the professional judgment of the biologists familiar with the Covered Lands. While aspect information was available for Fort Tejon woolly sunflower, Kusche's sandwort, and striped adobe lily, aspect is an unmapped microhabitat feature. As described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and the species-specific discussions of habitat characteristics and use in Section 5.3, Plants, of the TU MSHCP, the majority of Kusche's sandwort plants were found on north-facing slopes, the majority of Fort Tejon woolly sunflower plants were found on north- and south-facing slopes, and the majority of striped adobe lily plants were found on north-facing slopes. If the models were run with aspect, some portion of potential habitat would be excluded, as a minority of the plants is found on other slope aspects. In addition, the digital elevation model for Tejon Ranch is not refined enough to pick up microhabitat features of aspect. Because the habitat suitability models were run without aspect, the models are considered to be more conservative than if they had been run with aspect. As discussed above, erring on the side of the models overestimating suitable habitat is preferable to underestimating suitable habitat and potentially missing important populations of a species.

## 5.2.11 Species-Specific Recommendations

The comments included several species-specific recommendations regarding the habitat models for the Covered Species.

- **Tehachapi slender salamander.** A comment recommended that talus slopes be added to the habitat model and that the elevation variable for Tehachapi slender salamander should be lowered to 1,500 feet amsl. As noted above, information about talus slopes on the Covered Lands is not available. The Covered Lands do not include areas below 1,900 feet amsl. Therefore, lowering the model input parameter to 1,500 feet amsl would not affect the habitat model results for this species. Of note, since publication of the Draft EIS, the habitat model for Tehachapi slender salamander has been revised to include scrub and chaparral communities, which may include yucca (*Yucca* spp.) due to recent occurrence data for the species in dead yuccas on north-facing slopes (Sweet 2011).
- **Western spadefoot.** A comment recommended that the suitable habitat model for western spadefoot be expanded beyond 5 feet of seeps and springs to include a buffer around seeps and springs that is at least several hundred meters. Although it is known that western spadefoot uses upland habitats adjacent to breeding areas, an accurate quantitative habitat analysis for western spadefoot on the Covered Lands that does not grossly overestimate suitable habitat is difficult. As described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and Section 6.2.1.2.1, Discussion of Potential Take of Western Spadefoot, of the TU MSHCP, focused surveys for the western spadefoot in the TMV Planning Area were negative in 2007, and this species is considered to have low potential to occur on the Covered Lands below 3,000 feet amsl, and a very low potential to occur on Covered Lands above 3,000 feet amsl. If the western spadefoot does occur in the Covered Lands, it is expected to occur in a very sporadic and patchy distribution in modeled habitat. The estimate that 30 acres of modeled habitat would be affected by the Covered Activities (Table 4.1-3 in Volume I of this Supplemental Draft EIS), therefore, is likely an overestimate of the potential for effects on this species, and would accommodate any terrestrial habitat that may be affected at an occupied site; in other words, it is highly unlikely that more than 30 acres of actual occupied habitat, including adjacent uplands, would be affected. Furthermore, setbacks from modeled habitat for western spadefoot would be

incorporated into the design features of development under the TU MSHCP. These setbacks would provide an upland buffer between development and modeled habitat that could be used for terrestrial aspects of the species' life history.

- **American peregrine falcon.** A comment indicated that climate variables provide more information for American peregrine falcon. Potential foraging habitat for American peregrine falcon that could be used during migration was analyzed in the EIS (Section 3.1, Biological Resources, and Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS,). The literature review presented in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, indicates that information on climate requirements for this very wide-ranging species is generally lacking. Temperature and precipitation can be correlated with suitable habitat factors (e.g., elevation ranges) within the known range of this species, but there are few or no data correlating climate variables with American peregrine falcon presence. However, the only regions that this species does not occupy as a breeder are the Amazon Basin, the Sahara Desert, most of the steppes of central and eastern Asia, and Antarctica. Based on the species' range, it is reasonable to infer that it has a broad tolerance to different climate regimes. Therefore, we would not expect climate variables to affect a habitat model in the relatively temperate region in which the Covered Lands occur.
- **Bald eagle.** A comment recommended that "other areas of suitable vegetation cover around water sources" be included in the model for bald eagle. Modeled habitat for the bald eagle includes oak woodlands and savannah and riparian/wetland within 1 mile of Castac Lake (Section 3.1, Biological Resources, and Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS,). Bald eagles are not expected to occur on the Covered Lands other than in association with Castac Lake, because Castac Lake is the only perennial water body supporting sufficient populations of fish to support bald eagles.
- **Burrowing owl.** A comment recommended that burrowing mammal location data be included in the model for burrowing owl. As stated in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, the availability of numerous small mammal burrows is a major factor in determining whether an area with apparently suitable habitat will support burrowing owls (Coulombe 1971, p. 162), and burrowing owls rarely use areas unoccupied by colonies of burrowing mammals (Zarn 1974, p. 14). However, burrowing mammal location data (e.g., California ground squirrel colonies) are not available for the Covered Lands. As such, the model relies on more general habitat suitability parameters for the burrowing owl.
- **Least Bell's vireo and little willow flycatcher.** Comments recommended that migration habitat be included in the models for least Bell's vireo and little willow flycatcher, and that more detailed vegetation structure data be used for riparian areas. As described above in Section 5.2.7, Vegetation Data, the suitable habitat models were designed to estimate the distribution and amount of habitat most likely to be used by Covered Species. As described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, both the least Bell's vireo and willow flycatcher may use nonriparian habitats during spring and fall migration (U.S. Fish and Wildlife Service 1998, pp. 10–12; Sogge et al. 1997, p. 13), but both primarily use riparian habitat during migration, which was included in the suitable habitat model for both species. Including upland communities such as sage scrub and woodland in the model would greatly overestimate habitats likely to be used by these species during migration. More detailed data on vegetation structure were not available for the entire Covered Lands.
- **Tricolored blackbird**. A comment recommended that proximity to wetlands, riparian areas, and seeps be added to the model for tricolored blackbird. This species has two fairly distinct life history requirements: foraging habitat and breeding habitat. Modeled foraging habitat for tricolored blackbird includes agriculture, grasslands, riparian scrub, riparian woodland, and wash (wash/desert and wash/riparian/seeps vegetation types). Modeled breeding habitat for

tricolored blackbird includes wetlands and riparian/wetlands (Section 3.1, Biological Resources, and Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS). Because the tricolored blackbird prefers to breed in freshwater marshes with dense growths of emergent vegetation dominated by cattails (*Typha* spp.) or bulrushes (*Schoenoplectus* spp.), modeled breeding habitat includes the general vegetation categories of wetlands and riparian/wetlands. While the tricolored blackbird colonies require a nearby water source, this species typically forages in grassland, woodland, or agricultural croplands. During the breeding season, tricolored blackbirds generally forage within about 4 miles of nesting colonies (Orians 1961). However, this species also often changes its nesting location from year to year, so its foraging patterns and use areas may also change. Suitable water sources are scattered throughout the Covered Lands, and there also may be unmapped water sources outside of the Covered Lands that could support breeding and be a source of tricolored blackbirds foraging on site. If proximity to water was included in the model (e.g., within a 4-mile radius), the results would not have been substantially different than those included in the EIS and TU MSHCP (Figure 3.1-20 in Volume I of this Supplemental Draft EIS), but likely would have resulted in reduced habitat estimates. Therefore, the model for foraging habitat was based only on vegetation type and elevation range.

- **Western yellow-billed cuckoo**. A comment suggested that better data for vegetation structure be included in the model for this species. Detailed vegetation structure in riparian zones is not available for the entire Covered Lands. In addition, as described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, in the TMV Planning Area, where more detailed vegetation mapping was conducted, there is a lack of riparian habitat with appropriate patch size and configuration to support breeding territories of this species.
- **Coast horned lizard and two-striped garter snake.** Comments suggested that soils information be used to refine the habitat models for the coast horned lizard by including loose, friable soils, and, for the two-striped garter snake, by including streams with rocky and sandy soils associated with willows. Coast horned lizards may most commonly occur in sandy washes and areas with loose soils, but they also may occur on other substrates, including gravelly loams and clays where they find harvester ant prey, as long as patchy areas of loose soils are available (note that there is very little clay soil on the Covered Lands; see Figure 3.1-1 in Volume I of this Supplemental Draft EIS). Similarly, two-striped garter snakes use a variety of soils associated with riparian and aquatic sites in addition to streams with rocky and sandy substrates (Zeiner et al. 1990). Using soils to refine the habitat models for these species likely would remove areas that are suitable for the species, at least for some phases of their life cycles.
- **Ringtail.** A comment suggested that habitat for ringtail is poorly modeled because ringtail territories are known to be within 0.5 mile of riparian zones. The comment stated that the "modeling does not track with other riparian dependent species." The habitat model for ringtail (Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS) is consistent with the scientific literature regarding location of territories. The ringtail model includes areas within 1 kilometer (0.6 mile) of riparian and wetland communities, seeps and springs, and perennial streams. Another comment suggested that talus slopes and rock piles should have been added to refine the model. This information is not available for the Covered Lands.
- **Tehachapi pocket mouse**. A comment recommended that the modeled elevation for Tehachapi pocket mouse be lowered to 3,000 feet amsl. As described in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS, published data reports the Tehachapi pocket mouse generally occurring between 3,500 and 6,000 feet amsl. This approach to modeling habitat for the Tehachapi pocket mouse is consistent with other studies of this species (SC Wildlands 2003)
- **Valley elderberry longhorn beetle**. A comment recommended that additional habitat information for the valley elderberry longhorn beetle based on the Talley et al. (2007) report be

incorporated into the model for this species. Also, a comment suggested that all vegetation communities supporting elderberry be added to the model. Talley et al. (2007) characterize the valley elderberry longhorn beetle on the basis of the host plant (elderberry [*Sambucus* spp.]), as well as an array of physical and biological characteristics. Their goal is to develop habitat definitions that reliably indicate occupancy and local persistence and abundance, in order to assess whether unoccupied sites are suitable habitat, and to prioritize land acquisitions and identify management actions. Talley et al. (2007) found that higher densities of elderberry plants and larger mature elderberry plants (i.e., larger size, number of stems, range of branch sizes) were associated with increased valley elderberry longhorn beetle populations. In addition, proximity to habitat edge and topography was also important. However, it is not possible to revise the habitat model using the parameters identified by Talley et al. (2007), because this information is not available for the Covered Lands. Talley et al. (2007) found a statistically significant relationship between topography and beetle occupancy, but this relationship occurs at too fine a scale (the elevation range in their study area was only 2 to 18 meters) to be applicable in the habitat model developed for the Covered Lands.

With regard to including all vegetation communities with elderberry in the habitat model, this level of detail is not available for all of the Covered Lands. Therefore, vegetation communities known to often include elderberry as a constituent were used in the model.

- **Kusche's sandwort and round-leaved filaree.** Comments recommend that disturbed areas that may provide openings in the landscape for Kusche's sandwort and round-leaved filaree be added to the habitat models for these species. The vegetation mapping effort in the TMV Planning Area defined disturbed habitat as areas that experience regular or high levels of human disturbance (e.g., dirt ranch roads, areas associated with ranch facilities and structures) and combined these areas with developed areas. The locations of other or naturally occurring disturbed areas are not available for the Covered Lands. The Service assumes that such openings in the natural vegetation communities, where they occur, would have been smaller than the minimum mapping unit, and would have been mapped as part of the associated habitat parameters for these species. Any openings within otherwise suitable modeled habitat would already be included in the habitat models for these species; however, disturbed areas or openings within natural vegetation communities that could support the Kusche's sandwort and round-leaved filaree were not defined as a separate mapping category.

  A comment indicated that round-leaved filaree habitat may have been overestimated because the model is not restricted to clay soils. This assertion is incorrect. As noted in the habitat model parameters listed in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS, clay soils are included in the model.

- **Striped adobe lily**. A comment suggested that the model for the striped adobe lily be based on heavy adobe clay soils in blue oak woodland. The habitat model for this species has broader parameters that include clay soils and savannah and grassland communities (Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS). These soils and communities were selected based on the habitat associations for this species described in the literature (California Department of Fish and Game 2007) (63 *Federal Register* 177). Most of the verified reports have been from annual grasslands with a mixture of nonnative grasses and native forbs. At least two documented occurrences of striped adobe lily are from oak woodlands, and one record is from a native perennial grassland. While the species appears to be restricted to heavy, usually red, clay soils, the physiological and/or ecological basis for this restriction is not known (Stebbins 1989). The habitat model therefore was conservative in the habitat parameters for this species.

- **Tehachapi buckwheat.** A comment recommended that the habitat model for Tehachapi buckwheat include information on pollinator distribution. Tehachapi buckwheat is a new

species that was discovered in 2006 and very little is known about the natural history of this species. Observations of Tehachapi buckwheat during 2007 surveys suggest the species may be pollinated by a variety of beetles and ants (Dudek 2007a), but no information exists on specific pollinators of this species. In addition, information on the distribution of pollinators on the Covered Lands is not available.

- **Tejon poppy.** A comment suggested that the habitat model for this Tejon poppy be based on adobe clay or sandy soils in sparsely vegetated grassland and valley chenopod scrub. Most of the verified reports of Tejon poppy in the CNDDB (California Department of Fish and Game 2007) from Elk Hills are from valley saltbush scrub, with common saltbush and nonnative annual grasses such as red brome, wild oats, and rat-tail fescue. Because there are no known occurrences of Tejon poppy in the Covered Lands based on a literature review (California Department of Fish and Game 2007), and because the species was not observed during surveys conducted in the TMV Planning Area, there are no documented habitat associations for this species on the Covered Lands. Therefore, the habitat model used relatively broad parameters, including grasslands and all scrub communities in all soils, for the habitat model to ensure that potential habitat areas were not excluded.

**Table MR6-1. Comments Addressed in Master Response 6**

| Comment Number | Commenter |
|---|---|
| G2-25 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-26 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| O1-3 | California Native Plant Society (Suba, Greg) |
| O1-4 | California Native Plant Society (Suba, Greg) |
| O1-5 | California Native Plant Society (Suba, Greg) |
| O1-6 | California Native Plant Society (Suba, Greg) |
| O1-7 | California Native Plant Society (Suba, Greg) |
| O1-10 | California Native Plant Society (Suba, Greg) |
| O1-11 | California Native Plant Society (Suba, Greg) |
| O4-54 | Center for Biological Diversity (Keats, Adam) |
| O4-55 | Center for Biological Diversity (Keats, Adam) |
| O4-166 | Center for Biological Diversity (Keats, Adam) |
| O4-167 | Center for Biological Diversity (Keats, Adam) |
| O4-177 | Center for Biological Diversity (Keats, Adam) |
| O4-218 | Center for Biological Diversity (Keats, Adam) |
| O4-220 | Center for Biological Diversity (Keats, Adam) |
| O4-221 | Center for Biological Diversity (Keats, Adam) |
| O4-224 | Center for Biological Diversity (Keats, Adam) |
| O4-227 | Center for Biological Diversity (Keats, Adam) |
| O4-229 | Center for Biological Diversity (Keats, Adam) |
| O4-231 | Center for Biological Diversity (Keats, Adam) |
| O4-232 | Center for Biological Diversity (Keats, Adam) |
| O4-234 | Center for Biological Diversity (Keats, Adam) |
| O4-235 | Center for Biological Diversity (Keats, Adam) |
| O5-24 | Defenders of Wildlife (Flick, Pamela) |

# 6.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP specific to biological surveys conducted on the Covered Lands. Table MR6-1 provides a list of the commenters and a reference to the individual comment, as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The design, location, and implementation of the plant and wildlife surveys were not published or disclosed to the public. (Response provide in Section 6.2.1, Design, Location, and Implementation of Surveys.)
- Adequate surveys (over 1 year) should have been done to identify the habitat needs of the Covered Species and to evaluate project effects, mitigation, and the adequacy of the proposed conservation areas. (Response provided in Section 6.2.2, Identification of Habitat Needs and Adequacy of Surveys.)
- Additional data sets should have been used. (Response provided in Section 6.2.3, Sufficiency of Data Sets.)
- Preconstruction surveys (e.g., for songbirds) should not be limited to the development area and should include all of the Covered Lands. (Response provided in Section 6.2.4, Scope of Preconstruction Surveys.)
- Species-specific comments regarding surveys for burrowing owl, two-striped garter snake, Fort Tejon woolly sunflower, round-leaved filaree, striped adobe lily, Tehachapi buckwheat, and Tejon poppy. (Responses to the species-specific comments are provided in Sections 6.2.5, Burrowing Owl; 6.2.6, Two-Striped Garter Snake; and 6.2.7, Fort Tejon Woolly Sunflower, Round-Leaved Filaree, Striped Adobe Lily, Tehachapi Buckwheat, and Tejon Poppy.)

# 6.2 Responses to Substantive Comments

## 6.2.1 Design, Location, and Implementation of Surveys

Commenters indicated that the TU MSHCP and EIS rely on presence/absence surveys for special-status plants and wildlife for which design, location, and implementation details have not been published, making their validity uncertain. Commenters stated that the extent of the surveys on the Covered Lands and in modeled habitat is unclear. Commenters indicated that these factors raise questions about the validity and accuracy of the survey results, habitat suitability models, and Draft EIS findings. A commenter stated that these flaws illustrate that the public is unable to interpret results and emphasized the need for transparency in the environmental review process.

The TU MSHCP and EIS do not rely exclusively on the field surveys that were conducted in the TMV Planning Area to analyze effects and mitigation. Rather, for analyses related to the other Covered Species in the much broader landscape of the Covered Lands, the TU MSHCP and EIS rely on the habitat suitability models, the sufficiency of which is discussed in Master Response 5, Habitat Suitability Model. The survey information collected in the TMV Planning Area provides background information about species' use and occupation of the Covered Lands and supports the modeling efforts.

For large-scale plans such as the TU MSHCP, it is common for a permit applicant to retain a qualified biological consultant to conduct surveys on a representative portion of the lands that would be

covered by an incidental take permit (ITP) to obtain species occurrence information. Typically, surveys are completed within the area that would be affected by the proposed action, as well as a representative area that would be conserved. Tejon Ranchcorp (TRC) completed surveys for the proposed Covered Species within the 28,253-acre TMV Planning Area, which includes the TMV Specific Plan Development Envelope and a portion of the TMV Planning Area Open Space, which accounts for a portion of the TU MSHCP Mitigation Lands. Focused surveys for Covered Species were not conducted outside of the TMV Planning Area. Because the survey efforts cover only a portion (approximately 20%) of the Covered Lands, as noted above, the TU MSHCP and EIS analyses rely heavily on habitat suitability models, rather than occurrence data, to obtain the most accurate portrayal of biological resources and Covered Species habitats on the entirety of the Covered Lands. See Master Response 5, Habitat Suitability Model.

The methods to construct the habitat models for the Covered Species are described in detail in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS, and were made available to the public for review and comment as part of the Draft TU MSHCP. In response to comments, Section 1.2.1 of this appendix has been modified to include the survey methods for the Covered Species occurrence data collected during the various surveys in portions of the Covered Lands (Dudek 2007a and 2007b). Thus, all of the information related to the modeling assumptions as well as the survey methods is included in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS. The survey methods are also generally described in 3.1, Biological Resources, of this Supplemental Draft EIS, and in Section 5.1, Methods Used to Analyze Potential Biological Impact to Other Covered Species, of the TU MSHCP.

With respect to specific questions regarding the methods used in the plant surveys, the field survey methods conformed to California Native Plant Society (CNPS) botanical survey guidelines (2001) and *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (California Department of Fish and Game 2000). Prior to surveys of the TMV Planning Area, surveys were conducted at reference locations for federally and state-listed species. Surveys were also conducted for several of the CNPS List 1B species potentially occurring in the vicinity of the TMV Planning Area. All plant species encountered during the field surveys were identified to subspecies or variety, if applicable, to determine sensitivity status. See Appendix E, Covered Species Survey Methods, of this Supplemental Draft EIS for a description of the survey methodology.

## 6.2.2 Identification of Habitat Needs and Adequacy of Surveys

A commenter stated that surveys are needed to identify habitat needs for the Covered Species to ensure that the best available information is available for development of the TU MSHCP. Another commenter stated that the field surveys conducted for individual species in a single year are inadequate to evaluate the project effects, mitigation, and adequacy of proposed conservation areas and suggested that additional surveys should be conducted as a basis for modeling, development of preserve areas, and evaluating take.

As noted above, for large-scale plans, such as the TU MSHCP, it is common for a permit applicant to retain a qualified biological consultant to conduct surveys on a representative portion of the lands covered by the ITP to obtain species occurrence information. Accordingly, surveys were completed for the 28,253-acre TMV Planning Area, as discussed above. Requiring surveys on the additional 113,633 acres of the Covered Lands, of which all would be conserved as permanently protected open space, would impose an unreasonable burden beyond that of comparable conservation planning efforts.

Moreover, such studies could still result in inappropriately eliminating potential habitat that could be occupied or used in the future by a species. For example, if verification studies were conducted for Tejon poppy or striped adobe lily, for which surveys in 2007 were negative (Dudek 2007a), and the species were absent during the verification surveys, a conclusion could be reached that this habitat was unsuitable. Instead, it is reasonable to assume that the Tejon poppy and striped adobe lily could occur on the Covered Lands in the future; thus, including them as Covered Species is important. The habitat modeling was intended, by design, to be conservative and inclusive of all potential habitat for the Covered Species to inform the effects analysis in this Supplemental Draft EIS and the take and conservation analysis in the TU MSHCP. Please refer to Master Response 5, Habitat Suitability Model, for a discussion of the modeling approach.

Additionally, with respect to the analysis of species' potential presence and effects described in the TU MSHCP, it should be noted that the biological survey information incorporated into the conservation analysis represent a culmination of data collected over more than 1 year. As stated in Section 5.1, Methods Used to Analyze Potential Biological Impacts to Other Covered Species, of the TU MSHCP:

> *Species occurrence data were reviewed and used to develop various sections of this Plan that require an understanding of the general distribution and relative abundance of species covered in the Plan. Two primary sources of spatial (GIS-based) data were used: (1) species occurrence data collected during various surveys in portions of the Covered Lands (Dudek 2007a; Dudek 2007b) and (2) California Natural Diversity Database (CNDDB) occurrence data (CDFG 2007c).*

This methodology is similarly described in Section 3.1.3.1, Mapping Methods, in Volume 1 of this Supplemental Draft EIS.

Data incorporated by Dudek (2007a) for rare plants included floristic surveys in 2003 and 2004 by Vollmar Consulting in approximately 4,500 acres of the TMV Planning Area. Jones & Stokes (2006) conducted floristic surveys in 2005 and 2006 that included the previously surveyed areas and additional portions of the TMV Planning Area. Data collected prior to 2007 were used to prepare a target list of special-status plant species that could potentially occur in the TMV Planning Area for comprehensive surveys conducted on the Covered Lands in 2007. The data collected from these earlier surveys were also mapped on field maps used during the 2007 surveys. Data incorporated for wildlife by Dudek (2007b) also used information developed prior to 2007 from previous evaluations of the TMV Planning Area for special-status amphibians, reptiles, and birds (Impact Sciences 2004) and small mammal trapping (Compliance Biology 2003). Please refer to Appendix E, Covered Species Survey Methods, of this Supplemental Draft EIS for a more detailed description of the survey methods.

## 6.2.3 Sufficiency of Data Sets

A commenter suggested additional data sets should have been used and specifically cited studies done by the Conservation Biology Institute (CBI) (2003a, 2003b), South Coast Wildlands (SC Wildlands) (2003), and CBI and SC Wildlands (2006).

The reports identified in the comment do not provide specific information that would improve the conservation analysis conducted for the TU MSHCP. The primary purposes of the studies cited by commenter were to characterize the relative conservation values on the entire Tejon Ranch to help direct reserve design and to identify important landscape-level habitat linkages. The data sets used by CBI (2003a) were publicly available information that were either the same data used for the TU MSHCP (e.g., the Soil Survey Geographic [SSURGO] database, digital terrain models) or similar data, such as the U.S. Geological Survey (USGS) 30-meter digital elevation model compared to the Intermap Technologies (2005) digital elevation model used for the TU MSHCP. For vegetation communities, CBI (2003a) used coarser data than used in the TU MSHCP, such as Fire and Resource

Assessment Program (FRAP) vegetation data, and updated these land coverages using satellite imagery and aerial photography. The TU MSHCP vegetation data are more detailed than the FRAP data and are based on the Tejon-wide vegetation composite map (1980 through 1994 and updated in 2007) and on-the-ground vegetation mapping for the TMV Planning Area in 2007 (Section 1.2.1 in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS). CBI (2003a) also used Tiger road density data from the U.S. Census Bureau, but this database is not particularly relevant to the TU MSHCP because this study was conducted at the scale of the entire 270,000-acre Tejon Ranch, whereas the Covered Lands cover a much smaller spatial scale (141,886 acres) that has very little existing road development (other than unpaved ranch roads).

Identification of the open space in the Covered Lands was based on scientific analysis of conservation values on Tejon Ranch using ranch-specific information and the expertise of biologists with direct ground-based knowledge of the biological resources on the ranch. The planning effort incorporated the general principles of conservation biology, such as conserving large blocks of habitat, minimizing fragmentation of sensitive lands, and ensuring connectivity. The planning effort evolved from a single species (the California condor) habitat conservation plan (HCP) to a multispecies conservation plan for other federally listed species and other species that may be considered for listing in the future.

Addressing each of the reports in turn, CBI (2003a) did conduct habitat suitability models for two of the plant Covered Species—striped adobe lily and Tejon poppy—using vegetation, elevation, and soils data in a manner similar to the models described in Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS. CBI (2003a) also modeled habitat for Tehachapi pocket mouse using the same elevation parameter but somewhat different vegetation community parameters. For these models, CBI used regional-scale FRAP vegetation coverage updated with satellite imagery and aerial photography. Nonetheless, FRAP is still a regional vegetation coverage and does not have the detail and mapping precision of the vegetation data used for the TU MSHCP modeling , which was based on ground surveys.

The CBI modeling results were generally similar to those considered in the Draft EIS and described in Section 5, Other Covered Species, of the TU MSHCP. The modeled habitat for Tehachapi pocket mouse (Figure 3.1-26 of this Supplemental Draft EIS) shows a more restricted distribution on Covered Lands compared to Figure 4d in the CBI (2003a) report, but in both cases, the entire modeled habitat on Covered Lands is located in the Antelope-Fremont Valley watershed where relatively few effects would occur. The modeled habitat distributions for striped adobe lily are similar for the Covered Lands, with the modeled habitat in both the TU MSHCP (Figure 3.1-32) and CBI report (Figure 4a) primarily occurring in the northern portion of the Covered Lands. The TU MSHCP habitat model, however, shows more modeled habitat (mostly smaller, scattered patches) in the southern portion of Covered Lands. The modeled habitat distributions for Tejon poppy are also similar for the Covered Lands, with the modeled habitat in both the TU MSHCP (Figure 3.1-34) and CBI report (Figure 4b) primarily occurring in the northern portion of the Covered Lands. Because the modeled habitat distributions are similar, and because the CBI models were based on more general regional vegetation parameters, the CBI report does not provide site-specific information that would supplement or improve the conservation analysis. Please see Master Response 5, Habitat Suitability Model, for more detail on the data used for habitat modeling.

CBI (2003b) primarily focused on the conservation value of Tejon Ranch, with the goal of raising the awareness of the public and decision-makers about the significance of the ranch and the need to conduct comprehensive, landscape-level resource planning. As noted on page 1 of that report, CBI does not advocate a particular open space design. It describes the high biological diversity and high species endemism of the ranch and the importance of the ranch for evolutionary processes such as divergence and speciation. As such, the report does not provide specific information that would

supplement or improve the effects analysis in this Supplemental Draft EIS or the conservation analysis in the TU MSHCP.

The focus of the SC Wildlands (2003) study was to identify a landscape habitat linkage across Tejon Ranch using landscape permeability analyses[1] for nine focal species: mountain lion, American badger, San Joaquin kit fox, mule deer, western gray squirrel, Tipton kangaroo rat, Tehachapi pocket mouse, California spotted owl, and blunt-nosed leopard lizard. Of these, the mountain lion, badger, deer, squirrel, pocket mouse, and spotted owl occur on the Covered Lands, but only the Tehachapi pocket mouse is a Covered Species under the TU MSHCP. As noted above, the models for Tehachapi pocket mouse used the same elevation parameter but somewhat different vegetation parameters. Because the focus of the SC Wildlands (2003) study was on identifying landscape linkages using a specific analytic technique (the permeability analysis), it is not relevant to the habitat models for the Covered Species. The reader is directed to Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity, for a discussion of the landscape habitat linkage.

CBI and SC Wildlands (2006) identify conservation objectives and propose a reserve design for Tejon Ranch using the information developed by CBI (2003a) and SC Wildlands (2003), as discussed above.

The habitat suitability modeling used in the TU MSHCP provides more up-to-date and thorough information related to the Covered Lands and other Covered Species than these cited references. Therefore, the TU MSHCP modeling data are the best scientific information available.

## 6.2.4 Scope of Preconstruction Surveys

A commenter stated that baseline surveys should have been conducted for the Covered Species and that surveys do not constitute mitigation. The commenter also indicated that surveys should not be limited to construction areas and should be used to evaluate the status of the Covered Species, such as the songbirds (i.e., least Bell's vireo, willow flycatcher, yellow warbler, and western yellow-billed cuckoo).

Baseline surveys that would occur in the open space areas under the TU MSHCP are not intended to be mitigation in and of themselves. They are an essential element in ensuring a meaningful adaptive management program, and the TU MSHCP has been revised to clarify this approach. The open space resource baseline surveys and effectiveness monitoring described in Section 7.3.2, Effectiveness Monitoring, of the TU MSHCP provide the link between the biological goals and objectives and the proposed adaptive management strategy. Effectiveness monitoring would be used to assess the biological conditions in the open space system and the effectiveness of the avoidance and minimization measures prescribed in the TU MSHCP, and would provide the information needed to identify and implement adaptive management measures, as appropriate.

Preconstruction surveys are required as mitigation, however, for construction and ground-disturbing activities, such as utility installation in open space areas. In addition to habitat conservation, which is the primary conservation strategy under the TU MSHCP, preconstruction surveys are intended to minimize and mitigate, to the maximum extent practicable, the effects of incidental take.

As described in Section 7.1, Biological Goals and Objectives for Other Covered Species, of the TU MSHCP, preconstruction surveys would be conducted for all of the Covered Species except valley

[1] As defined by SC Wildlands (2003, p. 8), "Landscape permeability analysis is a GIS technique that models the relative cost for species to move between core areas based on how each species is affected by habitat characteristics such as slope, elevation, vegetation, and road density."

elderberry longhorn beetle.[2] If individuals are detected within or adjacent to development areas, species-specific avoidance and minimization measures would be implemented. For example, any detected salamander, reptile, or mammal Covered Species in disturbance zones would be collected, trapped, or relocated to suitable habitat outside the construction area, and exclusion fencing would be erected to prevent animals from entering the Disturbance Area. Western spadefoot breeding sites would be protected by a 300-foot setback. Preconstruction surveys during the breeding season would be conducted for nesting raptor Covered Species (except bald eagle, which is only a winter visitor), and appropriate setbacks would be established from active nests (Master Response 3, Raptors, for details of avoidance and minimization measures). Preconstruction surveys during the breeding season would also be conducted for breeding birds and, with the exception of purple martin and yellow warbler, active nesting areas would be protected with a 500-foot setback or noise-attenuating measures until young have fledged. If purple martins or yellow warblers are observed breeding in a construction area, construction activities would be avoided during the breeding season. Preconstruction surveys would also be completed for ringtail and coast horned lizard, and a live trapping program for Tehachapi pocket mouse may be completed depending on the existence of essential habitat elements and/or known occurrences.

For plant Covered Species, surveys would include the construction zone and areas within 150 feet of the Disturbance Areas. Detected populations of plant Covered Species would be marked with a protective barrier and construction monitoring would be conducted as deemed appropriate by a Service-approved biologist. In addition, if striped adobe lily or Tehachapi buckwheat is detected, construction activities within 325 feet of populations would be avoided to limit permanent effects on pollinators of the adobe lily and indirect effects on the buckwheat; the Service-approved biologist may reduce the 325-foot setback depending on site conditions.

## 6.2.5 Burrowing Owl

A commenter stated that preconstruction surveys for burrowing owl should be conducted prior to land-disturbing activities (e.g., grading, tilling, and disking), including activities associated with fire safety, in open space areas within the Covered Lands.

Under the TU MSHCP, preconstruction surveys for burrowing owl would be conducted prior to construction activities associated with commercial and residential development (Objective 4.1 in Section 7.1.1.2.3, Burrowing Owl, of the TU MSHCP). To avoid effects on burrowing owl resulting from fuel management activities, Goal 4 of the TU MSHCP has been modified, as follows, so that Objectives 4.1 through 4.3 would be implemented for fuel modification activities associated with the fire prevention plan (FPP) around development areas:

*Goal 4:* *Impacts to breeding burrowing owls will be avoided and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities, and fuel modification activities related to implementing any ground-disturbing fuel modification activities under the FPP.*

In addition, the use restrictions and best management practices (BMP) that protect the conservation values of the ranch would apply, pursuant to the Ranchwide Agreement. Such limitations are currently reflected in the Interim Ranchwide Management Plan (RWMP), which includes preconstruction surveys for all sensitive resources prior to ground disturbing activities in open space (Tejon Ranch Company 2009). Subsequent RMWPs and conservation easements must

[2] Preconstruction surveys would not be completed for valley elderberry longhorn beetle because the Covered Lands are located south of the documented range of this species and no modeled habitat for this species would be permanently lost. Based on the negative survey results in the TMV Planning Area, the probability of this species occurring on the Covered Lands and being affected by Covered Activities is low.

similarly protect conservation values and, pursuant to the ITP, subsequent RWMPs would be subject to the Service's review and approval.

## 6.2.6 Two-Striped Garter Snake

A commenter stated that two-striped garter snakes were found in certain areas associated with the proposed TMV Project, but that the document is not clear if the whole project site was surveyed for the species.

As described in Section 3.1, Biological Resources, in Volume I1of this Supplemental Draft EIS, surveys for the two-striped garter snake were conducted as part of directed searches for aquatic reptiles and amphibians in all suitable habitat in the entire TMV Planning Area, including riparian scrub, riparian woodland, riparian wetland, wetland areas, and washes. Two-striped garter snake was observed in the southwestern and central portions of the TMV Planning Area east of Rising Canyon, in Dry Field Canyon, and in Bear Trap Canyon. The species has also been observed in oak savannah and chaparral habitats near water sources (Dudek 2007b, Tejon Ranch Company 2007).

The effects analysis for this species in this Supplemental Draft EIS primarily relies on the habitat suitability model and not on observed occurrences. Two-striped garter snake is expected to occur throughout modeled habitat within Covered Lands with distributions similar to those found within the TMV Planning Area. Habitat was modeled for all of the Covered Lands (Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS). It is unlikely, however, that all modeled habitat would be saturated because some modeled habitat may not contain the microhabitat used by this species, including rocky or sandy beds with willows or dense vegetation. Therefore, not all modeled habitat is expected to be occupied by this species. As discussed in Master Response 5, Habitat Suitability Model, the habitat modeling approach for completing the effects analysis was designed with the goal of including the vast majority of potentially occupied habitat.

## 6.2.7 Fort Tejon Woolly Sunflower, Round-Leaved Filaree, Striped Adobe Lily, Tehachapi Buckwheat, and Tejon Poppy

A commenter indicated that the comprehensiveness of the surveys for Fort Tejon woolly sunflower, round-leaved filaree, striped adobe lily, Tehachapi buckwheat, and Tejon poppy is not discussed. The commenter also correctly noted that no striped adobe lily or Tejon poppy plants were observed during botanical surveys. The commenter stated that bulbiferous plants like *Fritillaria* (the genus for striped adobe lily) are challenging to survey for because aboveground plants are not always present if growing conditions are not appropriate (e.g., too little rain).

Appendix D, Habitat Suitability Criteria Methods, and Appendix E, Covered Species Survey Methods, to this Supplemental Draft EIS describe the survey methods and modeling assumptions considered in this EIS and in the TU MSHCP. Focused surveys were conducted for plant Covered Species in 2007 in the entire TMV Planning Area (Dudek 2007a); focused surveys for these and other special-status plants were not conducted in the remainder of the Covered Lands. As noted above, previous surveys conducted by Vollmar Consulting (2004) and Jones & Stokes (2006) were incorporated into the database for special-status plants that were used for the effects analysis in this Supplemental Draft EIS. As noted in Section 2.6, Sampling Methods, of Appendix E, Covered Species Survey Methods, to this Supplemental Draft EIS, field survey methods conformed to CNPS botanical survey guidelines (California Native Plan Society 2001) and *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (California Department of Fish and Game 2000). In particular, prior to field surveys in the TMV Planning Area, reference populations were surveyed for all potentially occurring federally or state-listed species, including

striped adobe lily, and many of the CNPS List 1B species that could occur on the Covered Lands and that were at peak phenology. Striped adobe lily was observed at a reference location just prior to the TMV Planning Area surveys, so environmental conditions in 2007 were appropriate for the above-ground growth of this species. The Tejon poppy was not observed at reference locations surveyed by Dudek, but was observed at another reference site by Jones & Stokes prior to the TMV Planning Area surveys (B. Schafer pers. comm. 2007). The first of two survey passes was conducted from mid-April through May, which covers the flowering period for the striped adobe lily and Tejon poppy. On average, coverage rates varied from 50 to 75 acres per botanist per day. Coverage rates varied depending on presence of special-status species, topography, and suitability of habitat being surveyed. Meandering transects were walked, and transect paths were recorded on field maps.

Master Response 7

# Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity

**Table MR7-1. Comments Addressed in Master Response 7**

| Comment | Commenter |
|---|---|
| G2-27 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-28 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-29 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| I502-15 | Forster, Peggy |
| I502-16 | Forster, Peggy |
| I1463-6 | Stafford, Lynn |
| O4-50 | Center for Biological Diversity (Keats, Adam) |
| O4-51 | Center for Biological Diversity (Keats, Adam) |
| O4-51A | Center for Biological Diversity (Keats, Adam) |

## 7.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP regarding edge effects, fuel modification, and wildlife habitat connectivity. These different types of potential effects are somewhat interrelated because they can affect the function of wildlife habitat connections along boundaries between open space areas and developed areas. Table MR7-1 provides a list of the commenters and a reference to the individual comments, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The Draft EIS and Draft TU MSHCP do not address edge effects resulting from residential and commercial development. Open space is spread out and would be subject to edge effects and other indirect effects. (Response provided in Section 7.2.1, Analysis of Edge Effects.)
- Effects of fire management need to be analyzed, and a fire management plan is needed to protect Covered Species and their associated habitats. (Response provided in Section 7.2.2, Fire Management.)
- Development on portions of the Covered Lands would reduce landscape habitat connectivity for terrestrial wildlife between the Coast Range, Transverse Range, and southern Sierra Nevada, as well as north-south connectivity. The Draft EIS does not adequately discuss wildlife crossings of Interstate 5 (I-5) west of the TMV Planning Area. Development would adversely affect California condor movements between the Coast Range and Sierra Nevada. (Response provided in Section 7.2.3, Effects on Landscape Wildlife Habitat Connectivity and Movement.)
- Movement in and around Castac Lake would be constrained by development. Avoidance and mitigation measures for this effect are not discussed in the Draft EIS. (Response provided in Section 7.2.4, Condor Habitat Connectivity.)

# 7.2 Responses to Substantive Comments

## 7.2.1 Analysis of Edge Effects

A commenter asserted that well-studied edge effects on species resulting from residential and commercial development are not addressed in the Draft TU MSHCP or Draft EIS. Another commenter indicated that the Draft TU MSHCP and Draft EIS did not address the quality of the proposed open space, and that the TMV Project is spread out and would result in edge effects or indirect effects within the proposed open space areas, including habitat degradation from cats and other pets, invasive weeds, exposure of wildlife to toxins, and human disturbance. The commenter stated that labeling the majority of the 120-acre parcels as wildlands is misleading. Also related to edge and other indirect effects, a commenter stated that wildland fire protection and related fuel reduction measures would alter and degrade habitats. Because wildland fire management has broader implications than just edge effects (i.e., it applies to the entire Covered Lands landscape), it is discussed as a separate topic below.

Potential edge effects on the Covered Species are identified and discussed in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, as well as Section 4, California Condor, Section 5, Other Covered Species, Section 6, Potential Biological Impacts/Take Assessment, and Section 7, Conservation Plan for Other Covered Species, of the TU MSHCP. This response focuses primarily on potential edge effects on other Covered Species, as potential effects on California condors are discussed in detail in Master Responses 1A through 1I. A discussion of general threats to Covered Species, as well as effects associated with the Covered Activities, are also discussed in Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.

Section 5, Other Covered Species, in the TU MSHCP describe reasons for decline for each of the Covered Species, as well as known or suspected threats to the species, including many threats that relate to some type of edge effect, or an adverse effect occurring at the interface between development and habitat. As examples, cats and dogs from residential areas are potential predators of burrowing owls; traffic and development-related noise is a potential threat to nesting least Bell's vireos and potentially other nesting birds because it may interfere with communication, impair ability to hear predators, and increase stress levels; pesticides are a threat to tricolored blackbird, potentially causing reproductive failure; and Argentine ants are a threat to coast horned lizard and other native species, possibly including Tehachapi buckwheat, due to displacement of native invertebrates that are important prey, pollinators, or seed dispersers. Lighting affects many wildlife species for a variety of reasons, including disruption of daily (circadian) rhythms (e.g., disruption of awake and sleep periods), disruptions of habitat use patterns (e.g., orientation or disorientation related to a light source), stress, and increased vulnerability to nocturnal predators.

Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Sections 5 and 6 of the TU MSHCP include a discussion of general effects on each of the different wildlife Covered Species taxonomic groups (i.e., amphibians, birds, invertebrates, mammals, and reptiles) from the Covered Activities, and analyzes specific effects on each species. These effects may reflect general threats identified for the species rangewide that also could result from the Covered Activities, or may reflect potential threats to Covered Species based on the scientific literature for other species (e.g., effects of noise and lighting on birds). The potential effects from development, including those potentially occurring at the interface of development and habitat, are discussed in this Supplemental Draft EIS and the TU MSHCP. As examples, amphibians are vulnerable to water quality effects, such as toxins, other pollutants, and dust (because their skin is semipermeable) that can flow or descend from development into riparian, wetlands, and aquatic habitats; birds are vulnerable to invasive exotic plant species that can be introduced by landscaping at the edge of development; birds that use riparian, wetland, and aquatic habitats are vulnerable to water quality effects similar to

amphibians; and reptiles and small mammals are vulnerable to urban-related predators such as cats and dogs, and mesopredators that are tolerant of development, such as raccoons, skunks, and opossums. Potential effects identified Sections 5 and 6 of the Draft TU MSHCP, including potential edge effects, were considered in developing the Covered Species goals and objectives described in Section 7.1, Biological Goals and Objectives for Other Covered Species. Master Response 4, Covered Species Threats and Potential Effects from Covered Activities, also provides a matrix summary (Table MR4-2) of the threats, goals, and objectives for each of the Covered Species.

The primary conservation mechanism for the Covered Species under the TU MSHCP is preservation of a large open space system encompassing at least 91% of the Covered Lands, which is anticipated to provide the Covered Species with adequate suitable habitat away from habitat edges. In addition, as described in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS and Section 7.2.1, Measures to Avoid and Minimize Impacts, of the TU MSHCP, the TU MSHCP includes a variety of general design measures to reduce edge effects for the Covered Species along the development-habitat interface, including:

- Setbacks in the design of commercial and residential development located at the boundary of open space areas that would avoid and minimize the introduction of invasive plant and animal species and urban runoff.
- Best management practices (BMPs) for water quality protection.
- Downcast lighting for commercial and residential development located at the boundary of open space areas.

Additional species-specific avoidance and minimization measures would also be implemented, including:

- Restrictions on development and public uses at various distances from golden eagle nest sites, based on a viewshed analysis prepared during approval of grading plans.
- Setbacks for preferred bald eagle roost sites near Castac Lake.
- Setbacks between commercial and residential development and striped adobe lily and Tehachapi buckwheat populations to maintain potential pollinators.
- Setbacks from breeding and nesting sites during construction or other Covered Activities, as appropriate, for American peregrine falcon, burrowing owl, least Bell's vireo, southwestern willow flycatcher, tricolored blackbird, western yellow-billed cuckoo, white-tailed kite, and ringtail.
- European starling management for purple martin based on the abundance of starlings within 500 feet of suitable habitat for the martin.
- Weekly construction monitoring of Tehachapi buckwheat occurrences within 325 feet of development activities.

The TU MSHCP would also include other measures intended to reduce edge effects, as well as general effects associated with increased human presence and public activities adjacent to and within open space. These include:

- Provision of education material to Homeowners Associations regarding acceptable recreational activities, pets, and wildlife.
- Prohibitions on feeding wildlife.
- Signage near recreational use areas regarding prohibited activities within open space areas.

- Preparation of framework and project-specific Integrated Pest Management Plans (IPMP) that address potential sources of edge effects, such as fertilizers, pesticides, and non-native plant and animal species, including bullfrogs and Argentine ants.

Additionally, it is important to note that this Supplemental Draft EIS and Revised Draft TU MSHCP analyze a larger area for the Commercial and Residential Development Activities than would actually be disturbed; thus, buffer areas would naturally be incorporated into the plan. The development envelope considered in the analysis of the Proposed TU MSHCP Alternative is 8,817 acres (including 7,860 acres of disturbance in the TMV Specific Plan Area, 506 acres in Oso Canyon, 170 acres West of Freeway, 265 acres in the Lebec/Existing Headquarters Area, and 16 acres for the Tejon Castac Water District (TCWD) facilities on the California Department of Water Resources (DWR) parcel). However, this development envelope substantially overstates the effects of the Proposed TU MSHCP Alternative since actual ground disturbance would be limited to 5,533 acres (although the exact location is unknown). Thus, approximately 3,284 acres within the development envelope would not actually be developed and would provide additional buffering to open space areas.

With respect to the comment about the TU MSHCP's treatment of the 120-acre parcels as wildlands, there are no 120-acre parcels described in the Draft TU MSHCP or Draft EIS. Additionally, neither document characterizes any lands within the Covered Lands as "wildlands." Some portion of the TMV Specific Plan Area may be developed as larger custom lots over which a portion may be subject to the deed restrictions required in the TU MSHCP and Implementing Agreement. The quality of this open space would be protected by the species-specific measures discussed above.

## 7.2.2 Fire Management

A commenter stated that a fire management plan needs to be developed “not only to protect human life and habitation, but also Covered Species life and habitation.” The commenter stated that habitat clearance for fires can significantly degrade habitat and affect species; therefore, a thorough analysis of a fire plan and its effects on each species is required. The commenter also stated that due to the fragmentation and large edge-to-area ratio of the TMV Project, the 1,772 acres of fuel modification planned in open space is problematic.

As described in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume 1 of this Supplemental Draft EIS, continued grazing would be the primary fuel management activity under the Proposed TU MSHCP Alternative. Fuel management activities in open space would also include maintenance of existing roads and irrigation and/or vegetation clearing around existing structures (within 120 feet), as well as coordination with state or local agencies for mowing or other fire protection measures along fire-prone areas (e.g., highways). A fuel management plan is required to be submitted for review and approval by the Service in accordance with the terms of the Implementing Agreement. Further, Tejon Ranch Conservancy management, including fuel management, of designated open space areas would be required to comply with the TU MSHCP, and any fuel management plan developed by the Conservancy would be subject to Service review and approval through the Ranchwide Management Plan (RWMP) approval process. Of note, a fire protection plan covering up to approximately 1,770 acres in the TMV Planning Area Open Space was approved by Kern County on October 5, 2009, as part of the TMV Project approvals and is included in Appendix F to the TU MSHCP.

The short-term, nonpermanent effects from fuel modification in open space are expected to be minimal for several reasons. First, grazing is the primary method of fuel management planned in Covered Lands, and grazing activities would be consistent with past practices. Second, any fuel management plans proposed by the Tejon Ranch Conservancy would incorporate TU MSHCP species-specific avoidance and minimization measures and would be subject to Service review and

approval. Finally, any fuel modification areas extending into open space within the TMV Planning Area would be a maximum of 200 feet and would be limited to the thinning and nonirrigated treatments noted above.

As described in the fire protection plan approved by Kern County (Dudek 2008), fuel modification within TMV Planning Area Open Space would occur within 200 feet maximum of existing structures, and only additional mowing and thinning would be permitted. Thinned areas would not be markedly different in appearance from the adjacent natural areas not subject to thinning. Within the thinned areas, there would be requirements for moving and removal of flammable shrubs and dead and dying trees, as well as for limbing up oak trees for proper horizontal and vertical spacing; however, existing oak trees would not be removed, and additional oak trees may be planted, maintaining existing habitat values in these areas. No irrigation of fuel modification areas would occur within open space, thereby avoiding the potential for introduction of invasive species, such as Argentine ants, into open space. Additionally, no roadside irrigation is anticipated as long as the adjacent grasses are mowed so that they do not exceed 4 inches in height. Thus, only occasional mowing and thinning would be needed for fuel modification in open space, the oak canopy would remain or be expanded, understory grass cover would remain but would be mowed once per year (possibly more often in some areas), and the limited scrub habitat would have flammable species removed, with the remaining scrub thinned. Where wetlands occur in the fuel modification thinning and restricted planting zones, limited thinning, if any, would be anticipated because wetland areas usually exhibit higher soil moisture and subsequently higher fuel moisture. Plants that retain higher fuel moisture throughout the year do not burn as readily as other vegetation communities.

To be consistent with the final fuel modification zone for the TMV Project set forth in the Tejon Mountain Village Environmental Impact Report (Kern County 2009), which was 1,773 acres, the Revised Draft TU MSHCP and this Supplemental Draft EIS have been revised to use the 1,773-acre number throughout. This acreage likely overstates the size of the fuel modification zone that would occur in the TMV Planning Area Open Space, because much of the 200-foot area may actually occur within the development envelope.

While the Draft EIS specifically analyzed the effects of this fuel modification zone for each alternative, the Supplemental Draft EIS has revised the analysis to calculate the development-related fuel modification zone for each revised alternative and to clarify that this effect would be short-term and not permanent. As discussed in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, the fuel modification activities, including those in the 1,773-acre fuel modification zone, would not significantly or permanently degrade existing habitat:

> In general, it is anticipated that fuel modification effects would be roughly proportional to the distribution of vegetation communities within Covered Lands, with about 98% occurring within special-status upland communities, about 1% in riparian/wetland communities, and about 1% within agricultural lands.

For example, fuel modification on 1,773 acres would not be expected to substantially degrade live-in habitat for Covered Species in oak savannah, grassland, scrub, and riparian habitats and may in fact provide benefits to the Covered Species. Effects of removing flashy fuels, such as nonnative grasslands, on Covered Species would range from minimal to beneficial, as discussed below.

With respect to birds, such fuel modification may benefit raptors, such as American peregrine falcon, burrowing owl, and golden eagle, which may more easily access prey in these areas due to the removal of brush and other dense vegetation. In addition, they may hunt more effectively because prey would be more visible, and prey such as gophers and California ground squirrels are often more attracted to recently cut and mowed areas because of the greater availability of seeds and other food items. Voles are a prey species for white-tailed kite, and while voles tend to prefer dense grassland habitat, mowing could make other prey species for white-tailed kite available, such as

gophers and ground squirrels. Bald eagles forage over Castac Lake, an area that would not be affected by fuel modification, and roost in trees, also not subject to fuel modification. Other bird species use riparian areas and would not be substantially affected because, as noted above, there would be little or no change in habitat values in riparian areas as a result of fuel modification. Riparian/woodland birds such as least Bell's vireo, purple martin, willow flycatcher, western yellow-billed cuckoo, and yellow warbler would not be affected by fuel modification activities because most of their life history is within riparian/woodland areas. Tricolored blackbirds may benefit from greater accessibility to food because grassland habitat would open up and make seeds and insect prey such as grasshoppers more available. While mowing and selective thinning would likely have some beneficial effects on habitat quality for several species, there is a potential for some adverse impacts from disturbance of nest/burrows; therefore, surveys prior to fuel modification activities would be required to address this issue.

In addition, proposed fuel modification activities would not adversely affect the suitability of already open habitat areas for California condors. Because of their large size, condors generally prefer to forage in open habitat areas to minimize potential damage or injury from approaching animal carcasses in shrub- or tree-covered areas. Fuel modification activities that involve the removal of vegetation cover would not adversely affect foraging habitat for condors, although development-related deterrents, such as noise recreational activity, and pets, would likely limit condor foraging in fuel modification areas. Furthermore, restrictions on carcass and gut pile disposal in the TMV Planning Area would reduce food availability in fuel modification areas (see Section 2.2.2.5, Adaptive Management, in Volume I of this Supplemental Draft EIS).

With respect to amphibians and reptiles, mowing in grassland areas and selective thinning in scrub areas may also open up habitat and allow for occupation by harvester ants, which are the main prey for coast horned lizard. Western spadefoot, Tehachapi slender salamander, yellow-blotched salamander, and two-striped garter snake fulfill many of their life history requirements in riparian areas that would not be affected by fuel modification. These species may benefit from removal of dense grasses by occasional mowing and selective thinning of dead shrubs in adjacent upland areas because it may be easier for them to move, forage, and locate prey; dense nonnative grasslands tend to preclude small terrestrial species such as toads and salamanders because locomotion and prey detection become difficult. However, while mowing and selective thinning would likely have some beneficial effects on habitat quality for several species, there is a potential for some mortality or injury of individuals from mowing and other thinning tools, and disturbance of burrows; therefore, surveys prior to fuel modification activities would be required to address this issue.

With respect to insects and mammals, elderberry plants would not be removed for fuel modification, and the valley elderberry longhorn beetle would not be affected. Similarly, riparian habitat would not be affected by fuel modification activities, so no effect on the ringtail is anticipated. The Tehachapi pocket mouse could benefit from thinning of dense grasses and some shrubs as long as native shrubs are still present, as this species forages on open ground and beneath shrubs (Zeiner et al. 1990).

Finally, covered plant species are not expected to be affected by fuel modification activities. Surveys prior to grading would be required to avoid effects on covered plant species during fuel modification activities associated with the residential and commercial development. In addition, none of the covered plant species are on the lists of species that would need to be removed or thinned from fuel modification areas, as outlined in the fire protection plan (Appendix F of the TU MSHCP).

With respect to the commenter's concern regarding the edge-to-area ratio of the TMV Project, it is likely that the fuel modification zone would largely fall into the development envelope, rather than the open space. Nevertheless, the full 1,773-acre area was considered in the effects analysis presented in this Supplemental Draft EIS. As discussed above, effects on Covered Species from fuel management activities under the Proposed TU MSHCP Alternative are not anticipated to be

significant, may in many cases be beneficial, and where potentially adverse, would be reduced through minimization measures.

## 7.2.3 Effects on Landscape Wildlife Habitat Connectivity and Movement

Several commenters stated that wildlife connectivity in the Tehachapi Mountains is important for terrestrial species and the California condor, and stated concerns that development on portions of the Covered Lands would reduce wildlife habitat connectivity between the Coast Range, Transverse Range, and southern Sierra Nevada, including across the Covered Lands themselves and across I-5. A commenter stated that the Draft EIS does not discuss how four specific I-5 wildlife crossings west of the TMV Planning Area would be affected and whether mitigation measures would maintain access to these locations. This commenter also questioned what the wildlife movement constraints would be going north and south as a result of the combined effects of the proposed TMV Project and the proposed developments to the north and south that are not part of the Covered Lands.

The Draft EIS provided a description of documented wildlife movement patterns on the Covered Lands in Section 3.1.5, Wildlife Habitat Linkages and Corridors. Wildlife movement on the Covered Lands is currently unrestricted, and there are no major barriers to movement and dispersal of wildlife and plants. Within the Covered Lands, native wildlife, including high-mobility species such as black bear, mountain lion, mule deer, bobcat, and coyote, have been observed at several locations, including around existing developed areas such as the cluster of buildings and facilities at the Tejon Ranchcorp (TRC) headquarters and adjacent school. The California condor frequently flies over the Covered Lands, which provide important foraging and roosting habitat for the species.

This response addresses issues related to habitat connectivity in two separate parts: the relationship of the Covered Lands and proposed development to terrestrial wildlife access to I-5 crossings, and terrestrial wildlife movement within and across Covered Lands. Habitat connectivity for the California condor is addressed in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and Section 7.2.4, Condor Habitat Connectivity, of TU MSHCP and Volume I. Master Response 1G, California Condor Overflight Habitat Connectivity, addresses habitat connectivity for the California condor in additional detail.

### 7.2.3.1 Terrestrial Movement through I-5 Crossings

Although wildlife can freely move across the Covered Lands, I-5 and associated highway fences are potential barriers to wildlife movement and dispersal west of the Covered Lands. In order to understand current patterns of wildlife movement related to I-5, TRC conducted a wildlife movement study between 2002 and 2007 using motion-sensitive cameras positioned at 14 potential I-5 wildlife crossing points, including bridges and culverts, located between the I-5/California Aqueduct in the north to approximately the junction of I-5 and State Highway 138 to the south (Figure 3.1-3 in Volume I of this Supplement Draft EIS). The full results of the study are presented in the Biological Resources Technical Report for the TMV Project (Dudek 2009), and summarized in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS. Specifically, Table 3.1-3 in Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS summarizes the results of the camera study. Generally, the amount of wildlife photographed at the northern crossing points was greater than the amount photographed at southern crossing points, with the Grapevine Group (the GV locations on Figure 3.1-3) accounting for approximately 65% of all terrestrial species photographed in the study. Overall, the camera study data indicate that activity by larger mammals (i.e., mule deer, bobcat, and coyote) was concentrated at the Castac Lake Group (the TL locations on Figure 3.1-3) and the Grapevine Group (GV-RC4, -RC5, and -RC6). Coyotes and bobcats, but no mule deer, were documented at the Gorman Group (Table 3.1-3). In particular, the data for bobcats and

coyotes from the Grapevine Group GV-RC4 and GV-RC5 strongly indicate that these species move across I-5 via existing culverts. Additional visual surveys of wildlife activity (e.g., tracks, scat) along trails leading from nine I-5 culverts that showed significant evidence of movement in the camera study found evidence of mule deer, bobcat, and coyote moving to and from the I-5 culverts. These survey data indicate movement by large and small mammals in areas in and adjacent to the Covered Lands and also demonstrate that I-5 is not an impermeable barrier to east-west terrestrial wildlife movement under existing conditions. Most of the wildlife movement is occurring at the more northerly underpasses and culverts in the Tehachapi Uplands. Furthermore, large and small mammals are traversing steep and rugged landscapes such as the north face of Grapevine Peak. Movement across these areas allows direct access from the Covered Lands to the Wind Wolves Preserve and Los Padres National Forest west of I-5. One species known to occur on Covered Lands but that was not detected during the camera study is the mountain lion. However, this species has been documented in other studies to use fairly constrained crossings under roadways (Beier 1995, p. 234; Foster and Humphrey 1995, p. 99), and there is no reason to expect that mountain lions are precluded from crossing I-5 using these culverts.

Section 4.1.3.3, Wildlife Movement and Connectivity, in Volume 1 of this Supplemental Draft EIS analyzes the potential effects of the Proposed TU MSHCP Alternative on wildlife movement in the Covered Lands as related to access to the I-5 crossings. As shown in Figure 2-7 in Volume 1 of this Supplemental Draft EIS, commercial and residential development would be limited to the western portion of the Covered Lands, with the commercial and resort residential development clustered around Castac Lake, and the low-density mountain residential development located to the north and west. The combined 93,522-acre Established Open Space Areas and 12,795-acre Existing Conservation Easement Areas would remain unconstrained for wildlife movement. The TMV Planning Area Open Space would be preserved adjacent to and within the low-density mountain residential development, as shown in Figure 2-7 of this Supplemental Draft EIS. More than 94% of the TMV Planning Area Open Space is generally composed of contiguous habitat blocks greater than 200 acres that would be suitable for use and movement by wildlife. The open space established under the Proposed TU MSHCP Alternative in the western portion of the Covered Lands would provide a substantial unconstrained habitat linkage within and north of the TMV Planning Area to convey east-west wildlife movement. Along the northern boundary of the Covered Lands, the open space habitat linkage would be approximately 1 to 2 miles wide and would consist mostly of woodland and savannah habitats. This linkage would provide direct wildlife access to the GV-RC6 undercrossing of I-5 located west of this linkage (where 97 deer photographs were documented). Retaining this area for wildlife to continue to move to and from the existing I-5 culverts would allow them to move between the Covered Lands east of I-5 and the Wind Wolves Preserve and Los Padres National Forest essentially as they do currently.

A commenter questioned how the remaining four crossings west of the TMV Planning Area and south of GV-RC6 would be affected. These crossings are identified on Figure 3.1-3 in this Supplemental Draft EIS as TL-RC1, TL-RC2, TL-RC3, and TL-RC-4 and are referred to as the Castac Lake Group crossings.

Proposed land uses at TL-RC1 and TL-RC2 west of I-5 are commercial and residential development associated with the Lebec/Existing Headquarters Area (Figure 2-7 in Volume 1 of this Supplemental Draft EIS). Land east of I-5 at these crossings would be in designated open space. As indicated in Table 3.1-3 in Section 3.1, Biological Resources, of the Supplemental Draft EIS, these crossings are frequently used by deer. Wildlife use at these crossings (Castac Lake Group) likely would be constrained in the future by development west of I-5. However, species that are relatively tolerant of development are expected to continue to use the crossings at TL-RC3 and TL-RC4 following development west of I-5. For example, existing land uses around TL-RC4 already include residential and commercial strip development (e.g., the Flying J Truckstop), arterial roads, I-5 rest areas, and associated nighttime lighting that are not conducive to wildlife movement. Nevertheless, this

crossing is currently used by urban-tolerant species such as coyotes, mule deer, and raccoons, and this use is expected to continue. The Grapevine Creek crossing at TL-RC3 would connect directly to open space with more than 500 feet of open space buffer between the undercrossing and potential future development areas and similarly would provide for continued opportunities for movement by urban-tolerant wildlife. Furthermore, both Cuddy Creek west of Castac Lake associated with TL-RC4 and Grapevine Creek to the north of Castac Lake associated with TL-RC3 would have setback areas along the creeks and the reclaimed water ponds south of Cuddy Creek that would provide buffer areas for wildlife moving along the creeks.

While there would be some constraints to wildlife movement at the Castac Lake Group crossings, it is important to note that access to these crossings is not crucial for maintaining wildlife movement across I-5. In general, a high frequency or number of individuals crossing between core habitat areas is not necessary to promote genetic exchange and maintain healthy populations. Because there would be no impairment of the crossings at the Grapevine Group crossings, there would be adequate movement to maintain healthy wildlife populations east and west of I-5. Additionally, none of the Covered Species associated with the Proposed TU MSHCP Alternative depend on the Castac Lake Group crossings.

Large species that are much more likely to avoid more urban settings, such as mountain lion and black bear, would be expected to move across the unconstrained northern portion of the Covered Lands and use the existing undercrossing of I-5 at GV-RC6. In addition, movement to the northwest and across I-5 at the GV-RC4 and GV-RC5 crossings would not be precluded by the Proposed TU MSHCP Alternative. Figure 2-7 in Volume 1 of this Supplemental Draft EIS illustrates the location of contiguous lands in the northern portion of the TMV Planning Area that are anticipated to facilitate wildlife movement.

### 7.2.3.2 Terrestrial Movement Across the Covered Lands

With regard to terrestrial movement across the Covered Lands, open space in the Covered Lands would provide a large, unfragmented habitat area that would support wildlife use and movement for the species currently present on site, including species that use large land areas such as mountain lion, black bear, and mule deer. Under the Proposed TU MSHCP Alternative, 93,522 acres would be preserved in Established Open Space, 23,001 acres would be preserved in TMV Planning Area Open Space, and 12,795 acres would be preserved in Existing Conservation Easement Areas, resulting in preservation of 91% of the Covered Lands. As described above, the Established Open Space and Existing Conservation Easement Areas would be unconstrained for wildlife movement. The TMV Planning Area Open Space would be preserved adjacent to and within the low-density mountain residential development, as shown in Figure 2-7 in Volume I of this Supplemental Draft EIS. As noted above, more than 94% of the TMV Planning Area Open Space would be generally composed of contiguous habitat blocks greater than 200 acres, and suitable for movement by wildlife.

In addition, the Ranchwide Agreement, which would conserve lands within TRC ownership outside of and adjacent to the Covered Lands, would provide additional open space areas north of the western portion of the Covered Lands, where the habitat linkage width is the most narrow.

The wildlife linkage would include a contiguous, fully avoided block of land within the Tehachapi Uplands landscape, including lands protected within the Covered Lands and lands protected by the Ranchwide Agreement. The avoided and preserved areas would include a contiguous 4- to 8-mile-wide block of land that extends for approximately 9 miles from west of I-5 to areas east of the Tejon Ranch ownership and would include more than 100,000 acres of preserved upland habitat. The western portion of the habitat linkage would connect directly with the northern I-5 underpasses and culverts (the Grapevine Group) documented to be most heavily used in the camera study.

North and south wildlife movement also would not be precluded by the Proposed TU MSHCP Alternative. Open space in the eastern two-thirds of the Covered Lands would allow unimpeded movement to and from the northeast along the Tehachapi Uplands, as well as movement to the northwest. Movement directly to the north and northwest, east of I-5, however, would continue to be limited. The northern portion of the Covered Lands is bounded by the San Joaquin Valley and agricultural uses, which generally lack habitat for many of the species expected to use the Tehachapi Uplands for movement, such as mountain lion, mule deer, and black bear (Figure 3.7-1 in Volume 1of this Supplemental Draft EIS). As described above, camera stations at GV-RC4 and GV-RC5 had heavy use by mule deer, coyotes, and bobcats (Table 3.1-3 in Volume 1 of this Supplemental Draft EIS). This use would be expected to continue. These crossings are located where the north and southbound lanes of I-5 are separated, as depicted in Figure 3.1-3 in Volume 1 of this Supplemental Draft EIS. GV-RC4 and GV-RC5 are included in the northern portion of designated open space under the Ranchwide Agreement. North-south wildlife movement across State Route (SR) 138 and I-5 south of SR 138 was not studied as part of the proposed action because these locations are outside of the Covered Lands, represent existing conditions and would remain unchanged by the proposed action, but it is expected any undercrossings similar to those west of the TMV Planning Area would be used.

In addition to the proposed development on the Covered Lands, growth within the mountain communities is anticipated to occur in the Tehachapi Uplands region, including Frazier Park Estates and Gorman Post Ranch. Frazier Park Estates would include large blocks of contiguous open space adjacent to other public lands with open space, including the Los Padres National Forest on the western edge of the Frazier Park Estates project (Kern County Planning Department 2009, pp. 4.3-21, 4.3-22, 4.3-49, 4.3-50). The Gorman Ranch project would provide 2,000 acres of open space including wildlife corridors greater than 1 mile wide between the development footprint and the southern border of the TMV Planning Area (Harmsworth 2006, pp. 95 to 99 and 133 to 137). Additionally, with respect to the valley and foothill development, while Centennial is not located in the Tehachapi Uplands, the Centennial project would include preservation of roughly 8,667 acres of natural lands located between the developed portions of Centennial and adjoining open space, where regional movement is expected to occur, including the more mountainous areas to the northwest and southeast of the project's development areas (BonTerra 2008, pp. 51 to 55 and 132 to 139). Similarly, Grapevine, which would be primarily located in the San Joaquin Valley, would include preservation of roughly 3,300 acres of open space located between the developed portions of Grapevine and open space adjacent to the TMV Planning Area. This includes the base of the Tehachapi foothills connecting to the Tehachapi Mountains to the south, and along drainages, resulting in an east-west landscape linkage approximately 1 to 2 miles wide (1 mile at its narrowest point) across the northern boundary of the TMV Planning Area. The Tejon Ranch Commerce Center project would include preservation in the western portion of the site, which is not linked to wildlife connectivity areas in the Tehachapi Uplands. However, this project is located in the San Joaquin Valley and is not considered to be an important part of wildlife connectivity in the Tehachapi Uplands (Kern County 2002, p. 4.2-18).

Implementation of the Proposed TU MSHCP Alternative and Ranchwide Agreement, together with other projects in the Tehachapi Uplands region (Frazier Park Estates and Gorman Post Ranch) and other projects in the valley regions (Grapevine, Centennial, and Tejon Industrial Complex) would result in a combined total of approximately 143,630 acres of permanent open space, preserving large, contiguous blocks of habitat for wildlife movement in both the Tehachapi Uplands landscape and the valley and foothills areas outside of the Covered Lands. Moreover, substantial habitat linkages would be maintained to provide connections to the Los Padres National Forest and Wind Wolves Preserve to the west, the Angeles National Forest to the south, and the Sequoia National Forest to the north.

## 7.2.4 Condor Habitat Connectivity

A commenter indicated that the Tehachapi Mountains are a critical landscape linkage for the California condor, connecting the Coast Range and Transverse Range with the southern Sierra Nevada. The commenter asserted that allowing development on key ridgelines would reduce the effectiveness of this landscape connection and functionally cut off the southern Sierra Nevada and critical habitat from the range of the expanding condor population. Another commenter suggested that the California condor would be subject to an arbitrary design for rerouting condor flight away from the development. This commenter asserted that because the Tejon region has been home to the condor for millennia, the species would not be able to change its flight patterns to accommodate the new development.

The Service agrees that Tejon Ranch and the Tehachapi Mountains as a whole serve as an important linkage between historic condor habitat areas in the southern Sierra Nevada to the Sespe Wilderness Area and Coast Range habitats to the west of the ranch. However, implementation of the Proposed TU MSHCP Alternative, including development in the TMV Planning Area, would not preclude condors from continuing to fly over Tejon Ranch to access areas farther to the east or west of the ranch.

With respect to urbanization and potential effects on condor movement patterns, it is important to note that the free-flying condors in the southern California subpopulation have been recorded flying over mountain communities in the Tehachapi Mountains that have rural residential densities similar to or greater than that proposed for the TMV Project, including Pine Mountain Club and Frazier Park, over I-5, and even developed portions of Santa Clarita and the northern San Fernando Valley. Indeed, according to global positioning system (GPS) tracking data, as well as on data presented in the U.S. Geological Survey (USGS) condor study (Johnson et al. 2010; Appendix I of this Supplemental Draft EIS), condors regularly fly over regional mountain communities such as Frazier Park, Lebec, Pine Mountain Club, and I-5 to access Hopper and Bitter Creek National Wildlife Refuges, the Wind Wolves Preserve, and Tejon Ranch. Condors also regularly forage in and around the communities of Stallion Springs and Bear Valley Springs to the east and northeast of the ranch. Thus, development proposed for the Covered Lands is not anticipated to interfere with California condor flyover routes. With regard to the comment about development of key ridgelines, the initial Development Envelope associated with the TMV Planning Area was substantially modified, after discussions between the Service and TRC, to move development off of the northernmost higher-elevation ("key") ridges and slopes to preserve high-quality California condor foraging and flyover habitat. These areas include Grapevine Peak and northern Grapevine Ridge, the northern portions of Middle, Silver, Squirrel, and Lolas Ridges, the area encompassing the junction of Tunis and Geghus Ridges, and the easternmost 3-mile reach of Geghus Ridge. This resulted in an almost 2-mile-wide (at its smallest width) corridor with a contiguous block of high-quality condor foraging and roosting habitat that extends from the western ranch boundary near Grapevine Peak eastward throughout the upland portions of the ranch, inclusive of the east-west condor flight corridor between Grapevine Peak and Tunis-Winters Ridge area (Appendix C of the TU MSHCP).

In summary, while Tejon Ranch is an important linkage between historic condor habitat areas in the southern Sierra Nevada to the Sespe Wilderness Area and Coast Range habitat to the east of the ranch, the Service does not anticipate that implementation of the TU MSHCP, including development of the TMV Project, would preclude condors from continuing to fly over Tejon Ranch to reach other habitat areas within their range east and west of the ranch. See Master Response 1G, California Condor Overflight Habitat Connectivity, for a more detailed discussion of this issue.

## 7.2.5 Movement Around Castac Lake

A commenter suggested that movement in the area around Castac Lake would be constrained by Commercial and Residential Development Activities proposed under the TU MSHCP. The commenter indicated that avoidance and mitigation measures are not discussed for the species that could be prevented from accessing Castac Lake due to the TMV Project.

As summarized above, the linkages and corridors analysis in Section 4.1.3.3, Wildlife Movement and Connectivity, of this Supplemental Draft EIS shows that wildlife would continue to have opportunities to move across the Covered Lands and be able to access important crossing locations along I-5 after development. The EIS also concludes that wildlife movement in and around the Castac Lake area would be constrained due to the higher density "urban-type and residential development" of this area, and thus is consistent with the comment regarding this constraint. However, while constrained, connectivity in the area will continue to exist as discussed below. Additionally, because wildlife movement across the northern portion of the Covered Lands and access to existing crossings of I-5 (that were the most frequently visited during the camera study) would be maintained, constraining wildlife access to the Castac Lake area is not considered a substantial adverse effect on regional wildlife movement.

Moreover, existing land uses in the vicinity of the Castac Lake Group crossing (TL-RC4) west of I-5 and southwest of Castac Lake are not particularly conducive to wildlife movement. These land uses include residential and commercial strip development (e.g., the Flying J Truckstop), arterial roads, I-5 rest areas, and associated nighttime lighting. However, wildlife species that are less sensitive to urban settings, such as coyotes, mule deer, and raccoons, use this crossing. As shown in Table 3.1-3 of this Supplemental Draft EIS, most of the use of the Castac Lake Group crossings was by mule deer and raccoons, accounting for 98% of the mammals photographed at these cameras. Neither of these species is particularly sensitive to the existing urban development west of I-5 (e.g., compared to bobcat), and both species are expected to continue to use these crossings post-development. Even with development in the TMV Planning Area, deer, raccoons, and other wildlife that are less sensitive to urban settings would have ample opportunity to move along Cuddy Creek to the west and Grapevine Creek to the north, given the setback areas along the creeks and the reclaimed water ponds south of Cuddy Creek. Large species that are much more likely to avoid such urban settings, such as mountain lion and black bear, would be expected to move across the unconstrained northern portion of the Covered Lands and use the existing undercrossing of I-5. Castac Lake is not a particularly important resource for other terrestrial species in the area and no non-avian special-status species were observed using the lake (e.g., focused surveys for western pond turtle were negative). Other species that may use Castac Lake post-development are birds that would not be constrained in accessing the lake (see Master Response 3, Raptors, regarding use of Castac Lake by bald eagles).

**Table MR8-1. Comments Addressed in Master Response 8**

| Comment | Commenter |
|---|---|
| G2-17 | Environmental Protection Agency |
| I1163-7 | Palmer, Bruce K. |
| I1210-2 | Pinard, John W. |
| I1300-13 | Risebrough, Bob |
| I1300-14 | Risebrough, Bob |
| I1350-1 | Sachau, B. |
| I1563-1 | Trudell, Heidi |
| I1567-1 | Tuszynski, Jacek |
| I1607-2 | Wallace, Sylvia |
| I293-10 | Clendenen, David, et al. |
| I293-11 | Clendenen, David, et al. |
| I293-40 | Clendenen, David, et al. |
| I293-41 | Clendenen, David, et al. |
| I293-44 | Clendenen, David, et al. |
| I293-45 | Clendenen, David, et al. |
| I293-5 | Clendenen, David, et al. |
| I293-6 | Clendenen, David, et al. |
| I293-7 | Clendenen, David, et al. |
| I293-8 | Clendenen, David, et al. |
| I293-9 | Clendenen, David, et al. |
| I527-6 | Fry, Kenneth |
| I73-1 | Balbona, Gina |
| I73-2 | Balbona, Gina |
| I73-3 | Balbona, Gina |
| I73-6b | Balbona, Gina |
| I73-7b | Balbona, Gina |
| I746-1 | Jay, Bonnie |
| I904-1 | Lopez, Irene |
| I948-17 | Manning, Jeffrey A. |
| I948-27 | Manning, Jeffrey A. |
| I948-28 | Manning, Jeffrey A. |
| I948-5 | Manning, Jeffrey A. |
| I948-6 | Manning, Jeffrey A. |
| I948-7 | Manning, Jeffrey A. |
| I948-7 | Manning, Jeffrey A. |
| I948-8 | Manning, Jeffrey A. |

| Comment | Commenter |
|---|---|
| O4-101 | Center for Biological Diversity (Keats, Adam) |
| O4-102 | Center for Biological Diversity (Keats, Adam) |
| O4-103 | Center for Biological Diversity (Keats, Adam) |
| O4-105 | Center for Biological Diversity (Keats, Adam) |
| O4-121 | Center for Biological Diversity (Keats, Adam) |
| O4-15 | Center for Biological Diversity (Keats, Adam) |
| O4-16 | Center for Biological Diversity (Keats, Adam) |
| O4-17 | Center for Biological Diversity (Keats, Adam) |
| O4-18 | Center for Biological Diversity (Keats, Adam) |
| O4-19 | Center for Biological Diversity (Keats, Adam) |
| O4-20 | Center for Biological Diversity (Keats, Adam) |
| O4-21 | Center for Biological Diversity (Keats, Adam) |
| O4-22 | Center for Biological Diversity (Keats, Adam) |
| O4-23 | Center for Biological Diversity (Keats, Adam) |
| O4-237 | Center for Biological Diversity (Keats, Adam) |
| O4-238 | Center for Biological Diversity (Keats, Adam) |
| O4-239 | Center for Biological Diversity (Keats, Adam) |
| O4-24 | Center for Biological Diversity (Keats, Adam) |
| O4-24 | Center for Biological Diversity (Keats, Adam) |
| O4-241 | Center for Biological Diversity (Keats, Adam) |
| O4-242 | Center for Biological Diversity (Keats, Adam) |
| O4-243 | Center for Biological Diversity (Keats, Adam) |
| O4-243 | Center for Biological Diversity (Keats, Adam) |
| O4-25 | Center for Biological Diversity (Keats, Adam) |
| O4-26 | Center for Biological Diversity (Keats, Adam) |
| O4-35 | Center for Biological Diversity (Keats, Adam) |
| O4-36 | Center for Biological Diversity (Keats, Adam) |
| O4-60 | Center for Biological Diversity (Keats, Adam) |
| O5-2A | Defenders of Wildlife (Flick, Pamela) |
| O5-17 | Defenders of Wildlife (Flick, Pamela) |
| O5-18 | Defenders of Wildlife (Flick, Pamela) |
| O5-18 | Defenders of Wildlife (Flick, Pamela) |
| O5-25 | Defenders of Wildlife (Flick, Pamela) |
| O5-26 | Defenders of Wildlife (Flick, Pamela) |
| O5-27 | Defenders of Wildlife (Flick, Pamela) |
| O5-28 | Defenders of Wildlife (Flick, Pamela) |

# 8.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP regarding regulatory considerations. This master response begins with an overview of the incidental take permit (ITP) issuance process and a review of the Federal regulations relevant to the Draft EIS and the Draft TU MSHCP. Table MR8-1 provides a list of the commenters and a reference to the individual comment , as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- Not all of the protected species are found on site. Many imperiled species are found on site and should be protected. (Response provided in Section 8.3.1, Identification and Protection of Covered and Imperiled Species.)
- The issuance of an ITP would not adequately protect species. (Response provided in Section 8.3.2, Criteria for Issuance of an ITP.)
- The designation and modification of critical habitat is not clear or at risk in the TU MSHCP. (Response provided in Section 8.3.3, Critical Habitat Designation.)
- The TU MSHCP should be consistent with the California Condor Recovery Plan and the TU MSHCP is not clear. (Response provided in Section 8.3.4, Role of the Condor Recovery Plan.)
- The Implementing Agreement has a narrower definition of take than the Federal Endangered Species Act (ESA), and is not authorized by the ESA. It does not give the Service sufficient authority. (Response provided in Section 8.3.5, Implementing Agreement.)
- The No Surprises Rule limits the scope of the Implementing Agreement. (Response provided in Section 8.3.6, No Surprises Rule.)
- The ITP and TU MSHCP may not be enforceable. (Response provided in Section 8.3.7, Enforceability of the ITP and TU MSHCP.)
- The ESA Section 7 Consultation process and biological opinion raises issues about the action area, adverse modification to critical habitat, and the potential for a "jeopardy" finding. (Response provided in Section 8.3.8, Section 7 Consultation Process and Biological Opinion.)
- Any take of bald or golden eagles is illegal. (Response provided in Section 8.3.9, Bald and Golden Eagle Protection Act.)

# 8.2 Regulatory Overview

## 8.2.1 Permit Application under ESA Section 10

Section 9 of the ESA prohibits the take of any fish or wildlife species listed under the ESA as endangered or threatened without a permit. *Take*, as defined by the ESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Section 10 of the ESA provides a regulatory mechanism to permit the incidental take of federally listed fish or wildlife species by state, local, or private parties during lawful activities. ESA Section 10(a)(1)(B) allows the Service to issue an ITP to authorize the take of federally listed fish or wildlife if the take is incidental to otherwise lawful activities, including development. Before issuing an ITP, the Service must approve a habitat conservation plan (HCP) that describes the potential effects of the action and measures that the applicant will take to minimize and mitigate the effects of

take. Section 10(a)(2)(B) of the ESA provides statutory criteria that must be satisfied before an ITP can be issued. The Service must find that the effects of authorized incidental take are minimized and mitigated to the maximum extent practicable under the HCP, the take must not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and adequate funding for a plan to minimize and mitigate the effects of take must be ensured. The overall purpose of an HCP, including the TU MSHCP, is not to authorize land development, but rather to ensure that the effects of the Covered Activities, which may include land development, on federally listed species are adequately minimized and mitigated. Any development to occur on the area covered by the HCP – the Covered Lands – must obtain local land use approvals through the appropriate local government process. Thus, ESA Section 10 provides a regulatory mechanism to permit the incidental take of federally listed fish and wildlife species by private interests during lawful land use activities.

## 8.2.2 The Role of the ESA Section 7 Consultation Process in the ITP Application Process

Issuance of an ITP is also a Federal action subject to Section 7 of the ESA. The Section 7 consultation process for this proposed action has not been completed. Section 7(a)(2) requires the Service to consult internally to ensure that any action that the Service "authorizes, funds, or carries out" "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification" of the critical habitat of any listed species (ESA 1536(a)(2), 50 Code of Federal Regulations [CFR]402.14(g)(4)). Because the Section 7 consultation process is not complete, the Service have not yet formally determined whether a Section 10(a)(1)(B) ITP can be issued. Therefore, comments regarding whether the proposed action would "jeopardize" the species, or whether the proposed action would cause "adverse modification to habitat," raise issues that the Service has not yet formally addressed. This Supplemental Draft EIS and the TU MSHCP provide analysis relevant to these issues to assist the Service in making the formal determination.

## 8.2.3 The Role of NEPA in the ITP Application Process

Issuance of an ITP is a Federal action subject to compliance with the National Environmental Policy Act (NEPA). The purpose of NEPA is to promote analysis and disclosure of the environmental issues surrounding a proposed Federal action and public participation in the review process to reach a decision that reflects a careful consideration of the environmental implications of a proposed action. Although Section 10 and NEPA requirements overlap considerably, the scope of NEPA goes beyond that of the ESA by considering the effects of a Federal action on the human environment, such as water quality, air quality, and cultural resources. Under NEPA, an environmental impact statement (EIS) is required when the Federal action, such as issuance of an ITP, would result in potentially significant effects on the quality of the human environment. The Service determined that an EIS is required for the issuance of an ITP associated with the Covered Activities under the TU MSHCP. This Supplemental Draft EIS, therefore, serves as an analytical tool to evaluate direct, indirect, and cumulative effects of the proposed action and to help the Service determine whether to issue an ITP.

### 8.2.4 The Role of the Bald and Golden Eagle Protection Act in the ITP Process

The Bald and Golden Eagle Protection Act (BGEPA), 16 United States Code (U.S.C.) 668 – 668d, prohibits take of eagles. *Take* as defined under the BGEPA , includes the actions to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" (16 U.S.C 668c). To *disturb* a bald or golden eagle means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding or sheltering behavior" (50 CFR 22.3). The BGEPA "is not a habitat management law" (72 *Federal Register* [FR] 31132, June 5, 2007), and does not protect habitat per se, other than eagle nests. Therefore, permit coverage for eagles is not required for activities that modify habitat, unless the activities result in take of an eagle under one of the terms in the definition. The Service determined through recent rulemaking that ITPs pursuant to the ESA and its implementing regulations may be lawfully issued to cover take under the BGEPA (16 U.S.C. 1531 *et seq*.; 50 CFR 17.1 *et seq*.).

In 2008, the Service issued a Final Rule regarding authorization under the BGEPA for take of bald and golden eagles (73 FR 29075, May 20, 2008). This rule, which became effective on June 19, 2008, extended BGEPA take authorization to holders of existing ESA Section 10 permits and allowed take authorization to be extended to future Section 10 ITPs associated with HCPs for multiple species that include bald or golden eagles as Covered Species (50 CFR 22.11). The new regulations state that "a permit that covers take of bald eagles or golden eagles under [Section 10 of ESA and its implementing regulations at 50 CFR Part 17] for purposes of providing prospective or current ESA authorization constitutes a valid permit issued under this part for any take authorized under the permit under part 17 as long as the permittee is in full compliance with the terms and conditions of the permit issued under part 17" (50 CFR 22.11(a)). In general, the statutory and regulatory criteria for issuing ESA incidental take authorization include minimization, mitigation, or other conservation measures that also satisfy the statutory mandate under the BGEPA that authorized take be compatible with the preservation of the bald or golden eagle (73 FR 29075, May 20, 2008). The new regulation provides for revocation of the ITP as applied to bald and golden eagles if the Service determines that activities covered by the ITPare "incompatible with preservation of the bald eagle or golden eagle."

See discussion in Section 8.3.9, Bald and Golden Eagle Protection Act.

## 8.3 Responses to Substantive Comments

### 8.3.1 Identification and Protection of Covered and Imperiled Species

Comments relating to the identification of species to be covered by the TU MSHCP include the following:

- Of the 27 species proposed for incidental take coverage under the TU MSHCP, seven were not documented as occurring on the Covered Lands and should be excluded from the TU MSHCP until they can be located on the site.
- The development should be placed somewhere else because there are over 80 "imperiled" species of plants and animals in the Tehachapi Mountains that live nowhere else on earth.

- It is important to protect the over 80 "imperiled" species, including San Joaquin kit fox, California spotted owl, and Tehachapi slender salamander.
- Birds, not developers, should be protected.

Section 10 ITPs authorize the incidental take of wildlife species listed as endangered or threatened under Section 4 of the ESA. While an HCP must be developed for federally listed species that trigger the need for an ITP, HCPs can also cover other species. The inclusion of proposed, candidate, or unlisted species in an HCP is voluntary and is the decision of the applicant (U.S. Fish and Wildlife Service 1996a, Section 4.A). While including unlisted species can be challenging in terms of manageability and cost, addressing unlisted species in an HCP provides the permittee with additional regulatory certainty in the event of future species listings, and increases the biological value of HCPs through comprehensive multispecies or ecosystem planning. Here, as described in Section 1.4, Species to Be Covered by the Permit, of the TU MSHCP, the Covered Species are species of high conservation concern with the potential to be directly or indirectly affected by the Covered Activities. Most of the wildlife species are federally and/or state-listed, state Fully Protected, or potential candidates for Federal listing. Birds that are not listed or state Fully Protected are California Species of Special Concern. Plants that are not state or federally listed are California Rare Plant Rank 1B.1 species. All species addressed in an HCP, regardless if they are federally listed or not, must meet the same standard to be included in the ITP; i.e., the effects of the taking of such species must be minimized and mitigated to the maximum extent practicable (50 CFR 17.22 (b)(2)(B)).

As noted by the commenter, the TU MSHCP includes 27 Covered Species, including the California condor (Table 1-1 in Volume I of this Supplemental Draft EIS). With regard to the proposed coverage of six plant species under the TU MSHCP, the Service notes that take of listed plant species is not prohibited under Section 9 of ESA and thus is not authorized under an ITP. However, applicants for ITPs often provide conservation measures in HCPs for listed and sensitive plant species as part of their landscape or ecosystem planning efforts. The Service encourages voluntary conservation measures to protect listed and sensitive plant species in HCPs. The Service includes plant species in ITPs in recognition of the conservation provided for them under the plans and typically extend “no surprises” regulatory assurances to them under the Service’s No Surprises Rule codified at 50 CFR 17.22(b)(5) and 17.32(b)(5). Use of the term *take* in this Supplemental Draft EIS with reference to covered plant species refers to effects on or loss of the plant species.

Initially, in addition to the California condor, 48 special-status species known or with the potential to occur in the inventory area were evaluated for coverage under the TU MSHCP. From this list, 27 species were identified for coverage on the basis of a variety of criteria, including current and potential sensitivity status, range and occurrence information, the potential to occur in the Covered Lands, taxonomy, seasonality, and specific habitat or other life history requirements. Excluded from the list of species covered by the TU MSHCP are species that have low potential to occur in the Covered Lands based on known ranges or on specific habitat or life history requirements. The list also excludes species that have unresolved taxonomic issues or life history traits that make coverage difficult. Finally, species that are not likely to be affected by the Covered Activities were also excluded from coverage (Section 1.4, Species to be Covered by the Permit, in the TU MSHCP).

One commenter specifically questioned why the western spadefoot, least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo, valley elderberry longhorn beetle, ringtail, and Tejon poppy were included when they were not documented on the Covered Lands. To date, surveys have been conducted for the TMV Planning Area, not the full 141,886 acres of Covered Lands, so relying on survey occurrence data alone was not considered a sufficient criterion. Permittee staff, consultants, and Service biologists worked together to evaluate the special-status species to include in the TU MSHCP. Tejon Ranchcorp's (TRC's) coverage decisions were based on current and potential sensitivity status, range, occurrence information, taxonomy, seasonality, and specific habitat or life

history requirements, as well as whether Covered Activities could potentially affect the species. Any federally listed species that was considered to have some potential to occur on site and could be subject to incidental take was included. Of the species mentioned in the comment, least Bell's vireo, southwestern willow flycatcher, and valley elderberry longhorn beetle met these criteria. The western yellow-billed cuckoo is a Federal candidate for listing and therefore was included on the list. The ringtail is a California Fully Protected species and therefore has high sensitivity status. The western spadefoot's population has been in decline and may breed on site; although not detected in 2007 surveys, it breeds opportunistically in response to warm rains and may not be detectable during unfavorable conditions. Western spadefoot has a reasonably high likelihood of being listed in the future. Tejon poppy also has a reasonably high likelihood of being listed in the future and could be affected by the Covered Activities.

The TU MSHCP includes avoidance, minimization, and mitigation measures for each of the Covered Species, whether or not it is currently federally listed. These measures are summarized in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS and Section 7, Conservation Plan for Other Covered Species, in the TU MSHCP. For a detailed description of the biology, status, and occurrence of each species, refer to Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS and Section 4, California Condor, and Section 5, Other Covered Species, of the TU MSHCP. The standards set in the species-specific biological goals and objectives of the draft TU MSHCP for each of the species are intended to meet the Section 10(a) permit issuance requirements for avoiding, minimizing, and mitigating effects on a species-by-species basis, and are based on the species' individual conservation needs.

One commenter generally referenced "80 imperiled species" existing at the ranch and requested that they all be protected through the TU MSHCP, including specifically the San Joaquin kit fox, California spotted owl, and Tehachapi slender salamander. Other than the three species specifically named, it is unclear what species the commenter considers "imperiled." There is no regulatory definition of imperiled. However, as noted above, the applicant, with the technical assistance of the Service, reviewed relevant special-status species and determined that 27 of them merited inclusion in the TU MSHCP. The selection of Covered Species for inclusion in the TU MSHCP and ITP application is left up to the applicant under the ESA, and the criteria used by TRC in selecting which species to propose for coverage in the TU MSHCP are summarized above.

With respect to other species specifically identified in the comment, the San Joaquin kit fox does not occur in the Covered Lands. The upper elevation range for this species is about 2,000 feet above mean sea level, which is below the elevation of the Covered Lands. California spotted owl was evaluated for coverage but was not included in the TU MSHCP because it is not likely to be affected by the Covered Activities. California spotted owl (one female, one male) was documented in the TMV Planning Area in 2007 during wildlife surveys, but the documented individuals were concluded to be nonbreeders in accordance with the survey protocol. Because there is limited to no suitable California spotted owl habitat in the area proposed for commercial and residential development, and because Plan-Wide Activities, which generally consist of Existing Ranch Uses that have occurred in the Covered Lands for decades, are not expected to cause take, the California spotted owl was not included as a Covered Species. Nonetheless, the Service anticipates the TU MSHCP would benefit this species through preservation of habitat and implementation of avoidance and conservation measures prescribed for the Covered Species with similar oak woodlands and coniferous forest habitat preferences. The Service notes that the Tehachapi slender salamander is a Covered Species under the TU MSHCP.

With respect to the commenter's concerns that birds be protected, several species of birds are included as Covered Species in the TU MSHCP, including several species of falcons and song birds (Table 1-1 in Volume I of this Supplemental Draft EIS).

## 8.3.2 Criteria for Issuance of an ITP

Several commenters raised concerns about the Service's possible issuance of an ITP, including the following:

- No incidental take of condors or other species should be permitted because there is a potential for "irreversible effects" on threatened and endangered plants and wildlife.
- It is unclear how it could be determined that the loss of foraging habitat would not significantly adversely affect or cause "injury" or "harm" to condors or interfere with their behavioral patterns.
- The applicant should not be absolved of liability for the death of protected species.

Section 10(a) of ESA provides for the issuance of an ITP when the permit applicant submits an HCP that satisfies ESA Section 10(a)(2)(A) and the Service determines that the applicant has met the issuance criteria under Section 10(a)(2)(B). Those criteria are as follows:

- The taking will be incidental to an otherwise lawful activity.
- The effects of such take will be minimized and mitigated to the maximum extent practicable.
- Adequate funding to implement the conservation plan will be provided.
- The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.
- The HCP includes measures to ensure that any other necessary measures required by the Service are met, including those measures the Service believes are necessary or appropriate for purposes of plan implementation.

Thus, the regulatory standards under Section (10)(a)(1)(B) of the ESA do not prohibit, as some commenters suggest, "irreversible effects" or "harm" to habitat or wildlife. An ITP authorizes take of covered wildlife species, including take resulting from harm, provided that the take is minimized and mitigated to the maximum extent practicable and will not result in jeopardy to the Covered Species. In fact, the purpose of an ITP is to absolve the applicant of liability for take of protected species provided such take occurs incidental to otherwise lawful activities, is appropriately minimized and mitigated, and meets the other criteria under Section 10(a)(2)(B) of ESA. Each of the criteria for issuance of an ITP and comments relating to them are discussed further below.

### 8.3.2.1 The taking will be incidental to an otherwise lawful activity (ESA Section 10(a)(2)(B)(i)).

Many commenters stated that Service should not approve the TMV Project or any other development on the Covered Lands. Comments include the following:

- No incidental take of condors or other species by developers should be permitted.
- No development on Tejon Ranch should be permitted because there are not enough unfragmented, undeveloped tracts of land for crucial species such as antelope and the California condor.
- The proposed development would reflect poor planning because the plan would guarantee harm to condors, fragment habitat, and increase fire threats.
- The planning and permitting process should not allow the destruction of nature or of such a vital ecosystem.

The commenters' general objections to the TMV Project and development of Tejon Ranch are noted. The Service's statutory responsibility under Section 10 of ESA is to review an ITP application and to approve or reject such application based on whether it meets the standards for issuance of a permit under Section 10(a)(2)(B), and avoids jeopardy to any listed species and adverse modification of the critical habitat of any listed species under ESA Section 7. Section 10 of the ESA was specifically enacted to allow take by non-Federal parties incidental to otherwise lawful activities under certain conditions. To the extent the commenters urge the Service to reject the TMV Project or to reject development generally on Tejon Ranch, that concern misunderstands the role of the Service under ESA Section 10. The ESA does not authorize the Service to approve development. An ITP does not authorize development, rather it authorizes take incidental to otherwise lawful development. Development of the Covered Lands is governed by the local land use laws and approval processes of Kern County. Thus, approval of the proposed action—the TU MSHCP and issuance of an ITP—would not authorize the TMV Project or any other commercial or residential development. While approval of the ITP and TU MSHCP may facilitate development, the ITP authorizes only incidental take. In evaluating whether to issue an ITP to TRC, the Service carefully evaluates the potential effects of the TMV Project and other Covered Activities on the Covered Species, including potential habitat fragmentation and fire risk. An analysis of the effects of the Proposed TU MSHCP Alternative on Covered Species and their habitat is provided in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS.

### 8.3.2.2 The impacts will be minimized and mitigated to the maximum extent practicable (ESA Section 10(a)(2)(B)(ii)).

Some commenters raised concerns regarding the standards for mitigation and minimization, including the following:

- The TU MSHCP relies on conservation but the reserve design appears to have been based on where development was not desirable rather than biology.
- It is inappropriate to consider compliance with an existing state law and maintenance of status quo activities to be mitigation for this Federal action.

Issuance criteria under Section 10 of the ESA require that the HCP applicant minimize and mitigate to the maximum extent practicable the effects of any incidental taking authorized by a Section 10 permit. The applicant proposes during the HCP development phase what measures to include in the HCP. However, the Service ultimately decides, at the conclusion of the ITP application processing phase, whether the mitigation program proposed in the HCP has satisfied this statutory issuance criterion. This finding typically requires consideration of two factors: adequacy of the minimization and mitigation program, and whether it is the maximum that can be practically implemented. To the extent that the level of mitigation provided under the proposed HCP is rationally related or proportional to the level of take likely to occur, i.e., the plan adequately offsets the effects of take or provides substantial benefits to the species, less emphasis is placed on the second factor (U.S. Fish and Wildlife Service 1996a, Section 7.B; *Nat'l Wildlife Fed'n v. Norton*, 306 F. Supp. 2d 920, 928 (E.D. Cal. 2004)). The ESA and implementing regulations do not establish specific rules for developing mitigation programs. Mitigation programs should be based on sound biological rationale; they should also be practicable and commensurate with the effects they address (U.S. Fish and Wildlife Service 1996a, Section 3.B.3). Contrary to one commenter's suggestion, neither the ESA nor its implementing regulations require an HCP to result in a net benefit to the Covered Species (U.S. Fish and Wildlife Service 1996a, p. 3-21). Nevertheless, as the HCP Handbook recognizes, HCP applicants are encouraged to develop HCPs that contribute to the recovery of, and provide benefits to, the affected species (U.S. Fish and Wildlife Service 1996a, pp. 3-20 to 3-21).

The conservation measures included in the TU MSHCP are analyzed in this Supplemental Draft EIS, and generally include measures to avoid effects on the Covered Species (e.g., conservation of open

space areas), measures to minimize and mitigate unavoidable effects on the Covered Species, and measures intended to contribute to Covered Species conservation and recovery (TU MSHCP Section 4, California Condor, and Section 7, Conservation Plan for Other Covered Species). Among other things, mitigation under the TU MSHCP requires preservation of the TU MSHCP Mitigation Lands, which includes Established Open Space, including the Condor Study Area, and the TMV Planning Area Open Space. The Service disagrees with assertions made in the comments that the ecosystem of the Covered Lands would be destroyed under the TU MSHCP. Under the TU MSHCP, approximately 91% of the Covered Lands would be protected from development in open space areas (Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS).

In general, the design of open space areas under the TU MSHCP takes into account the habitat preferences of the Covered Species and reflects general principles of conservation biology, such as conserving large blocks of habitat, minimizing fragmentation of sensitive lands, and ensuring connectivity. The planning effort evolved from a single species (the California condor) HCP to a multiple species conservation plan for other federally listed species and other species that may be considered for listing in the future (History of the Cooperative and Regulatory Relationship between TRC and the U.S. Fish and Wildlife Service in Section 1.1, Overview and Background, in the TU MSHCP). Master Response 1B, California Condor Critical Habitat, in Volume 2 of this Supplemental Draft EIS provides an extensive discussion of the planning process for identifying the open space system for the California condor, which was based on both historical (pre-1987) and recent (post-1996) occurrences of the condor on Tejon Ranch.

Some commenters suggested that mitigation measures would probably fail to maintain existing conditions. The TU MSHCP is intended to preserve most of the high quality condor habitat in the Covered Lands, to avoid any lethal take of condors, and to maintain habitat conditions for the other Covered Species on the vast majority of the Covered Lands that would be protected in perpetuity under the plan. The responsibility of the Service under Section 10 of ESA is to evaluate the adequacy of the plan in light of the current and future conservation needs of the condor and the other Covered Species and determine whether it meets the permit issuance criteria under the ESA. The statute does not require the maintenance of existing conditions per se; rather it requires that any take be minimized and mitigated to the maximum extent practicable, and that jeopardy to any listed species by avoided (16 U.S.C. 1539(a)(2)(B)(ii) and (iv)).

With respect to the mitigation measures set forth for each resource element in this Supplemental Draft EIS, which are distinct from the minimization and mitigation program reflected in the TU MSHCP, those measures relate to mitigating the secondary effects of the Covered Activities on other resource element areas. While the ITP and TU MSHCP may facilitate some level of development, the ITP authorizes only incidental take, not the activity that results in take. Any development to occur on the Covered Lands must obtain local approvals through the appropriate local process, and the NEPA mitigation measures in this Supplemental Draft EIS are geared to that process. A requirement that a permittee comply with existing law or regulations is legitimate mitigation under NEPA (*City of Auburn v. U.S. Gov't,* 154 F.3d 1025, 1032 [9th Cir. 1998][upholding EIS including mitigation measure requiring compliance with hazardous materials transport regulations]; *Tillamook County v. U.S. Army Corps of Eng'rs,* 288 F.3d 1140, 1144 [9th Cir. 2002]["The Corps adequately described specific mitigation measures in the environmental assessment and Section 404 permit, which require the permittee to comply with dam safety regulations established by the Oregon Water Resources Department, and to take certain steps to prevent erosion at wetland erosion sites and compensate for wetland loss caused by reservoir expansion."]; *San Francisco Baykeeper v. U.S. Army Corps of Eng'rs,* 219 F.Supp.2d 1001, 1019 [N.D. Cal. 2002][upholding compliance with open ocean ballast discharge ordinance as valid mitigation to protect against invasive species, ordinance was not meaningless or redundant despite passage of state statute requiring open ocean ballast discharge that contained sunset provision]).

### 8.3.2.3 The applicant will ensure that adequate funding for the plan will be provided (ESA Section 10(a)(2)(B)(iii)).

A comment raised the issue of adequate funding for the TU MSHCP, as follows:

- The TU MSHCP must ensure there is reliable funding to implement the proposed mitigation measures.

The commenter correctly notes that an HCP must ensure there is adequate, assured funding to implement the proposed mitigation measures (U.S. Fish and Wildlife Service 1996a, Section 3.B.6). Section 9, Funding, of the TU MSHCP describes the funding assurances provided by TRC to implement the TU MSHCP and commits TRC to fully fund the plan. In addition, Section 8 of the Implementing Agreement requires assurances that such funding be in place. The Service notes that the primary mitigation measure provided under the plan is the conservation of the TU MSHCP Mitigation Lands through execution and recording of conservation easements. That measure does not require out-of-pocket funding by TRC. The provisions of the TU MSHCP that require additional funding include retention of one or more biologists by TRC on staff for the life of the ITP to monitor plan implementation; equipment and supplies for the biologists; environmental baseline surveys; pre-activity surveys for Plan-Wide Activities; preconstruction surveys; global positioning system (GPS) transmitters; reimbursement for Service technical assistance; and funding for the adaptive management program and changed circumstances provisions provided in the TU MSHCP. These funding requirements are estimated to result in a one- time cost of $208,000, and an annual cost of $429,000 (Table 9-2 in the TU MSHCP). Additionally, the costs for care and translocation of a single condor, if necessary, are approximately $85,512 per bird per year (Table 9-1 in the TU MSHCP), and are included in the funding commitments provided in Section 9, Funding, of the TU MSHCP.

TRC, a wholly owned subsidiary of the Tejon Ranch Company, is a multimillion-dollar company with various funding sources, including but not limited to land sales, oil and gas revenues, filming, hunting, and agriculture, available to meet these funding obligations. In reviewing whether TRC has adequately assured funding to implement the TU MSHCP under Section 10(a)(2)(B)(ii), 50 CFR 17.22(b)(2)(C) and 17.32(b)(2)(C), the Service will consider TRC's funding commitment in light of the considerable assets of TRC described in Section 9, Funding, of the TU MSHCP and summarized above, and the additional specific funding guarantees discussed in the Implementing Agreement.

Under the TU MSHCP and Implementing Agreement, TRC's Chief Financial Officer or equivalent officer must provide annual written certifications to the Service that funds to implement TRC's obligations for the upcoming year have been budgeted and expenditure of the funds has been approved by all necessary corporate action (Section 8, Funding, of the Implementing Agreement, and Section 9, Funding, in the TU MSHCP). Funding for the care and translocation of any habituated condors (Table 9-1 in the TU MSHCP) would be paid for through a reimbursable agreement with Service, and assured through a rolling letter of credit. Funding for operations costs, as discussed above, would be assured through the annual certification by TRC's Chief Financial Officer, or equivalent, demonstrating that funds have been budgeted and approved for expenditure in an amount sufficient to provide the staffing necessary to carry out operations requirements. Section 8.0 of the Implementing Agreement, included as Appendix A to the TU MSHCP, further provides funding assurances, including, as noted in Implementing Agreement Section 8.2, specific funding security provisions.

### 8.3.2.4 The taking will not appreciably reduce the likelihood of the survival and recovery of the species (ESA Section 10(a)(2)(B)(iv)).

Section 10 requires the Service to determine that the taking will not appreciably reduce the likelihood of the survival and recovery of the Covered Species. As summarized in Section 8.3.3, Critical Habitat Designation, below, commenters raised the concern that the Draft TU MSHCP failed to meet this standard because it did not adequately address effects on critical habitat or the role of the California Condor Recovery Plan. The standard in Section 10(a)(2)(B)(iv) of ESA is identical to the regulatory standard applicable to the Service's jeopardy determination under Section 7 of the ESA. As discussed above, because the issuance of an ITP is a Federal action under Section 7, the Service must complete an internal Section 7 consultation to determine whether the ITP and TU MSHCP is likely to jeopardize the continued existence of any of the Covered Species, or any other federally listed species. The jeopardy determination will consider the effects of the plan on condor habitat and condor recovery. The results of the formal Section 7 consultation will determine whether the permit issuance standard under Section 10(a)(2)(B)(iv) has been satisfied. As part of the internal Section 7 consultation, the Service will specifically analyze whether the proposed permit would adversely modify or destroy critical habitat of the California condor. In making an adverse modification determination, the Service will consider the effects, if any, of the proposed permit and TU MSHCP on the ability of critical habitat to carry out its intended conservation role and function, and will take into account all relevant information regarding the recovery needs of the species, including information in the California Condor Recovery Plan (U.S. Fish and Wildlife Service 1996b). The primary conservation role of the Tejon Ranch critical habitat unit is to provide foraging habitat for the condor and connectivity to other areas of the condor's range. As discussed in detail in Master Response 1B, California Condor Critical Habitat, and Master Response 1E, California Condor Loss of Foraging Habitat, the Service believes that Tejon Ranch would continue to provide connectivity between the western and eastern portions of the condor's historical California range and substantial foraging habitat to support the recovering California population of condors. The Service will make its formal determinations regarding jeopardy and adverse modification of critical habitat resulting from the TU MSHCP in its internal Section 7 biological opinion and Section 10 findings.

### 8.3.2.5 The applicant will ensure that any other measures required by the Service as necessary or appropriate for purposes of the plan will be included; and the Service has received any other requested assurances that the HCP will be implemented (ESA Section 10(a)(2)(A))(iv), 10(a)(2)(B)(v) and 50 C.F.R. 17.22(b)(2)(F) and 17.32(b)(2)(F)).

Section 10 authorizes the Service to require the applicant to include in the plan additional measures deemed by the Service to be necessary or appropriate for the plan and to obtain "such other assurances as it may require that the plan will be implemented" (50 CFR 17.22(b)). Among the measures often required by the Service is an Implementing Agreement to help assure that the applicant will implement the mitigation program and other conditions of the HCP (U.S. Fish and Wildlife Service 1996a). An Implementing Agreement has been incorporated into TRC's ITP application to ensure implementation of the terms of the ITP and TU MSHCP. Additional measures may be required after further review by the Service and consideration of public comments.

Sections 8.3.5, Implementing Agreement, and 8.3.6, No Surprises Rule, below discuss implementation assurances identified in the TU MSHCP and Implementing Agreement that are extended under the No Surprises Rule. The Service also responds to comments on the enforceability of the ITP and TU MSHCP in Section 8.3.7, Enforceability of the ITP and TU MSHCP.

### 8.3.3 Critical Habitat Designation

Comments relating to the role of the critical habitat in the TU MSHCP include:

- Additional areas in the ranch could have been designated as critical habitat, including areas with frequently used cliffs and trees, and areas with favorable winds.
- The effects of the Federal action on critical habitat should be analyzed, and the Service should explain how the issuance of an ITP would be consistent with the designation of California condor critical habitat on the Covered Lands.
- Regardless of the location of critical habitat boundaries, critical habitat is the "force of law" and may not be disregarded.
- The TU MSHCP and Implementing Agreement do not adequately account for the adverse modification of California condor critical habitat due to the TMV Project, thus the Service must describe direct and indirect effects of the action with respect to all critical habitat in California and the influence of the Federal action on the function and conservation role of the affected critical habitat units.
- Legislation is in place to protect the California condor, and allowing development to proceed is a mockery of the legislation.

With respect to the comments that additional areas should be designated as critical habitat, the proposed action here is not designation of critical habitat under Section 4 of the ESA, but review of the TU MSHCP pursuant to Section 10 of the ESA. A revision of the critical habitat designation is beyond the scope of the proposed Federal action under review by the Service.

The Service agrees with the comments stating that condor critical habitat may not be disregarded and that the effects of the proposed action on condor critical habitat must be fully analyzed. Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS includes a discussion of the effects of the proposed action and alternatives on condor critical habitat. Master Response 1B, California Condor Critical Habitat, and Master Response 1E, California Condor Loss of Foraging Habitat, provide additional information specific to that analysis. The Service will also complete a formal analysis of the effects of the proposed ITP and TU MSHCP on condor critical habitat as part of its internal Section 7 consultation. As discussed in Section 8.3.2.4 above, in the evaluation of the effects of the ITP and TU MSHCP on the Covered Species under Section 10(a)(2)(B)(iv) and Section 7, the Service will consider effects on species habitat, including California condor habitat, whether or not the habitat has been formally designated as critical habitat.

One commenter stated that the TU MSHCP, by its own terms, disregards critical habitat, which is contrary to law. However, the comment takes a quotation from the Draft TU MSHCP, p. 4-19, out of context. The full statement reads, "The MSHCP has been designed to continue to provide for, and support, condor feeding, foraging, and overflight activities in the ranch *without regard to* the precise boundaries of the large Township blocks that have been designated as critical habitat." (emphasis added). The intent of this statement in the TU MSHCP is to emphasize that implementation of the TU MSHCP would, by virtue of the preservation of 80,231 acres of condor critical habitat in the TU MSHCP Mitigation Lands and the continuation of hunting and ranching activities that provide critical sources of food for condors on Tejon Ranch, provide for and support ongoing condor use of the ranch both within and outside the boundaries of the critical habitat on the ranch.

The comment that allowing development on the Covered Lands makes a mockery of legislation to protect condors misunderstands the legislative structure of the ESA, which prohibits take of a species unless otherwise authorized in accordance with the terms of the statute. See discussion in Section 8.2.1, Permit Application under ESA Section 10, above. This Supplemental Draft EIS analyzes the effects of the proposed ITP/TU MSHCP on the condor and its critical habitat (Section 4.1,

Biological Resources, in this Supplemental Draft EIS); the effects of the proposed action on the condor and condor critical habitat will also be carefully evaluated by the Service in its internal ESA Section 7 consultation and Section 10 permit decision.

## 8.3.4 Role of the Condor Recovery Plan

One commenter asked about the role of the California Condor Recovery Plan in the ITP and Draft TU MSHCP process, as follows:

- The TU MSHCP should be consistent with the California Condor Recovery Plan (U.S. Fish and Wildlife Service 1996b).

Recovery plans are guidance documents intended to assist the Service, other Federal agencies and non-Federal parties in carrying out actions to recover listed species. They do not impose legally binding commitments on the Service or third parties. (*Nat'l Audubon Soc'y v. Hester* 801 F.2d 405 [D.C. Cir. 1986] [refusing to enforce recovery plan for the condor, rejecting argument that the Services captive-breeding program was inconsistent with its 1979 recovery plan].) The ESA does not require that an HCP meet a recovery standard, although the Service encourages ITP applicants to develop HCPs consistent with a recovery plan's goals (U.S. Fish and Wildlife Service 1996a, p. 3-20). The TU MSHCP includes measures intended to contribute to Covered Species conservation and recovery consistent with the California Condor Recovery Plan. The recovery strategy in the California Condor Recovery Plan focuses on the following:

- increasing reproduction in captivity to provide California condors for release,
- releasing California condors to the wild,
- minimizing California condor mortality factors,
- maintaining adequate foraging, nesting, and roosting habitat for California condor recovery, and
- implementing California condor information and education programs (U.S. Fish and Wildlife Service 1996b, p. 21).

While goals 1 and 2 relate to Service actions only, the Service has evaluated the measures proposed in the TU MSCHP and notes that the TU MSHCP includes a variety of provisions intended to promote goals 3 through 5. For example, the TU MSHCP includes measures to contribute to the California Condor Recovery Plan goals of information and education programs, and to minimize California condor mortality ( Table 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS). The TU MSHCP also includes funding to provide additional GPS units to aid in condor population monitoring and adaptive management.The TU MSHCP also incorporates a perpetual ranchwide ban on lead ammunition, which the California Condor Recovery Plan recognizes is a major factor in the historical decline of the condor, to minimize condor mortality (U.S. Fish and Wildlife Service 1996b, p. 9). Thus, the TU MSHCP incorporates several measures intended to further the goals of the California Condor Recovery Plan.

## 8.3.5 Implementing Agreement

One commenter questioned the authority and purpose of the Implementing Agreement. Other comments on the Implementing Agreement include:

- The ESA does not provide specific authority for the Implementing Agreement; however, the Implementing Agreement should meet the standards of ESA.
- The Implementing Agreement defines nonlethal take much more narrowly than the ESA, and the reason for the narrow definition is not clear.

- The Implementing Agreement inappropriately abdicates the Services future discretion in Section 7 consultations to impose reasonable and prudent measures and terms and conditions.

The Implementing Agreement is intended to clarify the provisions of the TU MSHCP and the processes the Service and TRC intend to follow to ensure successful implementation of the TU MSHCP in accordance with the ITP and applicable law. The Implementing Agreement would be incorporated into the ITP if the Service issues the permit.

One commenter noted that there is no specific authority for the Implementing Agreement. The commenter is correct. The Implementing Agreement is not a creature of statute; it is an optional document signed by the permit applicant and the Service that summarizes and clarifies the applicant's commitments under a proposed HCP and is intended to further ensure that the mitigation, avoidance and minimization measures in the HCP will be implemented (ESA Section 10(a)(2)(A)(iv) and (v)). To that end, the Implementing Agreement, which is included as Appendix A to the TU MSHCP, clarifies a number of obligations of TRC as the permittee. Under Section 5.1.6 of the Implementing Agreement, the permittee must take all necessary action to enforce all applicable terms of the TU MSHCP and the ITP against itself, third-party lessees, and third persons undertaking the Covered Activities. The failure to do so would be considered noncompliance by the permittee and could result in suspension or revocation of the ITP. The Implementing Agreement describes the process for suspension/revocation of the Section 10(a)(1)(B) permit. In addition, the Implementing Agreement specifies that the ITP does not shield third parties from liability under the ESA for take of Covered Species or limit the authority of the state or Federal government to enforce endangered species laws (Implementing Agreement, Sections 3 and 12).

With respect to the definition of *nonlethal take,* this term in the Implementing Agreement is not intended to replace the definition of take under the ESA. Rather, it is a defined term used in Implementing Agreement Section 5.1.1(g) to clarify when the mitigation measures described in Section 4.4.2, Measures to Mitigate Unavoidable Impacts, of the TU MSHCP will be taken.

One commenter asserted that the Implementing Agreement requires the Service to ensure that subsequent consultations under Section 7 of the ESA do not result in terms and conditions in excess of those included in the TU MSHCP, the Implementing Agreement, and/or the ITP, and that this provision is an inappropriate abdication of Service's future discretion under ESA Section 7. The comment misstates Section 11.1 of the Implementing Agreement which applies to future Section 7 consultations on the Covered Activities. Section 11.1 provides: "Any reasonable and prudent measures and terms and conditions in the biological opinion, or views expressed by the [Service] in informal consultation, on the proposed activity shall, *to the maximum extent appropriate*, be consistent with and not in excess of the measures included in the TU MSHCP, this Agreement, and the Permit" (emphasis added). Thus, the Service continues to retain its discretion on future Section 7 consultations.

Comments raising issues related to the adequacy of mitigation measures and conclusions regarding effects on Covered Species and critical habitat are responded to in Master Response 1A–1I, California Condor, and Master Response 15, Procedural Considerations, in Volume II of this Supplemental Draft EIS.

## 8.3.6 No Surprises Rule

Several commenters suggested that the assurances provided in the Implementing Agreement and TU MSHCP were inadequate due to the No Surprises rule. Comments include:

- The TU MSHCP fails to provide increased protections to the species in the face of changed circumstances due to the No Surprises provision.
- The adaptive management program is insufficient to provide for the "recovery" of the species due to the No Surprises rule, which forecloses management changes that are necessary to address new scientific data or address changed circumstances.
- The Permit Revocation rule does not cure the invalidity of the No Surprises rule.
- The No Surprises rule will likely be struck down by the courts; therefore, the TU MSHCP should not include this "illegal" provision.

The No Surprises rule was promulgated by the Service in recognition of the considerable land and monetary commitments made by landowners undertaking habitat conservation planning efforts. The No Surprises rule provides assurances to property owners that the Service will not require additional financial or land commitments beyond those contained in an approved HCP if unforeseen circumstances should arise during the permit term (63 FR 8859 (1998)). Under the No Surprises rule, an HCP must anticipate reasonably foreseeable changes in circumstances (described as changed circumstances under the rule) that could occur during the permit term to species or the geographic area covered by the plan and include measures in the plan to respond to those circumstances (63 FR 8859 8871, 50 CFR 17.3 (definition of changed circumstances),17.22(b)(5) and 17.32(b)(5)).

Provisions relevant to the No Surprises Rule are set forth in the Implementing Agreement at Section 5.2.2 and in Section 8, Changed Circumstances and Plan Implementation, of the TU MSHCP. These No Surprises provisions apply only to unforeseen circumstances (not to changed circumstances that can be reasonably anticipated [U.S. Fish and Wildlife Service 1996a, p. 3-28]). Unforeseen Circumstances are limited to changes in circumstances affecting a species or the geographic area covered by the plan that could not reasonably have been anticipated by TRC or the Service and that result in a substantial and adverse change in the status of a covered species. Under the No Surprises Rule, the Service may require additional measures even in the event of unforeseen circumstances so long as those measures are limited to modifications in the TU MSHCP Mitigation Lands or to operating the conservation program under the plan, such that the original terms of the conservation plan are maintained to the maximum extent possible. Measures that involve additional commitments of land, water or use restrictions are also allowed only with the consent of the permittee (CFR17.22(b)(5), 17.32(b)(5), Section 5.2.2 of the Implementing Agreement, and Section 8.3, Reconciliation of the No Surprises Rule, Unforeseen Circumstances, and Adaptive Management, in the TU MSHCP).

Contrary to the commenter's assertion, the TU MSHCP does in fact require increased protections in the event of a changed circumstance, as discussed in Section 8 of the TU MSHCP. The TU MSHCP includes an adaptive management program that requires increased protections in response to a changed circumstance. In Section 8.1, Changed Circumstances, the TU MSHCP identifies drought/climate change, fire/climate change, and new listings of species or designation of critical habitat not covered by the TU MSHCP. For changed circumstances resulting from drought, fire and climate change issues, the TU MSHCP incorporates preventative measures and responses. For the listing of a new species or designation of critical habitat, the TU MSHCP requires avoidance of jeopardy, take and adverse modification of critical habitat, as appropriate. In Section 9, Funding, of the TU MSHCP, funding is provided to address changed circumstances (Table 9-2 in the TU MSHCP). Additionally, the adaptive management program specifically allows the TU MSHCP to be revised as a result of new information on the effectiveness of mitigation measures, and as a result of the

monitoring programs (Section 8.3, Reconciliation of the No Surprises Rule, Unforeseen Circumstances, and Adaptive Management, in the TU MSHCP). The adaptive management program also has funding allocated to it (Table 9-2 in the TU MSHCP).

The comment cites *Nat'l Wildlife Fed'n v. NMFS*, 524 F.3d 917 (9th Cir 2007) and *Southwest Ctr. for Biological Diversity v. Bartel*, 470 F.Supp.2d 1118 (S.D. Cal. 2006) as requiring the Service to take into account both the survival and recovery of the species when issuing a biological opinion under ESA Section 7. The Service agrees that it must consider the recovery as well as survival of a species in ESA Section 7 consultations.

The commenter relies on the decision in *Southwest Center for Biological Diversity v. Bartel*, 470 F. Supp. 2d 1118 (S.D.Cal. 2006) to support its argument that use of the No Surprises provision in the TU MSHCP/Implementing Agreement results in a shell game that fails to provide for both the survival and recovery of the Covered Species. The Service disagrees with the commenter's assertion and with the suggestion in *Bartel* that an HCP must meet a recovery standard for covered species (See *Spirit of the Sage Council v. Kempthorne*, 511 F.Supp.2d 31, 42-44 [D.D.C. 2007]. [HCP is not required to meet a recovery standard but rather the five issuance criteria in Section 10(a)(2)(B).]). The Service notes that the *Bartel* decision did not question the validity of the No Surprises rule; rather, the court found the Service's issuance of the ITP and approval of the associated HCP flawed because the agency:

- relied on future consultation with the U.S. Army Corps of Engineers (USACE) to protect fairy shrimp, which consultation would not necessarily occur due to an intervening Supreme Court ruling that removed isolated wetlands from Federal jurisdiction;
- deferred analyzing the effects of development until the later consultation process, and
- relied on mitigation measures for transplanting fairy shrimp which were either untested or had proven unsuccessful in practice.

In contrast to situation in *Bartel*, the Service is not "defer[ring] analysis of the direct and indirect effects of development under the MSHCP until future ESA Section 7 consultations" (*Bartel,* 470 F. Supp. 2d at 1139). This Supplemental Draft EIS and TU MSHCP analyze the effects of the Covered Activities on the Covered Species, as will the Service's internal ESA Section 7 consultation on the proposed ITP. The TU MSHCP notes that "Federal wetland permitting within the Plan remains subject to the Fish and Wildlife Coordination Act, Clean Water Act (CWA), and state law, and may require additional avoidance, minimization, and mitigation measures" (Section 1, Introduction and Background, in the TU MSHCP), but such future permitting actions provide an additional level of protection. The TU MSHCP acknowledges that under the CWA wetland permit regulations, the development must first show avoidance, then minimize and mitigate effects on wetlands, meeting the no net wetland loss policies of USACE and state agencies (Section 7, Other Covered Species, in the TU MSHCP). Such future permitting may result in further benefits to Covered Species. The obligation for the proposed action to comply with Federal, state, and local regulations and statutes is also reflected in Chapter 4, Environmental Consequences, in Volume I of this Supplemental Draft EIS. However, neither the Service nor the TU MSHCP is relying on future Federal wetland permitting to mitigate for effects on riparian species. Instead, the TU MSHCP incorporates measures to avoid or minimize and mitigate the effects on all Covered Species which will be analyzed by the Service under Section 10 and Section 7 of ESA to determine whether to issue the ITP. The plan simply acknowledges that future CWA permitting may result in additional protective measures for certain species.

The TU MSHCP also incorporates proven conservation measures for riparian species – preservation and avoidance. As discussed above, a total of 129,318 acres would be preserved under the TU MSHCP, and federally protected wetland areas would be generally avoided in permanently preserved open space. Here, unlike in *Bartel*, the TU MSHCP incorporates adaptive management

provisions that, consistent with the No Surprises rule, are intended to provide for flexibility in the conservation plan to allow for changed circumstances. With respect to California condors, for example, the TU MSHCP explicitly acknowledges that "how condors that utilize Tejon Ranch will adapt to some of the conservation and mitigation strategies proposed in this MSHCP is not entirely known"; therefore, based on monitoring results, the conservation program for condors may be adaptively managed to address microtrash issues and deterrence methods (Section 4, California Condor, in the TU MSHCP). Additionally for the other Covered Species, the effectiveness monitoring set forth in Section 7.3.2, Effectiveness Monitoring, of the TU MSHCP provides: "Overall, the effectiveness monitoring program will assess the biological conditions in the open space system resulting from implementation of the Conservation Plan for Other Covered Species and provide any information needed to implement an adaptive management strategy". Thus, the TU MSHCP is designed to incorporate changes based on lessons learned from monitoring. None of the flaws the court found in the *Bartel* HCP is applicable.

The commenter's citation to *Nat'l Wildlife Fed'n v. NMFS*, 524 F.3d 917, 931 (9th Cir. 2007) is also misplaced. That case dealt with the Service's biological opinion and jeopardy determination under Section 7 of ESA. The court held that the agency's determination was insufficient under the regulations governing ESA Section 7, as the agency had considered only the survival and not the recovery of the species. As discussed above in Section 8.3.2.2 of this master response, the TU MSHCP would include measures to contribute to the recovery of the Covered Species. The Service will consider the effects of the ITP and TU MSHCP on recovery in addition to survival of the Covered Species and other listed species in its internal Section 7 consultation on the proposed ITP.

The TU MSHCP's conservation measures, adaptive management plan, and Implementing Agreement are consistent with the No Surprises regulations at 50 CFR §17.22(b)(5) and (6) and 17.32(b)(5) and (6). Contrary to the commenter's statement, the No Surprises rule has been upheld and has been consistently applied in HCPs nationwide. See *Spirit of the Sage Council v. Kempthorne*, 511 F. Supp. 2d 31 (D.D.C. 2007). Unless and until the Service or a Federal court modifies or otherwise revisits the rule, there is no basis for questioning the validity of the No Surprises rule as applied to the TU MSHCP.

## 8.3.7 Enforceability of the ITP and TU MSHCP

Commenters raised issues regarding the likelihood that the TU MSHCP would be enforceable. Specifically, commenters state that:

- There should be a mechanism to revoke the ITP if requirements of the TU MSHCP are not being met.
- The permittee should not be absolved for the death of any species.
- A failure to comply with an ITP's terms constitutes a take under ESA Section 9, and permit revocation should not be the only enforcement tool.

In response to commenters' concern regarding the enforceability of the ITP, the Service notes that the provisions of an ITP are fully enforceable under the ESA, which provides for permit revocation for violations of the terms of the permit (16 U.S.C. 539(a)(2)(C)). In addition, ESA regulations provide that an ITP may be revoked if continuation of the permitted activities would appreciably reduce the likelihood of survival and recovery of the species in the wild (17 CFR 17.22(b)(8), upheld in *Spirit of Sage Council v. Kempthorne*, 511 F. Supp. 2d 31, 46 (D.D.C. 2007)), and an ITP may be revoked upon willful violations of the ESA or failure to correct a condition that led to permit suspension (17 CFR 13.28(a)). Furthermore, violations of the ESA, including unauthorized takes, are punishable under civil and criminal enforcement mechanisms in Sections 9 and 11 of the ESA; nothing in the Section 10 process removes that authority. Thus, in response to one commenter's concern, the ITP would not

absolve any party, including the permittee from an unauthorized take. Additionally, contrary to another commenter's statement, violation of a permit condition does not automatically constitute a take under ESA Section 9. Rather, as noted above, violation of a permit condition can result in a permit revocation.

In addition, the ESA requires that the Service receive assurances that the terms of an HCP will be implemented (16 U.S.C. 1539(a)(2)(B)). As noted in the discussion above, the Implementing Agreement, which contains additional implementation measures, would be incorporated into the ITP issued by the Service. The violation of those measures, could result in enforcement action. Thus, contrary to the commenter's assertion, permit revocation is not the only enforcement tool available to the Service. As noted in the Implementing Agreement, the Service retains a full range of enforcement remedies, including the ability to seek injunctions, revoke or suspend the permit or seek civil or criminal penalties. Through the ITP, the mitigation, avoidance and minimization measures in the TU MSHCP as well as all permit conditions and Implementing Agreement conditions will be ensured of being implemented and will be enforceable by the Service.

Finally, the Service notes that the ITP does not shield third parties. The Implementing Agreement specifically acknowledges that the ITP does not shield third parties from liability under ESA for take of Covered Species or limit the authority of the state or Federal government to enforce endangered species laws (Implementing Agreement, Sections 3 and 12). In addition to statutory enforcement remedies, the Implementing Agreement contains additional measures, the violation of which could result in revocation of the ITP. Pursuant to the Implementing Agreement, the Service would have ongoing oversight obligations; for example, it would review and approve all management plans or amendments to ensure compliance with the TU MSHCP and ESA (Implementing Agreement, Section 5.1.1(d)). The Implementing Agreement also requires certain additional provisions in perpetuity. These include enforcement of the lead ammunition ban in perpetuity, establishment and enforcement of terms required in covenants, conditions and restrictions (CC&Rs), and protection of open space in perpetuity (Implementing Agreement, Section 5.1.1(a), (b), (e)). The Service would also be named as a third-party beneficiary to conservation easements over open space lands, and the easements must include requirements to continue to submit management plan revisions to the Service (Implementing Agreement, Section 5.1.1(d)).

## 8.3.8 Section 7 Consultation Process and Biological Opinion

Several commenters raise issues relating to the Service's Section 7 internal consultation process. As noted above, the Section 7 consultation process has not been completed. The comments are summarized in each section below.

### 8.3.8.1 Definition of Action Area

One commenter raised questions regarding the TU MSHCP's definition of the action area for the California condor pursuant to Section 7 of the ESA. Specifically, the commenter stated that:

- Analysis of effects on critical habitat and cumulative effects must be completed in the action area.
- The TU MSHCP and EIS should include a clearly defined action area, which is essential to identifying a clear baseline from which to analyze effects on critical habitat and indirect effects on listed species, and to permit a complete review by the Service and the general public.
- The TU MSHCP must clarify whether the Covered Lands is the same as the action area.
- The action area should be defined as the whole of California, not just the Covered Lands in TRC ownership. Empirical evidence supports this definition of action area.

An action area is a component of the Section 7 process under the ESA. The action area refers to the area to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). The action area is also important for determining cumulative effects from future state or private activities, not involving Federal activities, that are reasonably certain to occur in the action area of the Federal action subject to consultation 50 CFR 402.02). The environmental baseline for the Section 7 process includes the past and present effects of all Federal, state, or private actions and other human activities in the action area, the anticipated effects of all proposed Federal actions in the action area that have already undergone formal or early Section 7 consultation, and the effect of state or private actions which are contemporaneous with the consultation in process (50 CFR 402.02) (definition of effects of the action).

Thus, the comments are correct that selecting an appropriate action area is important in analyzing the direct, indirect and cumulative effects of a proposed action in order to make jeopardy and adverse modification determinations pursuant to Section 7 of the ESA. The Service will make a formal determination of the action area during its internal Section 7 consultation on the proposed ITP and TU MSHCP.

This Supplemental Draft EIS, however, includes analysis of the direct, indirect and cumulative effects of the proposed action of an appropriate study area, as defined for each resource area in Chapter 3, Affected Environment, and Chapter 4, Environmental Consequences. In general, the study area used to assess potential direct and indirect effects on biological resources is concurrent with the Covered Lands (Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS). For several resource areas, the cumulative effects analysis area was expanded beyond the Covered Lands (e.g., air quality, water quality). In particular, the assessment of cumulative effects on the California condor was expanded to include a cumulative effects analysis area representative of the range of the California population, including the southern California subpopulation, which generally occurs between San Luis Obispo County and Ventura County, through the Tehachapi Mountains and into the southern Sierra Nevada, and the northern California subpopulation, which generally occurs between the Big Sur Coast in Monterey County and Pinnacles National Monument in San Benito County. The cumulative effects analysis area for condors was expanded because the Service anticipates that there will be more intermixing between the northern and southern California subpopulations of the condor over the 50-year ITP term as the species increases in numbers, and condor use of their historic range in California continues to expand.

The Service disagrees that the NEPA and ESA analyses must consider the entire State of California in considering cumulative effects on condors. As noted above, the cumulative effects analysis area for the condor has been expanded to include the range of the California population.

### 8.3.8.2 Adverse Modification to Critical Habitat

Commenters stated that the ITP must not result in the destruction or adverse modification of critical habitat. Specifically, commenters stated that:

- In its internal Section 7 consultation process, the Service should conclude the proposed action would result in destruction and adverse modification of condor critical habitat.
- One commenter summarized the ESA definition of “destruction or adverse modification” of critical habitat, and concluded that in light of the Gifford Pinchot Task Force decision and Service guidance, the ESA must be read to preclude anything that diminishes the value of critical habitat for either survival or recovery of the affected species.
- Based on the definitions of "critical habitat" and "conservation" under the ESA, if an action's effects threaten either the recovery or survival of a species, the biological opinion must conclude that the action adversely modifies critical habitat.

- The Service must ensure that the HCP is not likely to result in either the destruction *or* the adverse modification of critical habitat for the California condor, and that "destruction" and "adverse modification" cannot be equated.
- Even with the preservation of habitat and avoidance, minimization, and mitigation measures proposed, the loss of habitat and indirect effects of fragmentation will negatively affect the condor and cause direct and indirect take.
- Approval of the ITP would set a precedent disregarding the critical habitat designation for condors and all other endangered species.

The Service will determine whether the proposed ITP and TU MSHCP will adversely modify or destroy condor critical habitat through its internal Section 7 consultation on the proposed action. Under the ESA, at the conclusion of the Section 7 consultation, the Service must issue a biological opinion that, among other things, states the Service's opinion as to whether the Federal action is likely to result in the destruction or adverse modification of critical habitat (16 U.S.C. 1536(a)(2)). As discussed above, the ESA Section 7 consultation will be completed prior to the Services' decision on the permit application. This Supplemental Draft EIS provides important information regarding the Federal action's potential effects on critical habitat (Section 4.1, Biological Resources, in Volume I), which will assist the Service in making this determination. The TU MSHCP also provides information that may assist the Service in the consultation (Section 4, California Condor, in the TU MSHCP). In making the adverse modification determination, the Service will follow the guidance memorandum, *Application of the "Destruction or Adverse Modification" Standard under Section 7(a)(2) of the Endangered Species Act*, issued in December 2004 following the Gifford Pinchot Task Force decision. This memorandum identifies the appropriate analytical framework for conducting adverse modification determinations during ESA Section 7 consultation pending the adoption of a new regulatory definition of destruction or adverse modification. Refer to Master Response 1B, California Condor Critical Habitat, for more information on this topic.

It is important to understand that a critical habitat designation does not set up a preserve or refuge. Rather, designation of critical habitat identifies essential habitat for a listed species, and requires Federal agencies to consult with the Service if their proposed actions may affect critical habitat to ensure that the Federal agency action does not destroy or adversely modify the critical habitat. (U.S. Fish and Wildlife Service 2000). Consideration of effects on critical habitat applies only when Federal funding, permits, or projects are involved; critical habitat restrictions apply to citizens engaged in activities on private land only to the extent that their proposed activities involve Federal agency permitting or funding (16 U.S.C. 1532(a)(2)).

With respect to development in critical habitat, the commenter's contention that development on Tejon Ranch is legally required to avoid condor critical habitat is incorrect. The Service has consistently affirmed that a "critical habitat designation does not necessarily restrict further development. It is a reminder to Federal agencies that they must make special efforts to protect the important characteristics of these areas" (U.S. Fish and Wildlife ServiceMay 2000). The Service's rule establishing condor critical habitat in 1976 states that, "There has been widespread and erroneous belief that a critical habitat designation is something akin to establishment of wilderness area or wildlife refuge and automatically closes an area to most human uses. Actually, a critical habitat designation applies only to Federal agencies, and is a notification to such agencies that their responsibilities pursuant to Section 7 of the Act are applicable in a certain area." (41 FR 41915).

The Federal regulation defining adverse modification or destruction of critical habitat has been invalidated. *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.* (Gifford Pinchot) (9th Cir. 2004). Pending promulgation of a new definition of adverse modification, the Service relies on the statutory definition of critical habitat set forth in Section 4 of the ESA. In the Section 7 consultation on the proposed permit, the Service will formally analyze the effects of the proposed action on the ability of

critical habitat to carry out its intended function and conservation role. Refer to Master Response 1B, California Condor Critical Habitat, in Volume II of this Supplemental Draft EIS, for more information on this topic.

### 8.3.8.3 Jeopardy

Several commenters raised issues regarding whether a jeopardy finding is warranted. Specifically, commenters stated:

- The jeopardy standard and requirement from the ESA must be met.
- Before granting an ITP, the Service must ensure that the ITP will not jeopardize the continued existence of a threatened or endangered species.
- Given the existing population of condors, the avoidable loss of one condor could jeopardize the species in the wild.
- Bifurcation and fragmentation of the condor's range in the Covered Lands has the potential to jeopardize the continued existence of the condor because it is reasonably expected to appreciably reduce the likelihood of both the survival and recovery of the condor in the wild by adversely modifying its critical habitat, reducing its distribution, and reducing its reproduction through to the loss of foraging habitat available in the nesting area to the west.

As accurately summarized by one commenter, the ESA requires that at the conclusion of the Section 7 consultation, the Service must issue a biological opinion that states, among other things, the Service's opinion as to whether the Federal action is likely to jeopardize the continued existence of any endangered species or threatened species (16 U.S.C. 1536(a)(2)). To jeopardize the continued existence of a species means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR §402.2). The Service must ensure that any action it authorizes does not result in jeopardy.

The Service's internal Section 7 consultation will be completed prior to a decision on the permit application for the TU MSHCP. The Service will reach a determination during the Section 7 consultation process as to the likelihood of jeopardy to any of the Covered Species. The Section 10 ITP issuance criteria, which include a finding that the taking will not appreciably reduce the likelihood of survival and recovery of the species, also reflect the regulatory definition of jeopardy under ESA Section 7 (U.S. Fish and Wildlife Service 1996a, p. 6-13). With respect to the comment that the avoidable loss of one condor could jeopardize the continued existence of the species in the wild, it should be noted that there is no allowance or request for lethal take of condors in the TU MSHCP. The TU MSHCP, as related to the California condor, is intended to avoid lethal take of the species and to minimize and mitigate potential nonlethal take resulting from habituation. The proposed TU MSHCP requests up to four nonlethal takes over a 50 year permit term. Such take would involve capturing the habituated birds, rehabilitating the birds for release if possible, or if the birds cannot be retrained, maintaining them in captivity. Refer to Master Response 1C, California Condor Take and Habituation, in Volume II of this Supplemental Draft EIS. The Services formal jeopardy analysis will be completed during the Section 7 consultation process.

With respect to the comment that fragmentation of the condor's range or loss of foraging habitat could jeopardize the species, Section 4.1, Biological Resources, in this Supplemental Draft EIS indicates that flyover habitat would be preserved under the Proposed TU MSHCP Alternative, and the loss of foraging habitat would not be substantial compared with the amount conserved from development. The TU MSHCP is consistent with this analysis. Please refer to Master Response 1A–1I, California Condor, regarding issues of foraging habitat and food source availability, linkages, habituation, and recovery.

## 8.3.9 Bald and Golden Eagle Protection Act

Comments on protection of eagles under the ITP include:

- Any take of golden or bald eagles is illegal because it violates the BGEPA, which imposes strict liability with no provision for take. New rules governing take provisions within the BGEPA must be promulgated by the Service before any implementation of any development on Tejon Ranch.
- Avoidance of lethal take of bald eagles is not enough to avoid liability under the BGEPA because the act also prohibits disturbance of the species.
- Eagles nesting on the Centennial site should be protected.

The commenter is incorrect in asserting that any take of bald eagles is illegal because the BGEPA imposes strict liability with no provision for take. As discussed above, the Service has issued rules permitting the incidental take of eagles and extended BGEPA take authorization to holders of existing ESA authorizations, including specifically allowing take authorization to be extended to future ESA Section 10 ITPs associated with habitat conservations plans for multiple species that include bald or golden eagles as Covered Species (73 FR 29075, May 20, 2008). There is no strict-liability exception that prevents issuance of take permits under these BGEPA permit rules. The Service has not completed its analysis of potential take of bald and golden eagle under the proposed ITP; however, based on review of the proposed action to date, the Service does not believe that the proposed TU MSHCP would result in take of any bald or golden eagles that would require a BGEPA permit.

The commenter is correct that avoidance of lethal take is not enough to avoid liability under the BGEPA due to the prohibition on disturbance. In 2007, the Service defined "*disturb*" under the BGEPA as meaning "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle (2) a decrease in its productivity, by substantially interfering with normal, breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding or sheltering behavior". The BGEPA is not a habitat management law and habitat loss, by itself, is not take under the BGEPA. However, to the extent that a loss of, or other effects to, habitat cause effects on an eagle within the definition of *take* under the BGEPA and its implementing regulations, such effects are prohibited without authorization. To constitute take under the BGEPA definition of *disturb*, a loss of habitat must agitate or bother an eagle to the extent that the loss causes or is likely to cause an injury to, a decrease in the productivity of, or nest abandonment by, an eagle.

As indicated above, the Service has not completed its analysis of the effects of the proposed ITP or the BGEPA on eagles. However, as indicated in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, there is no information that suggests that disturbance of eagles, within the meaning of the BGEPA, would occur under the TU MSHCP. The bald eagle is a wintering visitor that does not breed on site. The Covered Activities would result in the permanent loss of some modeled habitat but are not likely to cause injury to or a decrease in productivity of any bald eagles. Because bald eagles do not breed on the Covered Lands, nest abandonment would not occur. The TU MSHCP would result in the conservation of a significant amount of modeled habitat and would require the avoidance of habitat disturbances during construction activities, the avoidance of cattle-grazing effects on riparian habitat, the distribution of educational information to minimize disturbances caused by human recreation, and the establishment of seasonal setbacks form roost and perch areas (Section 6, Potential Biological Impacts / Take Assessment, in the TU MSHCP). These measures should avoid effects on and any take of bald eagles within the meaning of the BGEPA.

With respect to golden eagles, Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS indicates the Proposed TU MSHCP Alternative would result in some loss of modeled habitat within the Covered Lands . However, the TU MSHCP would provide for the conservation of

extensive primary breeding/forging and foraging habitat in large, unfragmented open space on the Covered Lands, which should be adequate to continue to support breeding pairs of the golden eagle within the plan area. In addition, under the TU MSHCP all active golden eagle nest sites on the Covered Lands would be conserved. The TU MSHCP also incorporates specific avoidance measures to avoid injury to, a decrease in productivity of, or nest abandonment by any eagle. These measures include surveys, application of a view-shed analysis, and implementation of development setbacks and disturbance avoidance measures, such as closing recreational trails near active nests sites during the breeding season to avoid effects on golden nests and associated foraging habitat (TU MSHCP, Section 6). With the conservation of extensive primary breeding/foraging and foraging habitat in large, unfragmented open space in the Covered Lands (91% of the primary breeding habitat and 92% of breeding/foraging habitat for golden eagle preserved under the Proposed TU MSHCP Alternative), it is anticipated there would be sufficient habitat to continue to support the existing known active golden eagle nests (three total) within the Covered Lands. These measures should avoid effects on, and, consequently, any take of, golden eagles within the meaning of the BGEPA. The habitat effects on bald and golden eagles cited above are not anticipated to rise to the level of a take under BGEPA for the following reasons:

- The Covered Activities within the eagle habitat areas, including the development of the TMV Project, are not activities likely to "agitate or bother" a bald or golden eagle so as to cause injury, a decrease in eagle productivity, or nest abandonment. This is attributable to the measures incorporated into the TU MSHCP, summarized in bullet 3 below, which are designed to avoid effects on bald and golden eagles from the Covered Activities and require protection of golden eagle nests and substantial foraging habitat for both bald and golden eagles.
- The bald eagle does not breed on the Covered Lands and all active golden eagle nests within the Covered Lands would be preserved under the TU MSHCP.
- The TU MSHCP describes several conservation measures, and avoidance and minimization measures, to protect bald and golden eagles. These includes conserving 99% of the bald eagle foraging habitat, and 91% of the primary breeding habitat and 92% of the breeding/foraging habitat for the golden eagle. Although up to 58% of bald eagle wintering habitat could be directly affected by the TU MSHCP Covered Activities, there is no evidence of a large wintering population on the Covered Lands, and conservation measures would require additional protections and enhancements of the wintering habitat that would be preserved (e.g., signage, education, and diurnal perch protection). The conservation plan sets out a series of additional required measures to manage any potential effects on bald and golden eagles including avoiding and minimizing habitat disturbances during construction activities, long-term (operations) effects, cattle-related effects, and the effects of human recreation and pet activities in foraging and wintering habitat. These measures would be likely to result in a net conservation benefit to eagles and would be compatible with the preservation of bald eagles and golden eagles.

The TU MSHCP does not analyze effects on eagles from the proposed Centennial development mentioned by one commenter, except with respect to cumulative effects (Master Response 12, Cumulative Effects). However, as noted above, there is no evidence that the TU MSHCP Covered Activities, in combination with the Centennial development, would result in take of bald or golden eagles because significant bald and golden eagle habitat would be preserved (Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS). Further, it is presumed that the Centennial Project itself would need to comply with the ESA and BGEPA, so that bald and golden eagles would persist in the region.

**Table MR9-1. Comments Addressed in Master Response 9**

| Comment | Commenter |
|---|---|
| G1-1 | U.S. Department of Agriculture Forest Service (Moore, Randy) |
| G1-2 | U.S. Department of Agriculture Forest Service (Moore, Randy) |
| G1-3 | U.S. Department of Agriculture Forest Service (Moore, Randy) |
| G1-4 | U.S. Department of Agriculture Forest Service (Moore, Randy) |
| G1-5 | U.S. Department of Agriculture Forest Service (Moore, Randy) |
| G1-6 | U.S. Department of Agriculture Forest Service (Moore, Randy) |
| G1-7 | U.S. Department of Agriculture Forest Service (Moore, Randy) |
| G2-1 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-6 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-7 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-13 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-14 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G3-1 | Kern County Planning Department (James, Ted) |
| G3-2 | Kern County Planning Department (James, Ted) |
| G3-3 | Kern County Planning Department (James, Ted) |
| G3-4 | Kern County Planning Department (James, Ted) |
| G3-5 | Kern County Planning Department (James, Ted) |
| G3-6 | Kern County Planning Department (James, Ted) |
| G3-7 | Kern County Planning Department (James, Ted) |
| G3-8 | Kern County Planning Department (James, Ted) |
| G3-9 | Kern County Planning Department (James, Ted) |
| G3-10 | Kern County Planning Department (James, Ted) |
| G3-11 | Kern County Planning Department (James, Ted) |
| G3-12 | Kern County Planning Department (James, Ted) |
| G3-13 | Kern County Planning Department (James, Ted) |
| G3-14 | Kern County Planning Department (James, Ted) |
| G3-15 | Kern County Planning Department (James, Ted) |
| G3-16 | Kern County Planning Department (James, Ted) |
| G3-17 | Kern County Planning Department (James, Ted) |
| G3-18 | Kern County Planning Department (James, Ted) |
| G3-19 | Kern County Planning Department (James, Ted) |
| G3-20 | Kern County Planning Department (James, Ted) |
| I162-1 | Boyd, Ramon |
| I424-1 | Duchamp, Mark |
| I424-2 | Duchamp, Mark |
| I424-3 | Duchamp, Mark |

| Comment | Commenter |
|---|---|
| I424-4 | Duchamp, Mark |
| I425-2 | Duchamp, Mark |
| I425-5 | Duchamp, Mark |
| I426-1 | Duchamp, Mark |
| I426-2 | Duchamp, Mark |
| I426-3 | Duchamp, Mark |
| I426-4 | Duchamp, Mark |
| I426-5 | Duchamp, Mark |
| I426-6 | Duchamp, Mark |
| I426-7 | Duchamp, Mark |
| I426-8 | Duchamp, Mark |
| I426-9 | Duchamp, Mark |
| I426-10 | Duchamp, Mark |
| I426-11 | Duchamp, Mark |
| I426-13 | Duchamp, Mark |
| I624-1 | Hamber, Janet |
| I625-1 | Hamber, Janet |
| I625-2 | Hamber, Janet |
| I626-1 | Hamber, Robert |
| I626-2 | Hamber, Robert |
| I626-3 | Hamber, Robert |
| I626-4 | Hamber, Robert |
| I626-14 | Hamber, Robert |
| I626-15 | Hamber, Robert |
| I626-16 | Hamber, Robert |
| I626-17 | Hamber, Robert |
| I626-18 | Hamber, Robert |
| I626-19 | Hamber, Robert |
| I626-20 | Hamber, Robert |
| I627-14 | Hamber, Robert |
| I627-15 | Hamber, Robert |
| I627-16 | Hamber, Robert |
| I627-17 | Hamber, Robert |
| I627-18 | Hamber, Robert |
| I627-19 | Hamber, Robert |
| I627-20 | Hamber, Robert |
| I627-21 | Hamber, Robert |
| I627-43 | Hamber, Robert |
| I682-2 | Hinds, Leo Mark |
| I682-3 | Hinds, Leo Mark |
| I682-4 | Hinds, Leo Mark |
| I682-5 | Hinds, Leo Mark |

| Comment | Commenter |
|---|---|
| I682-8 | Hinds, Leo Mark |
| I682-9 | Hinds, Leo Mark |
| I930-1 | MacKay, Linda |
| I930-4 | MacKay, Linda |
| I930-5 | MacKay, Linda |
| I930-6 | MacKay, Linda |
| I930-7 | MacKay, Linda |
| I930-8 | MacKay, Linda |
| I930-9 | MacKay, Linda |
| I930-10 | MacKay, Linda |
| I930-11 | MacKay, Linda |
| I930-12 | MacKay, Linda |
| I930-13 | MacKay, Linda |
| I930-14 | MacKay, Linda |
| I930-15 | MacKay, Linda |
| I930-16 | MacKay, Linda |
| I948-14 | Manning, Jeffrey A |
| I948-15 | Manning, Jeffrey A |
| I1054-1 | Moore, Stan |
| I1123-1 | Normann, Ken |
| I1163-9 | Palmer, Bruce |
| I1301-1 | Risebrough, Bob |
| I1350-1 | Sachau, B |
| I1450-1 | Snyder, Noel |
| I1463-1 | Stafford, Lynn |
| I1463-2 | Stafford, Lynn |
| I1463-3 | Stafford, Lynn |
| I1463-4 | Stafford, Lynn |
| I1463-5 | Stafford, Lynn |
| I1463-7 | Stafford, Lynn |
| I1463-8 | Stafford, Lynn |
| I1463-9 | Stafford, Lynn |
| I1607-1 | Wallace, Sylvia |
| I1607-3 | Wallace, Sylvia |
| I1607-4 | Wallace, Sylvia |
| I1658-1 | Willer, Benjamin |
| O1-1 | California Native Plant Society (Suba, Greg) |
| O1-2 | California Native Plant Society (Suba, Greg) |
| O1-6 | California Native Plant Society (Suba, Greg) |
| O2-4 | Center for Biological Diversity (Keats, Adam) |
| O2-5 | Center for Biological Diversity (Keats, Adam) |
| O2-6 | Center for Biological Diversity (Keats, Adam) |

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| O3-3 | Center for Biological Diversity (Keats, Adam) |
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| O4-1 | Center for Biological Diversity (Keats, Adam) |
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| O4-560 | Center for Biological Diversity (Keats, Adam) |
| O7-1 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O7-2 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O7-3 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-1a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-2 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-3 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-4 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O10-1 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-2 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-3 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-4 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-7 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-8 | TriCounty Watchdogs (de Leeuw, Jan) |
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| O10-13 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-16 | TriCounty Watchdogs (de Leeuw, Jan) |
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| O10-20 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-22 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-24 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-25 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-26 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-27 | TriCounty Watchdogs (de Leeuw, Jan) |
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| O10-31 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-32 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-35 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-37 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-38 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-39 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-44 | TriCounty Watchdogs (de Leeuw, Jan) |
| O11-1 | TriCounty Watchdogs (de Leeuw, Jan) |

# 9.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP that were administrative in nature. Table MR9-1 provides a list of the commenters and a reference to the individual comment, as summarized below. The parenthetical reference after each summary bullet below indicates where a response to that comment is provided.

- Clarifications.
  - Clarification requests from the U.S. Department of Agriculture (USDA) regarding the Pacific Crest National Scenic Trail. (Response provided in Section 9.2.1.1, Clarifications Requested by the U.S. Department of Agriculture Regarding the Pacific Crest National Scenic Trail.)
  - Clarification requests from Kern County. (Response provided in Section 9.2.1.2, Clarifications Requested by Kern County.)
  - Miscellaneous editorial corrections and clarifications. (Response provided in Section 9.2.1.3, Miscellaneous Editorial Corrections and Clarifications.)
- Miscellaneous nonspecific comments and opinions such as introductory comments, conclusive comments, or opinion statements. (Response provided in Section 9.2.2, Miscellaneous Nonspecific Comments and Opinions.)
- Perceived flaws and inconsistencies in the documents.
  - General flaws. (Response provided in Section 9.2.3.1, General Document Flaws.)
  - Flaws identified in *The Mountain Enterprise* Article (Response provided in Section 9.2.3.2, *The Mountain Enterprise* Article.)
  - Center for Biological Diversity (CBD) Plan description comments. (Response provided in Section 9.2.3.3, Center for Biological Diversity Project Description Comments.)
- Scope of the Covered Lands
  - Consideration of existing oil field leases in the Covered Lands. (Response provided in Section 9.2.4.1, Oil Field Leases.)
  - Consideration of existing inholdings in the Covered Lands. (Response provided in Section 9.2.4.2, Inholdings.)
- Requests to extend the comment period. (Response provided in Section 9.2.5, Requests to Extend Comment Period.)
- References cited by CBD. (Response provided in Section 9.2.6, References Cited by the Center for Biological Diversity.)

# 9.2 Responses to Substantive Comments

## 9.2.1 Clarifications

A variety of comments requested technical corrections and clarifications. This response discusses those requests in the following categories: clarifications requested by the USDA, clarifications requested by Kern County, and miscellaneous clarification and correction requests.

### 9.2.1.1 Clarifications Requested by the U.S. Department of Agriculture Regarding the Pacific Crest National Scenic Trail

The USDA provided comments regarding the characterization of the Pacific Crest National Scenic Trail in the Draft TU MSHCP and Draft EIS, and attached the *Federal Register* notice identifying the selected route. They requested the correct title for the Pacific Crest National Scenic Trail be used in the EIS, and that Section 3.4, Existing Land Uses, of the TU MSHCP reference the portion of Covered Lands identified as a selected route for the Pacific Crest National Scenic Trail selected route. The USDA also requested that Section 3.8.4, Non-Motorized Transportation, of the EIS reference the Pacific Crest National Scenic Trail, because the selected location for the Pacific Crest National Scenic Trail is in the Covered Lands.

The Services acknowledges receipt of the *Federal Register* notice with the selected route for the Pacific Crest National Scenic Trail. Section 2.1.2, Overview of Activities Considered in the Alternatives, and Section 4.0.4.2, Other Reasonably Foreseeable Actions, in Volume I of this Supplemental Draft EIS discuss the status of the efforts to reroute the Pacific Crest National Scenic Trail. Similarly, Section 3.4, Existing Land Uses, of the TU MSHCP describes existing land uses in Covered Lands. The Pacific Crest National Scenic Trail is not an existing land use—it is a potential future land use that has not yet been subject to formal proposal-—and is therefore not referenced in this section of the TU MSHCP, or described as a reasonably foreseeable action in the cumulative effects analysis in this Supplemental Draft EIS. Specifically, the Ranchwide Agreement includes provisions for the negotiation of an offer for dedication of approximately 10,000 acres to accommodate the rerouting of the Pacific Crest National Scenic Trail from its current location to the east and south of Tejon Ranch to on the floor of the Antelope Valley to a new alignment crossing the ranch. Although the general path of the Pacific Crest National Scenic Trail was envisioned by the U.S. Forest Service to cross Tejon Ranch in the future (38 *Federal Register* [FR] 2832), no dedication of such easement has been made by the ranch and no formal proposal has yet been made to relocate the trail from its current location south and east of the ranch. Under the TU MSHCP, if a future route for the Pacific Crest National Scenic Trail is proposed within the Covered Lands, the Service must review and approve the route for the trail, in coordination with the U.S. Forest Service, based on the trail's compatibility with the conservation values of the TU MSHCP Mitigation Lands and compliance with the Federal Endangered Species Act (ESA). Section 3.8.3, Nonmotorized Transportation, in Volume I of this Supplemental Draft EIS discusses the presence of existing publicly dedicated bicycle and pedestrian routes in Covered Lands. As described above, the Pacific Crest National Scenic Trail does not transect Covered Lands. Therefore, no change has been made to this section.

### 9.2.1.2 Clarifications Requested by Kern County

Kern County reviewed the Draft TU MSHCP and requested clarifications of a general nature, clarifications of the TU MSHCP's relationship to the TMV Specific Plan and clarifications related to other developments. Each of these three categories is discussed below.

## General Clarifications

The commenter noted that Kern County Board of Supervisors is the regulatory body with land use authority for approval of land uses on Tejon Ranch and stated that comments are being provided to ensure accuracy of information presented in the TU MSHCP. Specific general clarification comments are provided below.

- The commenter noted that the TMV Specific Plan is in draft form, and requested that the final documents add "Draft" when referencing the TMV Specific Plan, fix language that appears to assume approval of the TMV Specific Plan, clarify that neither the Tejon Ranchcorp (TRC) nor the offsite infrastructure for the Tejon Castac Water District (TCWD) has present entitlement from the County, and reflect such changes in the text and figures of the TU MSHCP.
- The commenter objected to the introduction language on page 1-1 of the Draft TU MSHCP that appeared to assume that development in accordance with the general plan would result in fragmented habitat, because no such development has been approved.
- The commenter requested that the introduction clarify that the lands to the east are private, not public.
- The commenter requested clarification regarding why the project description stated that the fuel management plan, which is part of (and applicable to the full) TMV Specific Plan, only covers 1,700 acres.
- The commenter stated that the “CSA” is not defined, but appears to be referring to the Condor Study Area; to avoid confusion with County Service Areas, the commenter suggested that the documents simply spell out the reference rather than using an acronym.

The commenter’s statement that Kern County Board of Supervisors is the entity with land use authority in Tejon Ranch is acknowledged. Regarding the commenter's recommended modification to identify the TMV Specific Plan as “Draft,” this was appropriate at the time the Draft TU MSHCP was out for public review; since that time, however, the TMV Specific Plan and the Tejon Mountain Village Environmental Impact Report (TMV EIR) have been approved by the Kern County Board of Supervisors (Kern County 2009). These approvals are reflected in both the revised TU MSHCP and this Supplemental Draft EIS. Similarly, because the TMV Project and associated infrastructure were approved by the Kern County Board of Supervisors in 2009, the language in the TU MSHCP referencing “approval” of the TMV Project by the County has not been modified.

Regarding the commenter's concerns about characterization of a more fragmented landscape under Kern County's general plan on page 1-1 of the Draft TU MSHCP, it is acknowledged that the Kern County Board of Supervisors has not approved land use plans that would result in a more fragmented landscape. The statement on page 1-1 of the Draft TU MSHCP references development that could occur in the Covered Lands under existing Kern County zoning and land use designations. General plan land use designations are depicted in Figure 10-2 of the TU MSHCP, including the 4.3, Specific Plan Required, zoned areas. Potential development allowed under the general plan land use designations would require additional approvals from the Kern County Board of Supervisors. Regarding the commenter's request to clarify statements on page 1-1 of the Draft TU MSHCP regarding public lands to the east, the existing public lands to the east of Tejon Ranch, as shown on TU MSHCP Figure 1-1, include lands owned by the Bureau of Land Management and California State Lands Commission, as well as private lands. Accordingly, the TU MSHCP has been revised to clarify that Tejon Ranch and the Covered Lands are situated between an assortment of existing public lands to the west and a checkerboard of public lands to the east.

The 1,772-acre estimate for fuel modification in the TU MSHCP is the same as the 1,773-acre secondary impact area identified in the TMV EIR. (Note that the acreage estimate for fuel modification in the TU MSHCP and EIS has been corrected from 1,772 to 1,773 acres in this

Supplemental Draft EIS.) This fuel management is a permitted use in open space in the TU MSHCP, and the effects and benefits to Covered Species of the fuel modification activities in the 1,773 acres are discussed further in Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity, in Volume II of this Supplemental Draft EIS. It is recognized that the fire protection plan for the TMV Project will apply to the entire 26,417-acre TMV Specific Plan Area, not just the 1,773-acre fuel modification area. For the purposes of the TU MSHCP, any fuel modification in the TMV Specific Plan Development Envelope is considered part of the Disturbance Area.

Regarding references to the 37,100-acre Condor Study Area, CSA was defined on the Acronyms and Abbreviations list on Draft TU MSHCP page xxi as the Condor Study Area; however, in response to this comment and to avoid confusion between the abbreviation used in the TMV Specific Plan and the TMV EIR, the TU MSHCP and EIS have been revised to spell out Condor Study Area rather than use the acronym.

## Clarifications Regarding the TU MSHCP's Relationship to the TMV Specific Plan

The commenter recommended modification of the definition of the TMV Planning Area in the Final TU MSHCP, and noted that Draft TU MSHCP Figure 1-3 should show the portion of Oso Canyon that is in Kern County and in the TMV Project. The commenter further requested an explanation for why the TMV Specific Plan has 21,350 acres of open space and the TMV Planning Area has 23,001 acres of open space. The commenter requested revisions to Table 2-1 in the Final TU MSHCP to clarify that the area west of Interstate 5 (I-5) is not in the TMV Specific Plan Area. The commenter asked how the TU MSHCP would be implemented or modified if the draft TMV Specific Plan or other commercial and residential development activities, such as the Lebec/Existing Headquarters area, undergo revisions through the County's environmental and public review process. Finally, the commenter stated that the TMV Planning Area (28,353 acres) appears to not coincide with the TMV Specific Plan Area (26,417 acres).

Revisions to the TU MSHCP have been made to clarify the components of the TMV Planning Area, which does not equate with the TMV Specific Plan Area. The TMV Planning Area consists of three components: the TMV Specific Plan Area (i.e., TMV Project), Oso Canyon, and West of Freeway. The TMV Planning Area is 28,253 acres in size, and includes the 26,417 acre TMV Specific Plan Area. Total open space in the TMV Planning Area is 23,001 acres, as referenced in the comment. This includes the 21,335 acres of open space in the TMV Specific Plan Area, as well as 1,666 additional acres that would be preserved as open space. (Note: the commenter indicates that TMV Specific Plan open space is 21,350 acres. The correct acreage is 21,335 acres.) The Oso Canyon development area identified as part of the TMV Planning Area in the TU MSHCP is not located in the TMV Specific Plan Area. Revisions to the TU MSHCP have also been made to clarify that the area west of I-5, West of Freeway, is a component of the TMV Planning Area, not the TMV Specific Plan Area. The description of the development areas has been clarified in Section 2, Plan Description and Activities Covered by Permit, of the TU MSHCP, and summarized in Table 2-1 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS.

Regarding implementation of the TU MSHCP relative to the land use authority of Kern County and revisions to Commercial and Residential Development Activities that might result from Kern County reviews and land use approvals, no features of the TU MSHCP replace the land use authority of Kern County in review and approval of development in these areas. To the extent that future Kern County development approvals in these areas are within the parameters of these development areas, as described in the Draft TU MSHCP (e.g., 5,252 acres may be disturbed in the TMV Planning Area), there would be no effect on implementation of the TU MSHCP.

Finally, as noted above, the TMV Planning Area consists of three components: the TMV Specific Plan Area, Oso Canyon, and an area West of Freeway. The TMV Specific Plan includes the TMV Project,

and the area defined as West of Freeway includes County designations in the Frazier Park/Lebec Specific Plan and the O'Neill Canyon Specific Plan.

## Clarifications Regarding Other Development in the TU MSHCP

The commenter requested several clarifications regarding the development areas listed below.

- **Ranch Headquarters.** The commenter noted that the Draft TU MSHCP seems to depict the Ranch Headquarters on the west side of I-5 while the commenter is only aware of Ranch Headquarters being on the east side of I-5. The commenter further noted that in the general plan land use designation area 4.3 (Specific Plan Required), development would require County approval. The commenter noted that the TU MSHCP does not create a commitment on the part of the County to approve any future development proposals. The commenter included the Maximum Land Use Density Table for the general plan 4.3 area for reference.
- **Oso Canyon.** The commenter stated that the Draft TU MSHCP includes 1,666 acres in Oso Canyon and that inclusion of this area in the TMV Specific Plan boundary would require a General Plan/Specific Plan amendment subject to review under the California Environmental Quality Act (CEQA), and approval by the Kern County Board of Supervisors. The commenter also stated that Figure 1-3 in the TU MSHCP incorrectly shows Oso Canyon in Los Angeles County.
- **Grapevine.** The commenter requested that the Grapevine development be described as a "proposed development" in the environmental setting section of Section 3.5 of the Draft TU MSHCP. The commenter requested clarification in Section 4.2.3.5 of the Draft TU MSHCP regarding the status of the Grapevine development and stated that an expectation of development of this project is speculative at this time.
- **Wind Wolves.** The commenter requested that clarification be provided in Section 3.5 in the Draft TU MSHCP that the Wind Wolves Preserve lands are private lands in the jurisdiction of Kern County and subject to the Kern County General Plan and the Kern County Zoning Ordinance.
- **Lebec.** The commenter noted that a portion of the area surrounding Ranch Headquarters are depicted in the Draft TU MSHCP as "…may be within a 4.3 (Specific Plan Required) General Plan area named Lebec", and provides the Density Table for the Lebec 4.3 area from the Kern County General Plan.

Regarding Ranch Headquarters, the Draft TU MSHCP recognizes that the physical Ranch Headquarters (or TRC headquarters) is located east of I-5. The description of the development areas in the TU MSHCP has been clarified to explain that the Lebec/Existing Headquarters Area includes the 170-acre Lebec area west of I-5 and the Ranch Headquarters area east of I-5. It is recognized that future development in this area would require review and approval by Kern County and that the existing headquarters areas falls in the Kern County General Plan land use designation 4.3 area named Lebec.

Regarding Oso Canyon, the Oso Canyon development area is identified as part of the TMV Planning Area in the Draft TU MSHCP, and is not located in the TMV Specific Plan Area. The portion of Oso Canyon that is considered in the TU MSHCP is located in Kern County and more clearly identified on Figure 2-1 in the revised TU MSHCP.

In response to the comments regarding Grapevine, the text in Section 4.2.3.5, Other Actions Likely to Affect Tejon Ranch Critical Habitat, of the TU MSHCP has been modified to clarify the discussion of this conceptual project.

In response to the comment regarding Wind Wolves Preserve, the text in Section 3.5, Planned Surrounding Land Uses Outside Covered Lands, of the TU MSHCP has been modified to clarify the status of these private lands within the jurisdiction of Kern County.

Regarding Lebec, as discussed above, the Lebec/Existing Headquarters Area includes the 170-acre Lebec area west of I-5 and the Ranch Headquarters area east of I-5. Clarification of the same has been made in both the TU MSHCP and Supplemental Draft EIS. It is recognized that future development in this area would require review and approval by Kern County.

### 9.2.1.3 Miscellaneous Editorial Corrections and Clarifications

Commenters make a variety of comments requesting corrections and clarifications to the Draft TU MSHCP and EIS, including the following:

- One commenter suggested that the Service correct a cross referencing error in the Draft EIS to Section 4.2.2.3.
- One commenter noted that the description of the Proposed TU MSHCP Alternative in Section 4.2.3 of the Draft EIS appeared to misstate the area within which development would not occur.
- Two commenters stated concerns that language in the two following quotes was conflicting: "Tejon poppy was not observed during surveys in the Covered Lands"; "No individuals of Tejon poppy have been observed in the Covered Lands, so the only loss would be that of modeled habitat until or unless future surveys reveal the species' presence in areas where Covered Activities would remove them" (Draft TU MSHCP at page 6-63); and "Because this species was found in the surveyed portion of Covered Lands, the potential of this species to occur elsewhere in suitable habitat on non-surveyed portions of Covered Lands is high…" (Draft TU MSHCP at page 6-64).
- One commenter questions references to the TMV Planning Area boundary on Draft EIS Figures 2-7 and 2-8.

Regarding Draft EIS Section 4.2.2.3 (*sic*) (this is a cross-referencing error; the comment actually refers to Draft EIS Section 4.2.2.2, Potential Surface Water Flow and Groundwater Recharge Effects), the commenter is correct that Draft EIS Section 4.2.2.2 should have cited Section 3.2.1.2, Surface Drainages. That section describes surface drainages as "generally intermittent and sustain flows only after extended wet periods or large storm events." References in this Supplemental Draft EIS have been updated as appropriate, and every effort has been made to confirm the cross references.

Regarding Draft EIS Section 4.2.3, development would not occur in the 116,523-acre TU MSHCP Mitigation Lands, which consist of Established Open Space (93,522 acres) and TMV Planning Area Open Space (23,001 acres). Additionally, development would not occur in the Existing Conservation Easement Areas (12,795 acres). Section 4.2.3, Proposed TU MSHCP Alternative, in this Supplemental Draft EIS has been revised to clarify this.

The statement that Tejon poppy was found in the Covered Lands cited by commenter is incorrect in the Draft TU MSHCP. The text in Section 6.3.6, Tejon Poppy, of the TU MSHCP has been revised as follows:

> Because this species was found ~~within the surveyed portion of~~ adjacent to Covered Lands, the potential of this species to occur ~~elsewhere~~ within suitable habitat on non-surveyed portions of Covered Lands is high…

The statements in the Draft EIS regarding the lack of presence of the Tejon poppy in the Covered Lands are correct.

Finally, Figures 2-7 and 2-8 in the former Draft TU MSHCP showed the TMV Planning Area boundary, which is incorrectly labeled on the legend. The TMV Planning Area boundary has been revised in the figures in Chapter 2, Proposed TU MSHCP Alternatives, in Volume I of this Supplemental Draft EIS.

## 9.2.2 Miscellaneous Nonspecific Comments and Opinions

A number of commenters provided nonspecific comments, information, and/or general opinions regarding the TU MSHCP and EIS. These comments do not address specific features of the TU MSHCP and EIS and are addressed in the following categories: nonspecific comments and opinions.

### 9.2.2.1 Nonspecific Comments

The following nonspecific comments were provided on the Draft EIS and/or Draft TU MSHCP.

- Various commenters provided their group's or individual's description or credentials.
- Various commenters provided introductory remarks or explanations to their comments.
- Various commenters cross reference or include other comment letters.
- Various commenters requested copies of the final documents; one commenter requested a copy of the Pacific Advanced Civil Engineering (PACE) report (2006); two commenters request a paper copy of the Draft TU MSHCP and Draft EIS.
- One commenter stated he does not support the Draft TU MSHCP because the plan has no provision for hunting and another commenter requested that the Service deny the TU MSHCP approval because hunting, fire prevention, control of feral pigs, and coyote hunting are not part of the plan.
- One commenter apologized for submitting comments late. One commenter stated he would be sending additional comments. One commenter submitted photos of condors that he had posted on the internet. Another commenter stated they reserve their right to submit additional comments on the EIR.

The Service acknowledges the receipt of descriptions and credentials submitted by all commenters, as well as other letters referenced and introductory remarks provided in all comment letters. Substantive responses to topics raised by commenters in introductory remarks, as amplified by subsequent specific comments in those letters, are provided in the appropriate master responses.

Regarding requests for copies of public notices and specific documents, the revised documents will be made available to all commenters during the public review period for this Supplemental Draft EIS. A copy of the PACE report was sent to the appropriate commenter in July 2009; of note, however, Draft EIS Section 3.2.1.4, Castac Lake, incorrectly listed the PACE report with a publication date of 2003. The PACE report was published in 2006. This Supplemental Draft EIS has been revised to correct the citation to the PACE report.

Regarding commenters disapproval of the TU MSHCP because it has no provisions to allow hunting (or fire prevention), as described in Section 3.4, Existing Land Use, of the TU MSHCP, while hunting is not a Covered Activity under the TU MSHCP, commercial hunting is an existing activity that will continue on the Covered Lands and throughout the ranch. Ongoing commercial hunting programs at the ranch will continue to include those for feral pigs as well as for elk, deer and other traditional game animals. There is no existing hunting program at the ranch for coyotes. As described in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume 1 of this Supplemental Draft EIS, commercial hunting is assumed to continue to occur throughout the Covered Lands unless otherwise noted. Fire protection (called fuel modification) is a Covered Activity.

Regarding the submission of comments a day late, the Service acknowledges receipt of the comments. Regarding reserving rights to provide additional comments on the EIR, to the extent that the commenter is directing comments to the TMV EIR, that document is not before the Service.

#### 9.2.2.2 Opinions

The following opinions were provided on the Draft EIS and/or Draft TU MSHCP.

- One commenter provided a letter detailing opinions about the character and motivations and comments of another commenter.
- Various commenters expressed opinions that Tejon Ranch is a *de facto* natural reserve or should be maintained as such, and support the fight against urbanizing it.
- One commenter expressed the opinion that Tejon Ranch is partially owned and fully controlled by Wall Street asset strippers and claimed that their money has convinced Sierra Club, Audubon California, Natural Resources Defense Council, and others to support the TU MSHCP. Commenters claimed that these entities justify their support by stating that urbanization will occur on only 10% of the site, with the remaining 90% forever protected, mitigation measures (including lead ammunition ban), and provision of a full-time job for a biologist. The commenter claimed that Tejon Ranch is practicing a type of blackmail by threatening the dismemberment of the ranch and its piecemeal sale.
- One commenter expressed his opinions that protecting 90% of the condor habitat is not enough, development is not needed because there are empty housing tracts and homes throughout Kern County; that the Kawaiisu Indians have been “killed off” and kept from being listed on the National Registry of Native Americans because of the Tejon Ranch Company; that the Tejon Ranch Company has no conservation intentions, asserting that it has historically “bought politicians” while simultaneously “taking away from people of California." The commenter asked the Service to stop "this cycle of oppressive behavior”.
- One commenter requested that the Service protect the birds instead of developers.
- Various commenters expressed their opinion that development should be less than the current plans.
- Various commenters expressed the opinion that government authorities and agencies should support the interests of the people they represent and that the Service should do everything possible to protect local species.
- Various commenters expressed appreciation of the comprehensive TU MSHCP or support for the TU MSHCP and appreciation for the commitment of Tejon Ranch to environmental stewardship and sensitive development patterns.
- Various commenters expressed their disapproval of the TU MSHCP and requested that the Service deny the application.

The above comments express the commenters’ opinion as to the qualifications, opinions, and credentials of other commenters, the actions of the Tejon Ranch Company, general sufficiency of the proposed preservation under the TU MSHCP, the proper action by the Service, or the type of development that should be proposed. These comments do not address the sufficiency of the environmental analysis in the Draft EIS and TU MSHCP. Therefore, no additional responses are provided. Please refer to Master Response 8, Regulatory Considerations, in Volume 2 of this Supplemental Draft EIS for a detailed discussion of the standards and processes associated with ESA Section 10.

## 9.2.3 Perceived Flaws in the Documents

A number of commenters generally stated that the Draft TU MSHCP and/or the Draft EIS are large and difficult to comprehend. The comments state that the documents and maps contain flaws and inconsistencies requiring that they be withdrawn and recirculated or denied. Many comments did not provide information to support these contentions. Many commenters cited an article from *The Mountain Enterprise* newspaper (a two-part article published on April 10, 2009 and April 17, 2009) (Hedlund and Penland 2009) to support their contention. Another commenter alleged that TU MSHCP and Draft EIS have inconsistent project descriptions and inaccurate maps, and that together such errors and omissions make any reasonable assessment impossible. The response below addresses the above comments in three parts: commenters' general statements, *The Mountain Enterprise* article, and the CBD comments on this topic.

### 9.2.3.1 General Document Flaws

Various commenters expressed general and introductory remarks and opinions regarding document flaws without citing specific flaws in the Draft EIS or Draft TU MSHCP. Some commenters stated that the maps are unclear and without sufficient topographic references. Commenters suggested withdrawing the Draft EIS and Draft TU MSHCP from public review due to these flaws.

These comments express the commenters' opinions and refer generally to errors and inconsistencies, but do not raise particular issues or identify particular flaws. For the reasons described in Chapter 1, Purpose and Need for the Federal Action, in Volume 1 of this Supplemental Draft EIS, the EIS is being recirculated for public review. The Draft TU MSHCP has also been updated. As part of the revision process, every effort has been made to provide consistency between the terminology and figures in the two revised documents.

### 9.2.3.2 The Mountain Enterprise Article

Commenters included a two-part article from *The Mountain Enterprise* dated April 10, 2009 and April 17, 2009 (Hedlund and Penland 2009). The first segment of the article recounts receipt of a hard copy of the Draft TU MSHCP and Draft EIS and provides a review of these documents. The second segment of the article provides responses received from the Service and TRC. The article claims that the documents are "fundamentally flawed." As summarized below, the article addressed general comments; alleged inconsistencies in the Draft TU MSHCP; alleged inconsistencies between the Draft EIS and Draft TU MSHCP; alleged inconsistencies regarding the description of the proposed development; and published the official responses to the first segment from the Service and TRC in the second segment. The comments are set forth and responded to in this order.

#### General Comments

The article generally described the Draft EIS and Draft TU MSHCP as a four-volume, approximately 5,000-page set, describes the reviewers and their credentials, and states that they spent 100 hours of review time. The article stated that the documents were "poorly edited, proofed, and coordinated", and that the sloppiness of the documents indicated they were released in haste, linked to the change in Washington administration. The article further stated that their review consisted of identifying discrepancies rather than reporting on the terms and conditions, and questions whether it was lawful for the Service to proceed given the documents' flaws.

In an attempt to clarify the terminology used in the EIS, the Service has added a summary table of common terms used to describe the various components of the alternatives to Chapter 2, Proposed TU MSHCP and Alternatives, in Volume 1 of this Supplemental Draft EIS. This table (Table 2-1), along with Tables 2-5 and 2-6 in that chapter, provide definitions for commonly used terms (e.g., Covered

Lands, Covered Activities, Condor Study Area, TMV Planning Area), and summarize the different land uses proposed under each of the alternatives in the EIS (e.g., number or proposed dwelling units, acreage of Development Envelope, acreage of Disturbance Area). The Service anticipates that these new and revised summary tables will assist the public in understanding the nature of the proposed action. Regarding the size of the documents, the TU MSHCP is not unusually large or atypical for this type of Federal action.

The Service was prepared to circulate the Draft EIS and Draft TU MSHCP at the time it was publicized in the *Federal Register*. It is the commenters opinion that it was released in haste due to a change in administration. Further, the Service disagrees that the public comment period was flawed or unlawful. Nevertheless, for the reasons provided in Chapter 1, Purpose and Need for the Federal Action, in Volume 1 of this Supplemental Draft EIS, the Service has decided to recirculate the EIS for public comment, and the applicant has made revisions to the TU MSHCP. Every effort has been made to provide consistency between the terminology and figures in the two revised documents.

## Comments on Inconsistencies in the Draft TU MSHCP

The commenter identified the following inconsistencies in the Draft TU MSHCP.

- The commenter identified acreage discrepancies in Appendix C to the Draft TU MSHCP and the Tejon Ranch California Condor Conservation and Management Plan (Condor Plan) (Bloom 2008). Specifically, the article noted that the "TMV Specific Plan" is called out once as 7,800 acres (Bloom 2008, p. 4), referred to elsewhere as the proposed TMV development at 7,900 acres (Bloom 2008, p. 36), and referenced in other locations as the "TMV Planning Area" at 26,417 acres (Bloom 2008, p. 22).
- The commenter stated that, on Figure 4-6 of the Draft TU MSHCP, "the area labeled 'TMV Planning Area' (called out as 26,417 acres in the Condor Plan) is much smaller and wholly contained in the Specific Plan boundary (called out as 7,800 to 7,900 acres in the Condor Plan.)," and Figure 4-9 of the Draft TU MSHCP "shows a 'proposed development' (which is the same shape and location as Figure 4-6's TMV Planning Area) also as wholly in the TMV Specific Plan boundary." Thus, the article states that pages 4, 22, and 36 of the Condor Plan state the opposite of the information portrayed on Figures 4-6 and 4-9 of the Draft TU MSHCP, and that at least one map used different naming conventions to label TMV development.
- The commenter stated the boundary on Figure 4-10 in the Draft TU MSHCP, labeled TMV Planning Area, appeared to be the same boundary as that labeled TMV Specific Plan in Figure 4-9, noting that color convention is not consistent between the maps. Commenters also noted that the majority of the TMV Planning Area falls in condor critical habitat.
- The commenter stated that California condor critical habitat is not defined in the definitions section of the Draft TU MSHCP, but the term is used in both the maps and text.
- The commenter stated that the distinction between the Condor Study Area and California condor critical habitat is important because, according to the Draft EIS maps, the planned TMV development and other land uses on Tejon Ranch lie outside the Condor Study Area, giving the impression that there will be minimal effect on condors.
- The commenter stated that, "according to the HCP maps," most of the proposed land development with Tejon Ranch, except Centennial, while outside the Condor Study Area, falls in designated California condor critical habitat.

Regarding references in the Condor Plan, as noted in the Executive Summary of the Draft TU MSHCP, that plan was prepared by the applicant for the TMV Project approved by Kern County. The Condor Plan reviewed the effect of the TMV Project on the condor and its critical habitat. The commenter is correct that the Condor Plan incorrectly referred to the 26,417-acre TMV Specific Plan area as the

TMV Planning Area on page 22. Additionally, the development area in the TMV Specific Plan approved by the County was 7,860 acres, which was rounded in one instance to 7,800 and to 7,900 in another instance.

The referenced development areas on Figures 4-6 and 4-9 of the Draft TU MSHCP were accurate. The Specific Plan Boundary was the same in both maps. The development areas were different between the maps because Figure 4-6 only showed development (in orange) proposed for coverage in the TU MSHCP and Figure 4-9 showed development (in yellow) identified in the Ranchwide Agreement, which includes proposed development outside the boundaries of the Covered Lands. The area labeled TMV Planning Area on Figure 4-6was bigger than the Specific Plan Boundary and does not equate with the development areas shown in orange. The TMV Planning Area was not depicted on Figure 4-9 at all because Figure 4-9 was intended to show critical habitat in the context of proposed development on the ranch generally. Thus, both figures were correct. Although the outlines of the TMV Planning Area were correct on Figure 4-6, the Service agrees it would be helpful to more clearly depict that boundary; therefore, all these figures are clarified and/or corrected in this Supplemental Draft EIS as well as in the revised TU MSHCP. Figures 4-9 and 4-10 of the Draft TU MSHCP were created for two different purposes. Figure 4-9 depicted all proposed development as identified in the Ranchwide Agreement, including the TMV Specific Plan Development Envelope analyzed in the Draft TU MSHCP as well as other proposed development outside the Covered Lands. Figure 4-10 depicted California condor global positioning system (GPS) locations relative to condor critical habitat and does not depict any proposed development areas. The purple boundary depicted in Figure 4-9 was the TMV Specific Plan Area, while the red boundary depicted on Figure 4-10 was the TMV Planning Area, both of which were noted in the legends for those figures. It is not necessary to have the color conventions consistent between these figures, provided the legends for each figure accurately represent the information in the graphic. Regardless, as noted above, all these figures are clarified and/or corrected in this Supplemental Draft EIS as well as in the revised TU MSHCP, and every effort has been made to conform the colors, where possible.

The commenter is correct in noting that a majority of the TMV Planning Area is located in California condor critical habitat. For a discussion of the regulatory requirements related to critical habitat, please refer to Master Response 8, Regulatory Considerations, in Volume 2 of this Supplemental Draft EIS. For a discussion of effects of the Proposed TU MSHCP on California condor critical habitat, please refer to see Section 4.1, Biological Resources, in Volume 1 of this Supplemental EIS and Master Responses 1A through 1I in Volume II of this Supplemental Draft EIS.

A definition of federally designated critical habitat is included in Section 3.1.6, California Condor, in Volume 1 of this Supplemental Draft EIS, and has been added to Section 4.2, Potential Biological Impacts / Take Assessment, of the TU MSHCP.

Section 4.1, Biological Resources, including Figure 4.1-1, in Volume 1 of this Supplemental Draft EIS provides additional information and depicts the relationship of development to California condor critical habitat. Master Response 1B, California Condor Critical Habitat, in Volume 2 of this Supplemental Draft EIS provides further discussion of critical habitat in relation to the Condor Study Area.

## Comments on Inconsistencies between the Draft EIS and Draft TU MSHCP

The following comments identified potential inconsistencies between the Draft EIS and Draft TU MSHCP.

- The commenter stated that there is no reference to California condor critical habitat in the Draft EIS, and that the Draft EIS only uses the term Condor Study Area. Therefore, comparing maps and text presentations in the Draft EIS with that of the Draft TU MSHCP regarding condor range is not possible. The commenter further stated that 61 out of 65 maps in the Draft EIS depict only

the Condor Study Area, instead of the much larger critical habitat boundary in Tejon Ranch. By referencing only the Condor Study Area instead of the designated critical habitat, the Draft EIS makes it appear as if there would be minimal effects on condors, and therefore fails to disclose effects on condors, including effects from utility easements and access.

- The commenter noted that the Draft EIS states there are 132,043 acres of critical habitat on the ranch and 570,400 acres of critical habitat in California, and the Draft TU MSHCP states there are 132,009 acres of critical habitat on the ranch and 605,190 acres of critical habitat in California.
- The commenter stated that while four figures in the Draft EIS depicted critical habitat, only two of them depicted the TMV Project in relationship to critical habitat (Figures 4.1-1 and 4.1-2).
- The commenter stated that Figures 4.1-1, 2-7 and 2-8 in the Draft EIS reversed the names of the Specific Plan Boundary and the TMV Planning Area development.
- The commenter stated that Figure 4.1-2 in the Draft EIS used all one color for "Development" without identifying individual development areas, such as the TMV Project or Centennial.
- The commenter stated that because condor critical habitat is not referred to anywhere in the text of the Draft EIS, except for one historical note, there is, therefore, no discussion of the cumulative effects of all Covered Activities on condor critical habitat.
- The commenter stated that the maps are hard to read at the 11-inch by 17-inch size, and states it is difficult to discern the different colors on the maps. The commenter stated that, in the Draft EIS, Figure 3.7-4, colors on the legend did not appear on the map; in Figure 2-1, the color on the map and legend were different; and Figure 4-11 was unreadable.

Critical habitat for the California condor was discussed in Section 3.1.6.1, Biological Resources, California Condor, Status and Distribution, Section 4.1.3.2, Proposed TU MSHCP Alternative-Potential Effects on Species, Covered Species, California Condor, and Section 4.1.6.1, Summary of Effects to California Condor, of the Draft EIS and depicted in Draft EIS Figures 3.1-4, 3.1-5, 4.1-1 and 4.1-2. The discussions and representations of critical habitat in the Draft EIS were consistent with those presented in the Draft TU MSHCP, including the use of identical figures (e.g., Draft EIS Figures 4.1-1 and 4.1-2 are the same as Figures 4.6 and 4.9 in the TU MSHCP). A discussion of California condor critical habitat is also provided in Sections 3.1 and 4.1, Biological Resources, in Volume 1 of this Supplemental Draft EIS. Additionally, new figures, which consistently depict California condor critical habitat with the Covered Lands, are also included in this Supplemental Draft EIS.

Master Response 1B, California Condor Critical Habitat in Volume 2 of this Supplemental Draft EIS, and, in particular, Section 1B.2.3, Definition and Significance of the Condor Study Area, in that master response, provides a discussion of the relationship between federally designated critical habitat and the Condor Study Area. As described in that master response, the Condor Study Area boundary is based on the Service's review of the critical habitat boundary, on-the-ground topography, telemetry, historical condor use, and GPS condor data through 2007. It encapsulates the area most used by condors on Tejon Ranch for roosting, historically and currently, as well as suitable habitat for foraging, and reflects the 37,000-acre area initially identified and delineated by the Service's Condor Recovery Program as a critical area of concern. Although development under the TU MSHCP has been designed to avoid the Condor Study Area, the Draft EIS analysis also included an assessment of the effects of the Covered Activities on federally designated critical habitat, as described in Section 4.1, Biological Resources. As such, the EIS adequeatly considers and discloses potential effects on both the Condor Study Area and federally designated critical habitat.

The Tejon Ranch critical habitat unit includes 134,871 acres. There are 127,774 acres (not including Not-A-Part Inholdings) of federally designated California condor critical habitat within the boundary of Tejon Ranch and 605,194 acres in the State of California. This Supplemental Draft EIS has been corrected to reflect these precise numbers.

Figures 3.1-4 and 3.1-5 in Section 3.1, Biological Resources, of the Draft EIS, did not depict proposed development in the Covered Lands because those figures were intended to reflect existing conditions in the Covered Lands. Figures 4.1-1 and 4.1-2, included in Section 4.1, Biological Resources, of the Draft EIS, did depict the TMV Project (as well as other development under the Proposed TU MSHCP Alternative). Figure 4.1-2 also showed other developments under the Ranchwide Agreement. Regardless, as noted above, all these figures are clarified and/or corrected in this Supplemental Draft EIS as well as in the revised TU MSHCP.

The TMV Planning Area was correctly labeled on Figure 4.1-1 of the Draft EIS; however, the Service agrees it is helpful to more clearly differentiate the TMV Planning Area and the TMV Specific Plan Area boundaries on that figure. The commenter is correct that the TMV Planning Area boundary was incorrectly labeled on Figures 2-7 and 2-8 in the Draft EIS. All these figures are clarified and/or corrected in this Supplemental Draft EIS.

The purpose of Figure 4.1-2 of the Draft EIS was to disclose and depict all proposed development referenced in the Ranchwide Agreement, not to identify or analyze individual development projects. Regardless, as noted above, all these figures are clarified and/or corrected in this Supplemental Draft EIS as well as in the revised TU MSHCP.

As noted above, the Draft EIS, as well as this Supplemental Draft EIS, include a discussion of the effects of all of the alternatives on California condor critical habitat, as well as an analysis of the cumulative effects of the proposed alternatives with other projects that may occur in the future. Please refer to Chapter 4, Environmental Consequences, for a discussion of the approach used in this Supplemental Draft EIS to complete the cumulative effects analysis.

Figure 3.7-4 in the Draft EIS showed the Kern County General Plan land use designations for the Covered Lands, which are now out of date after the approval of the TMV Project. Figure 2-1 of the TU MSHCP, referenced in the comment, accurately depicted the Proposed TU MSHCP Land Use Summary. The colors that appear on the legend are the same as those that appear on the map. Figure 4-11 of the TU MSHCP, identified in the comment as unreadable, depicts the final Condor Study Area demarcation, existing and permitted power lines, power plants, and other structures. The comment does not indicate how the map was unreadable. Regardless, as noted above, all these figures are clarified and/or corrected in this Supplemental Draft EIS as well as in the revised TU MSHCP.

## Comments on the Description of the Proposed Development

The following comments were provided on the description of the proposed development.

- The commenter stated that the Draft EIS, Section 2.3.3.1.3, discussion of the TMV Planning Area and the TMV Specific Plan Area is confusing in its breakdown of total acreages for these areas (26,417 acres vs. 28,253 acres) and its breakdown of development footprint acreages (7,800 vs. 7,900 acres).
- The commenter stated that the Draft EIS uses the term *TMV Project* as a "catch-all" that combines the Specific Plan and the Planning Area components and notes that the Draft EIS states that the TMV Project would include "up to 3,450 residences, up to 160,000 square feet of commercial development, two golf courses, an equestrian center, up to 750 hotel rooms, and up to 350,000 square feet of support uses".
- The commenter stated that Draft EIS Figure 2-10 was unclear in its depiction of the west of I-5 portion of the TMV Planning Area, showing "three different, non-contiguous patches of the same color," which would support "approximately 173 dwelling units and 304,920 square feet of commercial space."

- The commenter stated that the Draft EIS states that TRC is not currently planning to develop the Lebec/Existing Headquarters area, but then states that development of that area would be consistent with the Kern County General Plan.
- The commenter stated that the Draft EIS states that implementation of the TU MSHCP would result in the disturbance of 5,533 acres (4% of Covered Lands), 3,633 dwelling units, and 1,804,390 square feet of commercial space. The commenter questioned the Draft EIS's determination of open space acreage, stating that the actual acreage of development is controversial and "ridiculously small," and hypothesize that the developers are "counting as 'open space' all the acreage that they are selling to homeowners."
- The commenter stated that the 3,450 residences and 174 residences and 9 dwelling units described in the Draft EIS total 3,632 units not 3,633 units, and quotes Section 2.3.3.1.3 of the Draft EIS regarding Lebec/Existing Headquarters: "no current development plans for this area" and "1,339,470 square feet of commercial development would be consistent with the Kern County General Plan." Commenters stated that the dwelling unit areas are shown in the Kern County General Plan and that the commercial development of 1,339,470 exceeds 100 acres.
- The commenter stated that 160,000 square feet and 304,920 square feet of commercial space total 464,920 square feet of commercial space, not 1,804,390, as stated in the Draft EIS, and that the 350,000 square feet (30 acres) of hotel space should be considered commercial. The commenter asked if the commercial acreage is accurate with respect to including hotels and golf courses, and for the definition of the Disturbance Area. The commenters express concern about including open space from the 20- to 80-acre parcels and suggest including undeveloped areas from the 20- to 80-acre parcels within the disturbance footprint. Furthermore, commenters note that the analysis of Disturbance Areas should consider urban–wildland interface issues and address degradation in habitat values associated with greenbelt acreage, as opposed to uninterrupted open space not subject to edge effects.

As noted under General Comments above, the Service has added a summary table of common terms used to describe the various components of the alternatives to Chapter 2, Proposed TU MSHCP and Alternatives, in Volume 1 of this Supplemental Draft EIS. The Service anticipates this table (Table 2-1) will assist the public in understanding the nature of the proposed action.

The description of the development area for each of the alternatives, and its relationship to the assumed Disturbance Area, has been clarified in Chapter 2, Proposed TU MSHCP and Alternatives, and the methods discussion in Section 4.1, Biological Resources, in Volume 1 of this Supplemental Draft EIS. Under the Proposed TU MSHCP Alternative, the TMV Planning Area is 28,253 acres (Table 2-1). As summarized in Table 2-5, the Development Envelope for the Proposed TU MSHCP Alternative is assumed to be 8,817 acres, and the maximum Disturbance Area in this Development Envelope would be 5,533 acres. Within the TMV Specific Plan Area and Oso Canyon, a subarea in the TMV Planning Area, the Development Envelope is assumed to be 8,366 acres and the Disturbance Area would be 5,082 acres. Because the exact location of disturbance in the Development Envelope is not known, the EIS analyzes the full Development Envelope as if it were all permanently affected.

Regarding use of the term *TMV Project* as a "catch-all," in this Supplemental Draft EIS, the terms *TMV Planning Area* and *TMV Specific Plan Area* (which encompasses the TMV Project) are separately defined and referenced. These terms are also defined in Table 2-1.

The Service concurs that the color distinctions in the map legend of Figure 2-10 of the Draft EIS could be clarified, and has revised all the figures to more clearly depict the area West of Freeway. The commenter correctly notes that no development plans are currently proposed in West of Freeway; however, because development could occur there during the 50-year proposed term of the incidental take permit (ITP), development consistent with the general plan land use designations is analyzed in this Supplemental Draft EIS under all alternatives except the No Action Alternative.

The commenter also correctly quotes Section 2.3.3.1.3 of the Draft EIS. The Service acknowledges that the Lebec/Existing Headquarters Area is not included in the TMV Specific Plan Area. Chapter 2, Proposed TU MSHCP and Alternatives, in Volume 1 of this Supplemental Draft EIS has been revised to more clearly describe the development areas. Similarly, The TU MSHCP has been revised to more clearly describe the Development Envelope and the Disturbance Areas.

Regarding characterization of the total number of dwelling units in the Draft EIS as "3,632 units, not 3,633 units," as explained in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume 1 of this Supplemental Draft EIS, a total of 3,632 dwelling units is assumed to occur under the Proposed TU MSHCP Alternative. The breakdown of residential units and commercial square footage is summarized for each alternative in Table 2-5. The Draft EIS did not mischaracterize the total proposed commercial square footage under the Proposed TU MSHCP Alternative, as the total includes the square footage that could be constructed in all of the development areas (Draft EIS, page 2-12). As noted above, this Supplemental Draft EIS provides a summary of the commercial square footage that could be constructed under each alternative in Table 2-5 in Chapter 2, Proposed TU MSHCP and Alternatives. . Note that the resort uses (750 hotel rooms and up to 350,000 square feet that could be developed as hotel lobby support services, food and beverage service, golf clubhouses, equestrian facilities and private recreation facilities) are not included in the commercial development totals described above, but are accounted for in the ground disturbance acreage.

With respect to calculating the Disturbance Area in areas designated as agricultural under the Kern County General Plan, the general plan allows for one dwelling unit on 80- and 20-acre lots, so an average permanent land Disturbance Area of 2 acres is assumed. This disturbance factor reflects the amenities and services typically associated with homes on large rural lots, as well as residential and ancillary structures, driveways, and landscaped areas. Chapter 2, Proposed TU MSHCP and Alternatives, in this Supplemental Draft EIS provides a more detailed description of the methodology used to calculate the Disturbance Areas for each of the alternatives considered in this Supplemental Draft EIS.

Please refer to Master Response 7, Edge Effects, Fuel Modification and Wildlife Habitat Connectivity, in Volume 2 of this Supplemental Draft EIS for a discussion of potential edge effects as they relate to wildlife habitat.

## Comments Relating to the Second Segment of *The Mountain Enterprise* Article

The following comments were provided on the second segment of *The Mountain Enterprise* article (Hedlund and Penland 2009).

- The second segment of the article follows up on the conclusions of the first segment by publishing the responses from the Service and the applicant.
- The Service responded that the documents were "comprehensive draft documents" and were "weighty" to allow the process to be as transparent as possible. The Service encouraged further public comments.
- The applicant responded that it disagreed with the article's conclusion that there are "major flaws" in the documents and encouraged further public participation. The applicant further provided the credentials of Pete Bloom, the primary author of the Condor Plan.
- The second segment concluded with *The Mountain Enterprise* editors' opinions that the reviewers were not concerned with length of the documents or their complexity, and reiterates the "sloppiness" and "contradictions" described in Part One. The article notes that the newspaper article was not intended to be a public comment for the record, but questions the meaning of a public comment period when the documents are so flawed.

The Service acknowledges the information provided in response to the April 10, 2009 article in *The Mountain Enterprise* (Hedlund and Penland 2009), and notes the comments summarized above. Please refer to the responses provided to the specific concerns raised in the first segment. As described above, where appropriate, the information in the EIS and TU MSHCP have been updated and clarified to provide a more clear understanding of the proposed action. Further, this Supplemental Draft EIS and revised TU MSHCP are being circulated for additional public review and comment.

Regarding the characterization of their articles as reporting, not public comment, and the articles' intent to motivate reporting about the Draft EIS and Draft TU MSHCP, the comments are noted.

Regarding the concerns as to the meaningfulness of the public comment period given perceived document flaws, the Service notes that this Supplemental Draft EIS and revised TU MSHCP are being circulated for additional public comment.

### 9.2.3.3 Center for Biological Diversity Project Description Comments

One commenter stated that the Draft TU MSHCP and Draft EIS contain the following inaccurate and inconsistent project descriptions and maps that confuse the reader and make assessment of the project impossible.

- The commenter stated that the Draft TU MSHCP contains inconsistencies regarding the acreage of totals of the development components and does not use a uniform system for describing the components. As an example, the comment points to the description of the Development Envelope of the TMV Project, which is referenced slightly differently in two places in the Draft TU MSHCP (7,860 Development Envelope or 7,800 Disturbance Area), but then is not included in Table 2-1 of the TU MSHCP. The commenter also noted that the Condor Plan, Appendix C to the Draft TU MSHCP, refers to a 7,900 CEQA envelope.
- The commenter stated that the Draft TU MSHCP has not consistently used the identified Disturbance Area to analyze the effects of the development and instead uses only the 5,082 acre figure of actual development. The commenter points to a statement on page 2-11 of the Draft TU MSHCP which described the net Disturbance Area of the TMV Project as 5,082 acres, and to a statement on page 4-60 that stated that only 5,082 acres will actually be effected.
- The commenter stated that the Draft TU MSHCP is further confused by the inconsistent use of the terms *TMV*, *TMV Project*, *TMV Planning Area*, and *TMV Specific Plan*.
- The commenter stated that the maps included in the Draft TU MSHCP and Draft EIS are confusing and do not inform the reader. The comment references *The Mountain Enterprise* article (Hedlund and Penland 2009) (see above) for a specific discussion of the mapping criticisms.
- The commenter stated that the inaccuracies and omissions in the Draft EIS render the description of the baseline conditions unusable in violation of the National Environmental Policy Act (NEPA), citing Half Moon Bay Fisherman's Marketing Association case for the proposition that without establishing baseline conditions, there is no way to determine what effect an action will have on the environment.
- The commenter stated that the inconsistencies described above are repeated throughout the Draft EIS, making an accurate analysis of the effects impossible and requested that the Draft EIS and Draft TU MSHCP be withdrawn and corrected before being reissued.

As described above in Section 9.2.3.2, *The Mountain Enterprise* Article, the Service has added a summary table of common terms used to describe the various components of the alternatives to Chapter 2, Proposed TU MSHCP and Alternatives, of this Supplemental Draft EIS. This table

(Table 2 1), along with Tables 2-5 and 2-6 in that chapter, provide definitions for commonly used terms (e.g., Covered Lands, Covered Activities, Condor Study Area, TMV Planning Area), and summarize the different land uses proposed under each of the alternatives considered in this Supplemental Draft EIS (e.g., number or proposed dwelling units, acreage of Development Envelope, acreage of Disturbance Area). The Service anticipates that these new and revised summary tables will assist the public in understanding the nature of the proposed action.

These tables, and other revisions made to the TU MSHCP and Draft EIS, clarify the acreage totals and use of terms in both documents. Specifically, the EIS and TU MSHCP have been revised to clarify that there are two main development areas proposed under the TU MSHCP: the TMV Planning Area (which includes the TMV Specific Plan Area, Oso Canyon and West of Freeway) and the Lebec/Existing Headquarters Area, as well as a small parcel for the TCWD Bear Trap Turnout infrastructure project. The Development Envelope represents an area in which permanent disturbance effects could occur; the Disturbance Area is a smaller amount of land that would be permitted to be permanently disturbed under the ITP. Because the exact location of disturbance in the Development Envelope is not entirely known, the TU MSHCP and the EIS analyze effects on the larger Development Envelope.

The Development Envelope analyzed in the TU MSHCP and in this Supplemental Draft EIS for the Proposed TU MSHCP Alternative totals 8,817 acres and is composed of 7,860 acres in the TMV Specific Plan Area, 506 acres in Oso Canyon, 170 acres West of Freeway, 265 acres in Lebec/Existing Headquarters Area, and 16 acres in the TCWD Bear Trap Turnout Project (Table 2-5 in this Supplemental Draft EIS). In addition, 200 acres of permanent ground disturbance are analyzed qualitatively for Plan-Wide Activities associated with the TU MSHCP in this Supplemental Draft EIS and TU MSHCP. The ITP would limit the area that could be permanently disturbed as follows: permanent ground disturbance in the TMV Planning Area would be limited to 5,252 acres (5,082 acres in the TMV Specific Plan Area/Oso Canyon; and 170 acres in West of fFreeway), 265 acres in the Lebec/Existing Headquarters Area (which is likely over inclusive, and is the same as the Development Envelope for this area), and 16 acres at the DWR parcel or operations and expansion of TCWD facilities (which again, is likely over inclusive, and is the same as the Development Envelope). Thus, the total Disturbance Area from Commercial and Residential Development Activities that would be allowed under the Proposed TU MSHCP Alternative would be 5,533 acres. Permanent ground disturbance from the Plan-Wide Activities would be limited to 200 acres. With respect to the alleged inconsistencies in the Condor Plan (Appendix C to the Draft TU MSHCP), the commenter is correct that page 4 of the Condor Plan references the TMV Project Development Envelope as the "7,900 acre CEQA envelope." As discussed above, the Condor Plan is now part of the TMV EIR record. The TMV EIR analyzed a 7,867 acre envelope, but the discrepancy between these numbers is due to rounding and is inconsequential. As explained above, this Supplemental Draft EIS and the TU MSHCP have been revised to clarify the relevant acreages and terms considered in both documents, and to clarify any perceived inconsistencies in how the Draft TU MSHCP Development Envelope or Disturbance Area were considered in the effects analysis. Specifically, the effects analysis for the Proposed TU MSHCP Alternative assumes that an 8,817-acre Development Envelope would be affected in the Covered Lands, and that an 8,366-acre Development Envelope would be affected in the TMV Planning Area. The ITP would limit actual permanent disturbance to no more than 5,533 acres in the Covered Lands and 5,252 acres in the TMV Planning Area.

Regarding references to *The Mountain Enterprise* article (Hedlund and Penland 2009), please refer to the responses to that article discussed above.

Regarding the statement that an inaccurate description of the proposed action renders the baseline unusable, the Service notes that the proposed plan—the TU MSHCP—does not equate with the baseline. The baseline consists of existing conditions (or the *preproject environment*, as set forth in the Half Moon Bay Fisherman's Marketing Association case referenced in the comment), not the

definition of the plan. A detailed discussion of the affected environment in provided in Chapter 3, Affected Environment, in Volume 1 of this Supplemental Draft EIS.

Regarding statements that the draft documents should be withdrawn due to inaccuracies and reissued, the applicant has updated its TU MSHCP and the Service has determined that a Supplemental Draft EIS is warranted for the reasons described in Chapter 1, Purpose and Need for the Federal Action, in Volume 1 of this Supplemental Draft EIS.

## 9.2.4 Scope of Covered Lands

Some comments raised questions about features or areas that may be in Covered Lands, including oil field leases and inholdings.

### 9.2.4.1 Oil Field Leases

A commenter stated that in April 2004, Longbow, LLC acquired two oilfield leases in the area commonly known as Comanche Point and attached copies of the leases. The commenter stated his belief that the land leased for oilfields to Longbow, LLC are part of the Covered Lands under the TU MSHCP, creating a conflict with the leases that grant to Longbow "sole and exclusive" possession of these areas with the exception of surface rights.

The Service acknowledges receipt of the lease copies. The two oilfield leases are both in the Comanche Point area of the ranch, and are not within the boundaries of Covered Lands in the TU MSHCP. Therefore, there is no conflict between the leases and the TU MSHCP.

### 9.2.4.2 Inholdings

A commenter noted concerns “that any actions permitted under the proposed federal permits for this proposed project will not and cannot be legally enforced or applied to the 3,870 acres that are not currently owned or managed by the applicant”; therefore, these acres should not be included in the analysis of the Draft TU MSHCP, or, if this land is included in the mitigation package, acquisition of the land should be an enforceable mitigation measure.

The 141,886 acres that encompass the Covered Lands include approximately 3,870 acres of land not owned by TRC. Because this land could ultimately be acquired by TRC and used consistent with the remainder of the property, it is included as part of the Covered Lands. Chapter 2, Proposed TU MSHCP and Alternatives, in Volume 1 of this Supplemental Draft EIS, and Section 2, Project Description, of the TU MSHCP, acknowledge that this acreage represents inholdings in the Covered Lands not owned by TRC, but that they have been included to provide a contiguous, integrated planning boundary. These lands are referred to as Not-A-Part Inholdings in both documents. The 3,870 acres are not included in Established Open Space or TMV Planning Area Open Space and therefore, are not part of the TU MSHCP Mitigation Lands. Of note, future development in these inholdings is not a Covered Activity. However, the Implementing Agreement for the TU MSHCP recognizes that this land may be acquired without a permit amendment, depending on the nature of the activities to be carried out (Implementing Agreement, Sections 1.5.1.1 and 1.5.1.2).

## 9.2.5 Requests to Extend Comment Period

Various commenters requested an extension of the public comment period.

For the reasons described in Chapter 1, Purpose and Need for the Federal Action, in Volume 1 of this Supplemental EIS, the Service has determined that a Supplemental Draft EIS is warranted. Both this

Supplemental Draft EIS and a revised TU MSHCP are being circulated for public review and comment.

## 9.2.6 References Cited by the Center for Biological Diversity

Comments O4-435 through O4-560 consist of literature and articles attached to Comment Letter O4. These attachments do not contain specific comments. In most cases, the attached literature is referenced in a specific comment and a response is provided in the relevant master response. The responses below briefly describe the commenter's use of the citation, provide a summary of the literature cited, and discuss the relevance of the articles to the TU MSHCP and EIS. The responses include cross-references to the master response where the substance of each comment is fully addressed.

- The commenter cited Abbit et al. (2000) in its comments regarding the scientific basis of the reserve design for the Draft TU MSHCP. Abbit et al. (2000) describes how information regarding the geography of species, especially range-restricted species, should be incorporated into conservation strategies in conjunction with projected increases in human population and development, and describes the challenges of international boundaries. Abbit et al. (2000) does not appear to provide specific reserve design methodologies that can be directly applied to this proposed action considering the article examines an aspect of species of reserve design that functions at a larger scale than the TU MSHCP. Refer to Master Response 5, Habitat Suitability Model.
- The commenter cited Airola and Williams (2008) in its comments regarding the population status of purple martin and its use of the Covered Lands. Airola and Williams (2008) does state that "The Tehachapi Mountains, with 100 to 200 pairs, may represent the last place in California where martins regularly nest in oak woodland." However, the Tehachapi Mountains extend well north of the Covered Lands to the southern Sierra Nevada range. Also, Airola and Williams (2008) qualify the regularly nesting statement with the phrase "may represent." The commenter cited Airola and Williams (2008) as indicating that "only" 40 to 100 pairs of purple martins were observed nesting in the Tejon Ranch Grapevine area, and that the number of pairs had decreased in 2000 north of the Tejon Ranch Grapevine area where European starlings are abundant. Airola and Williams (2008) does indicate that "The southern Tejon Ranch/Grapevine area supported an estimated 40 to 100 pairs in 1982; a partial survey of the Bear Mountain area found 56 pairs in 2000, and martins were absent in former nesting areas where starlings are now abundant." Note the 2000 survey was a partial survey and so the 56 pairs cannot be directly compared to the 40 to100 pairs found in the larger survey area in 1982. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Akcakaya and Atwood (1997) as an example of the use of population viability analysis (PVA) on California species in its comments regarding reserve design. Akcakaya and Atwood (1997) analyze the metapopulation dynamics of California gnatcatcher for an 850-square-kilometer area in Orange County. The model predicted a fast decline and high risk of population extinction with most combinations of parameters (such as survival, fecundity, dispersal, and catastrophes). The model results also indicated that models based on a few decades likely produced the most accurate results since models with shorter or longer timeframes may underestimate the effects of alternative management actions. This model could be used to prioritize management actions (Akcakaya and Atwood 1997). However, with the exception of the PVA for the coastal California gnatcatcher for the San Diego Multiple Species Conservation Plan (which is characterized by a highly fragmented landscape within which the gnatcatcher may operate as a metapopulation [Ogden 1993]), no other large-scale conservation planning efforts in California have used PVAs, including the Western Riverside Stephens' Kangaroo Rat HCP, the Western Riverside County MSHCP, Coachella Valley MSHCP, the Orange

County Central/Coastal Natural Community Conservation Plan (NCCP)/HCP, and the Southern Orange County NCCP/Master Streambed Alteration Agreement (MSAA)/HCP. Generally speaking, these plans did not perform PVAs due to a lack of available data for the species necessary to conduct a credible model, the questionable value of such PVAs for the particular conservation planning efforts, and the time and expense of doing so. Refer to Master Response 5, Habitat Suitability Model.

- The commenter cited Anderson and Laymon (1989) as a source of conservation guidance for the yellow-billed cuckoo. Anderson and Laymon (1989) summarize yellow-billed cuckoo habitat requirements and discusses revegetation efforts, describing factors that detract from habitat creation objectives and predicting likelihood of success for Kern and Colorado river enhancement projects. Specifically, Anderson and Laymon (1989) make recommendations on propagation methods (i.e., rooting hormones, cuttings, pole plantings), and combating browsing and competition from weeds. Given the habitat conservation levels proposed, additional creation and enhancement (beyond what would be required under the Clean Water Act (CWA) and California Fish and Game Code (FGC) for effects on jurisdictional wetlands) are not proposed at this time. Annual monitoring reports would identify significant problems regarding competition from weeds and recommend such changes or revisions to the programs; document changed or unforeseen circumstances that have occurred in the prior year and describe how they were addressed; and discuss adaptive management triggers and how adaptive management was implemented. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities, and Master Response 17, Monitoring and Adaptive Management.
- The commenter cited Beecham and Kochert (1975) in its comments regarding golden eagles. Beecham and Kochert (1975) evaluate the population status of golden eagles in southwestern Idaho by examining the nesting success, density, and mortality of this species in that area. The article states that "The number of alternate nests per nesting site in the area ranged from 1 to 12 (mean = 6)." Therefore, this statement would support the commenter's cited claim that golden eagles need alternative nests. This information is consistent with the TU MSHCP approach to providing protection to golden eagle nests. Refer to Master Response 3, Raptors.
- The commenter cited Bolger et al. (1997) in comments regarding the Tehachapi pocket mouse. Bolger et al. (1997) assessed the distribution of native rodents in 25 urban habitat fragments via live trapping to determine whether small fragments of habitat are capable of supporting viable populations of native rodents in coastal southern California. Since 13 of 25 fragments did not support populations of native rodents and fragments that had been isolated for a longer time supported fewer species of rodents, study results indicate that local extinctions occurred in fragments of habitat following insularization. Bolger et al. (1997) propose that random environmental and demographic fluctuations and edge effects cause these local extinctions. This citation is consistent with the reasons for decline of Tehachapi pocket mouse stated in Section 3.1.7.5, Mammals, in the subsection entitled Tehachapi Pocket Mouse, in Volume 1 of this Supplemental Draft EIS, and Section 5.2.4.2.1 of the TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Boyce (1992) in its comments regarding reserve design. Boyce (1992) reviews PVA and minimum population viability (MPV) analysis to advocate the use of PVA as a species management tool rather than to determine an actual MPV or estimate the probability of extinction. Generally speaking, PVAs are not performed for large scale conservation efforts due to a lack of available data for the species necessary to conduct a credible model, the questionable value of such PVAs for the particular conservation planning efforts, and the time and expense of doing so. Refer to Master Response 5, Habitat Suitability Model.

- The commenter included Brattstrom (1997) in its reference list and attachments, but has not cited to the article in its comment letter.
- The commenter cited Brook et al. (2002) regarding reserve design. Brook et al. (2002) advocate for PVA for its ability to determine whether extinction risk is high, even though they acknowledge that this process has little predictive value where data is sparse or poor, which is commonly the case with threatened species. Generally speaking, PVAs are not performed for large scale conservation efforts due to a lack of available data for the species necessary to conduct a credible model, the questionable value of such PVAs for the particular conservation planning efforts, and the time and expense of doing so. Refer to Master Response 5, Habitat Suitability Model.
- The commenter cited Brooks (1997) in its comments regarding habitat suitability models. Brooks (1997) describes several stages of habitat suitability index (HSI) development and testing. He argues for incremental improvements that can be made by publishing interim models that have not been fully validated to improve management of species based on improved HSI models. The article continues to provide examples showing several alternative methods to calibrate and verify HIS models. As noted in Master Response 5, Habitat Suitability Model, the habitat modeling was intended to be inclusive of important potential habitat for the Covered Species for the purpose of the effects analysis. Verification studies to refine the habitat models for this purpose are not necessary.
- The commenter cited Buehler et al. (1991) in its comments on the bald eagle. Buehler et al. (1991) recommends management in communal roosting forest stands of 190 hectares (470 acres). The 190 hectares exceeds the minimum communal roost forest stand size of 110 hectares (272 acres) (Buehler et al. 1991). The management recommendation was proposed for Chesapeake Bay undeveloped shoreline forest stands extending a minimum of 1,400 meters inland, with a minimum of 1,360 meters of shoreline edge. Buehler et al. (1991) recommended protection of existing tall, large diameter trees and the promotion of stands of trees where lacking. Commenter cited Buehler et al. (1991) as prescribing a 1,360 to 1,400 meter management zone for nonbreeding bald eagle roosting sites. As discussed in Master Response 3, Raptors, the proposed bald eagle Goal 3 and associated objectives in Section 7.1.1.2.2 of the TU MSHCP are considered appropriate for diurnal perches and roosts, and exceed the Buehler et al. (1991) minimum communal roosting acreage and management zone recommendations.
- The commenter cited Burgman et al. (2001) in its comments regarding reserve design. Burgman et al. (2001) present a set of concepts and formulas that may be used instead of detailed PVA and habitat models to estimate the size of protected areas required to conserve threatened plant species. They estimated quasi-extinction risk based on dynamic models that incorporated expert judgment of parameters and assessment of a population size, changes in population density through competition and predation, as well as factors of human influences, such as small-scale disturbance and habitat loss. The method described in the article focuses attention on the threats that affect habitat area and population density and may lead to management recommendations (Burgman et al. 2001). Limitations of this method include assumptions that habitat can be mapped reliably and information regarding species density, life history, and response to disturbance is available. The methods are based on short-term dynamics and also fail to account for spatial arrangement of habitat, future disturbance regimes, and dependency on other species (Burgman et al. 2001). The commenter does not cite specific elements of the article's focus of reserve design to demonstrate how they suggest this method could be applied to the TU MSHCP and fails to acknowledge the limitations of the methods provided by Burgman et al. (2001). This type of method would not be appropriate for large scale conservation efforts due to a lack of available data for the species necessary to conduct a credible model, and the time and expense of doing so. Refer to Master Response 5, Habitat Suitability Model.

- The commenter cited Cain et al. (2003) regarding little willow flycatchers to state that flycatchers use similar habitat to the least Bell's vireo and therefore suffer from similar issues, specifically riparian habitat loss. Cain et al. (2003) cite the decline of willow flycatchers and yellow warblers as the result of loss of riparian breeding habitat, increases in brood parasitism, and increases in nest predation. The study focused on examining aspects of predation on willow flycatchers and yellow warblers and its affect on their nesting success. Although the commenter correctly quoted Cain et al. (2003) in that this article states that willow flycatchers were negatively affected by loss of riparian habitat, the article actually focuses on another contributor to willow flycatcher decline—predation. In addition, the article discusses the willow flycatcher in comparison to the yellow warbler, not the least Bell's vireo (Cain et al. 2003). This citation is consistent with the reasons for decline of flycatchers stated in Section 3.1.7.3, Birds, in the subsection entitled Little Willow Flycatcher, in Volume 1 of this Supplemental Draft EIS, and Section 5.2.2.6.1 of the Draft TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited California Department of Fish and Game (CDFG) (1980) to support comments regarding ringtail territories within 0.5 mile of riparian zones. CDFG (1980) collected information from sighting records, museum specimens, and recent literature to determine the current distribution of ringtail cat, areas of population concentrations, and trends in population size. The greatest ringtail abundance were along the riparian areas in northern California and Sierra Nevada foothills. Ringtails' preference for riparian areas is verified by the abundance of sightings along many of the major rivers of California (California Department of Fish and Game 1980). However, although CDFG (1980) comments on the association of ringtail cats with riparian habitat, it does not provide a quantified habitat restriction. Refer to Master Response 5, Habitat Suitability Model, and Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Camp et al. (1997) in comments regarding raptors. Camp et al. (1997) used a geographic information system (GIS) to develop a management scheme for golden eagles that considered spatial zones incorporating the viewshed–the area visible across a landscape from a nest site–from each nest. Camp et al. (1997) recommend both a buffer zone that restricts potentially harmful activities in this flushing area and a viewshed that restricts potentially harmful activities in this agitation area. The commenter accurately characterizes Camp et al. (1997) since the article does suggest that an effective approach to mitigate effects of disturbance for raptors involves viewsheds and buffers. This is consistent with the golden eagle conservation objectives in Section 7 of the Draft TU MSHCP. Refer to Master Response 3, Raptors.
- The commenter cited CBD (2004), a petition to list tricolored blackbird under the California Endangered Species Act (CESA) and ESA and request for emergency action to protect the species, to illustrate tricolored blackbird population declines in its comments on the tricolored blackbird. The petition quotes Baird (1870) cited in Beedy and Hamilton (1999) as stating that the tricolored blackbird was "the most abundant species near San Diego and Los Angeles, and not rare at Santa Barbara." This citation is consistent with the description of the decline of tricolored blackbird stated in Section 3.1.7.3, Birds, in the subsection entitled Tricolored Blackbird, in Volume 1 of this Supplemental Draft EIS and Section 5.2.2.9.1 of the Draft TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Chave et al. (2002) in its comments regarding reserve design. Chave et al. (2002) examine the interplay between habitat fragmentation and seed dispersal mechanisms that maintain biodiversity in the tropical rainforest using dynamic and spatially explicit simulations. The commenter appropriately cited Chave et al. (2002) as an article written on reserve design. However, the commenter does not provide specific information from this article, nor suggest how elements from the reserve design presented by Chave et al. (2002) be applied

to the TU MSHCP. Generally speaking, a model of biodiversity in the tropical rainforest would not be appropriate for large scale conservation efforts in temperate North America.

- The commenter cited Cogan (2009), a report published by the commenter, in comments related to the condor. Refer to Master Response 1A through 1I on topics specific to the California condor.
- The commenter cited Collidge et al. (2002) in comments on the valley elderberry longhorn beetle. This may be a mistaken reference to Collinge et al. (2001), who examined valley elderberry longhorn beetle occurrences in California's Sacramento Valley. Among other patterns of habitat suitability, valley elderberry longhorn beetle occurred more often in clumps of elderberry bushes compared to isolated bushes. Compared to California valley elderberry longhorn beetle, valley elderberry longhorn beetle sites had much higher elderberry densities (Collinge et al. 2001). The commenter stated that dense stands of elderberry should be encouraged for the benefit of valley elderberry longhorn beetle, citing Collinge et al. (2001). Given the very high habitat conservation levels proposed, other avoidance/minimization measures, additional creation and enhancement beyond that required under the CWA and FGC for effects on jurisdictional wetlands have not been proposed by TRC. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Cook and Toft (2005) to support statements regarding the ongoing decline of tricolored blackbird populations. Cook and Toft (2005) used data collected since the 1930s to characterize the distribution, breeding habitat, and changes in global population size of tricolored blackbirds. The article also presents data on the reproductive success of this species at 103 colonies between 1992 and 2003. Loss of suitable nesting habitat statewide continues to cause widespread failure of breeding (Cook and Toft 2005). This citation is consistent with the description of the decline of tricolored blackbird stated in Section 3.1.7.3, Birds, in the subsection entitled Tricolored Blackbird, in Volume 1 of this Supplemental Draft EIS and Section 5.2.2.9.1 of the TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Conservation Biology Institute (CBI) (2003a) as a source of additional data known about the Covered Lands in its comments on surveys). CBI (2003a) utilized publicly available data and science-based conservation principles to achieve this end. CBI (2003a) identified four landscape units that differentially support the conservation values considered in the analysis. CBI (2003a) found that most of the ranch serves as landscape linkages for the focal species evaluated for the South Coast Missing Linkages Project with the possible exception of the Mojave Valley floor. It addresses grassland and oak communities, montane hardwood and montane hardwood-conifer communities, riparian communities and watershed integrity. CBI (2003a) concludes that conservation management in the region should consider landscape-scale variability and ecological processes. Nothing in the cited publication undermines the analysis of the open space design in the TU MSHCP, and the Service considers the analysis in this Supplemental Draft EIS and TU MSHCP to be based on the best available science. Refer to Master Response 6, Surveys.
- The commenter cited CBI (2003b) as a source of additional data known about the Covered Lands in its comments on surveys. CBI (2003b) presents the available scientific information (no new data was collected) for the Tejon Ranch region. The report examines the biogeographic factors, such as terrain and climate, which contribute to the biological richness of Tejon. CBI (2003b) calls for a comprehensive multijurisdictional plan to protect the natural resources of this region. Nothing in the cited publication undermines the analysis of the open space design in the TU MSHCP, and the Service considers the analysis in this Supplemental Draft EIS and TU MSHCP to be based on the best available science. Refer to Master Response 6, Surveys.

- The commenter cited CBI and South Coast Wildlands (2006) as a source of additional data known about the Covered Lands in its comments on surveys and as a potential alternative. CBI and South Coast Wildlands (2006) present a study using publicly available information to design a reserve for Tejon Ranch intended to protect its vast array of landscape functions and conservation values. CBI and SCW (2006) acknowledge the limitations of this study. Specifically, it did not directly take into account whether areas with lesser contributions to landscape values are appropriate for development from a regional planning perspective, possible development constraints, environmental compliance or endangered species permitting implications, other constraints (e.g., military flight corridors) or economic considerations. Nothing in the cited publication undermines the analysis of the open space design, and the Service considers the analysis in this Supplemental Draft EIS and TU MSHCP to be based on the best available science. Refer to Master Response 11, Alternatives, and Master Response 6, Surveys.
- The commenter cited Craig (2002) in its comments regarding buffers for peregrine falcons and bald eagles. Craig (2002) provides recommendations for buffer zones and seasonal restrictions specifically for Colorado raptors, including buffers and setbacks for nesting, roosting and/or perching raptors, including bald eagles. Craig (2002) suggest no human habitation, structures or roads/trails within 0.5 mile (2,640 feet) of an American peregrine falcon nest site and seasonal restriction to human encroachment within 0.5 mile of the nest cliff from March 15 to July 31. Craig (2002) also recommends a buffer zone that encompasses the cliff system and a 0.5-mile buffer from the cliff complex. Craig (2002) recommends that diurnal hunting perches of bald eagles be protected from human encroachment citing buffer zones from at least two management plans that range from 0.125 mile (200 meters or 660 feet) to 0.25 mile (400 meters or 1,320 feet) depending on topographic or vegetation screening (Craig 2002). The Craig (2002) study is based on informed opinion regarding individual species' tolerance of disturbance rather than empirical data. Refer to Master Response 3, Raptors, regarding setback distances and conservation measures for these species.
- The commenter cited Crooks and Soule (1999) in its comments regarding edge effects. Crooks and Soule (1999) examine the relationship between the distribution and abundance of the coyote, an apex predator, in 28 urban habitat fragments in coastal southern California to that of smaller carnivores and their avian prey. Crooks and Soule (1999) provide an example of the literature related to edge effects, demonstrating how the mesopredators release resulting from landscape fragmentation decrease ecosystem values by decreasing populations of scrub-breeding birds. The TU MSHCP includes measures to reduce such edge effects. Refer to Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity.
- The commenter cited Davis et al. (2004) to suggest the Draft TU MSHCP's modeling of the striped adobe lily (*Fritillaria striata*) is overestimated since this species is known to require blue oak woodland on heavy adobe clay soils. However, Davis et al. (2004) actually state, "Similarly, several high-scoring sites at the southern end of the region in Kern County are areas of blue oak (*Quercus douglasii*) woodlands on adobe soils that support rare plant species, such as *Mimulus pictus* and *Fritillaria striata*" Therefore, while Davis et al. (2004) consider blue oak woodlands on adobe soils to be suitable habitat for striped adobe lily, the article does not suggest that the species is restricted to this habitat. Refer to Master Response 5, Habitat Suitability Model, and Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited DeHaven (2000) as providing additional ideas on conservation of tricolored blackbird. DeHaven (2000) provides six recommendations for the Service and CDFG to halt and stabilize the downward trend of tricolored blackbird, and avoid the need to list the species in the future: (1) prepare and implement a plan to create additional nest substrates in southern San Joaquin Valley; (2) prepare and implement a plan for enhancing and managing the Toledo Pit site in Tulare County and other major dairy regions supporting breeding tricolored blackbird; (3) prepare land use trends and projections to prioritize key geographic areas for the

preservation and enhancement of tricolored blackbird habitat; (4) prepare and implement a tricolored blackbird management and enhancement plan; (5) prepare written criteria for paying dairy farmers to delay or forego harvest of silage crops; and (6) conduct and report on research and coalesce pertinent findings. While the recommendations in DeHaven (2000) are appropriate for the Service and CDFG to implement as range-wide measures for the tricolored blackbird, the measures listed above are not appropriate at the project level. Section 7 of the TU MSHCP includes measures to protect the tricolored blackbird. Refer also to Master Response 4, Covered Species Threats and Potential Effects of Covered Activities.

- The commenter cited Dodd and Siegel (1991) to support its statement that relocation of rare species has been documented to be relatively unsuccessful. Dodd and Siegel (1991) review information on projects involving relocation, repatriation, and translocation (RRT) of amphibians and reptiles, examine the motives for advocating these strategies, and recommend biological and management criteria that should be considered prior to initiating RRT projects. Dodd and Siegel (1991) conclude that most RRT projects involving amphibians and reptiles have not been successful as conservation techniques and therefore do not advocate this method as an acceptable management and mitigation practice. Dodd and Siegel (1991) generally refer to moving populations and define success as establishing a viable, self-sustaining population. Such a large-scale relocation program is not the intent of the proposed construction-related relocation measure in the TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter attached a letter from Delia Dominguez regarding cultural resources issues. Cultural resources concerns are addressed in Master Response 14, Cultural Resources.
- The commenter attached Eilperin (2006) but has not cited to the article in its comment letter.
- The commenter attached U.S. Environmental Protection Agency (EPA) (2007), presenting air quality data regarding ozone and a summary of design values. Air quality concerns are addressed in Master Response 16, Air Quality.
- The commenter attached EPA (2007) air quality data regarding particulate matter less than 2.5 microns in diameter (PM 2.5) in 2005-2007 and a summary of design values. Air quality concerns are addressed in Master Response 16, Air Quality.
- The commenter attached EPA (2008a), EPA's regulatory impact analysis PM 2.5 standards. Air quality concerns are addressed in Master Response 16, Air Quality.
- The commenter attached EPA (2008b), EPA's post-2020 attainment analysis for ground-level ozone, discussing attainment challenges. Air quality concerns are addressed in Master Response 16, Air Quality.
- The commenter attached EPA (2008c), an excerpt from EPA's regulatory impact analysis for ground-level ozone, Chapter 4, Approach for Estimating Reductions for Full Attainment Scenario. Air quality concerns are addressed in Master Response 16, Air Quality.
- The commenter cited Faanes and Howard (1987) to support comments that white-tailed kite do not stray far from riparian areas. Faanes and Howard (1987) presents an HSI model for white-tailed kite to be used with the Services' habitat evaluation procedures to assess effect and manage habitat for this species. Faanes and Howard (1987) cite studies in which kites foraged almost exclusively over grasslands and in which kites spent over 97% of their time hunting over four vegetation types: tall rank grass, short rank grass, saltmarsh, and rushes. Although Faanes and Howard (1987) notes that nesting typically occurs in wetlands and open brushlands, generally near water or along streams, they also note that foraging habitat is not necessarily adjacent to the nest site and that kites have been observed foraging 1.9 kilometers from a nest site. The commenter's statement using Faanes and Howard (1987) is consistent with Section 6.2.2.11.1 in the Draft TU MSHCP. Refer to Master Response 3, Raptors.

- The commenter cited Fielding and Haworth (1995) to support its comments that modeling for raptors and songbirds is uncertain because of the unpredictability of the systems being modeled. Fielding and Haworth (1995) developed predictive models for golden eagle, raven, and buzzard, which all differ in nesting habitat and in type and scale of foraging habitat. The models were then applied to validation data to test their predictive success. Results were quite varied, ranging from 6% of nest sites correctly predicted to 100% correctly predicted. Differences likely stemmed from methods applied and ecological processes, such as the data recording scheme and interregional differences in nesting habitat. According to Fielding and Haworth (1995), these results question the validity of distribution and habitat-change model predictions in conservation-based studies since the models may be working with systems that are inherently unpredictable. As noted above, the habitat modeling was intended to be inclusive of all potential habitat for the Covered Species for the purpose of the take and conservation analysis. Verification studies to refine the habitat models for this purpose are not necessary. Refer to Master Response 3, Raptors, and Master Response 5, Habitat Suitability Model.
- The commenter cited Fiedler (1987) with respect to the comprehensiveness of surveys for striped adobe lily. Fiedler (1987) compares three rare species in the genus *Calochortus* to one common *Calochortus* species, to determine whether individual and population differences could be detected between three rare species and a closely related species in the same genus, and describes *Fritillaria,* to which striped adobe lily belongs, as a related genus that also has an annually renewed seed bank. Fiedler (1987) notes that differences in responses to environmental conditions differ by species, such that a particularly short dry winter can evoke a "bloom" reproduction in one species, but can make another go into dormancy in the middle of its growing season. Fiedler (1987) describes the "bulb bank" as many bulbs that may form an effective population buffer since only a small proportion is sexually mature and a smaller portion reproduces annually, making surveys difficult. As noted in Master Response 6, Surveys, the habitat modeling was intended to be inclusive of all potential habitat for the Covered Species for the purpose of the effects analysis. Verification studies to refine the habitat models for this purpose are not necessary.
- The commenter cited Fischer (2000) (rather than Fischer and Lindenmayer [2000]) in comments regarding the inadequacy of species relocation or translocation as a mitigation strategy. Fischer and Lindenmayer (2000) reviewed 180 case studies and several theoretical papers regarding animal relocations, focusing on reintroductions, supplementations and translocations. In addition, Fischer and Lindenmayer (2000) note that relocation strategies may be a useful conservation tool for a range of taxa. Although Fischer and Lindenmayer (2000) state that translocations performed to solve human-animal conflicts generally failed, the large number of uncertain outcomes of relocation efforts made it difficult to draw general conclusions about the value of relocations as a conservation tool. While the commenter notes the lack of success related to relocations aimed at solving human-animal conflicts, the circumstances surrounding these efforts, such as long-distance moves and placement into entirely different habitats, differ from those proposed in the TU MSHCP. The Fischer and Lindenmayer (2000) study focused on reintroductions, supplementations and translocations at a much larger scale than the relocation effort proposed under the TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Fisher and Shaffer (1996) regarding declines in amphibian populations. Fisher and Shaffer (1996) quantified amphibian declines in California's Great Central Valley using broad-scale field sampling and historical analyses of museum records. In general, results indicate that there has been an unambiguous pattern of decline, although the degree varies both taxonomically (*Rana aurora* and *Bufo boreas* were the species most affected) and geographically (Sacramento and San Joaquin Valleys exhibited the highest rates of decline). The primary cause of these declines is likely introduced predators. Refer to Master Response 2, Amphibians.

- The commenter cited to Forman and Deblinger (2000) regarding the effects of roadway runoff on amphibians. Forman and Deblinger (2000) study the "road-effect zone," the ecological effects extending outward from a road. Nine ecological factors, including amphibians, were measured or estimated near 25 kilometers of a busy four-lane highway west of Boston, Massachusetts (Forman and Deblinger 2000). Forman and Deblinger (2000) discuss the effects of roads on migrating salamanders and note that Route 2 is likely a barrier to amphibian movement. Forman and Deblinger (2000) do not comment on the relationship between amphibians and runoff from roads, as the commenter's citation suggests; instead its discussion is focused on the effects of roads on amphibian movement. Of note, the TU MSHCP does identify urban runoff, which includes runoff from roads, as a potential significant threat to amphibians. Refer to Master Response 2, Amphibians.
- The commenter cited Germano et al. (2001) regarding the habitat needs of coast horned lizards. Germano et al. (2001) argue that the invasion of nonnative grasses has produced an impenetrable thicket for small ground-dwelling vertebrates that has adversely affected their populations and which should be considered before restricting grazing in wildlife preserves (Germano et al. 2001). The article directly states, "The coast horned lizard (*Phrynosoma coronatum*) is small (25 to 30 gram) and has relatively weak legs, which restricts it to open habitats." This is consistent with the coast horned lizard habitat characteristics described in Section 3.1.7.6, Reptiles, in the subsection entitled Coast Horned Lizard, in Volume 1 of this Supplemental Draft EIS and Section 5.2.5.1.2, Habitat Characteristics and Use, of the TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Gillespie (2005) regarding the habitat needs of round-leaved filaree, or *Erodium macrophyllum*. The data gathered in this study indicate that that *E. macrophyllum* is apparently restricted to heavy clay soils (Gillespie 2005). This restriction appears to be an ecological function rather than physiological since *E. macrophyllum* can grow and reproduce on other soil types (and has even produced greater biomass on nonclay soils), but is outcompeted by nonnatives in these environments. Gillespie (2005) is consistent with the round-leaved filaree habitat characteristics described in Section 3.1.8.4, Round-Leaved Filaree, in Volume 1 of this Supplemental Draft EIS and Section 5.3.3.3, of the TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Grayson (2005) regarding climate change effects on pikas. Refer to Master Response 13, Climate Change.
- The commenter cited Griffith et al. (1989) regarding relocation of the two-striped garter snake. Griffith et al. (1989) collected data on translocations of native birds and mammals to document current activities, identify factors associated with success, and recommend actions for greater success. Griffith et al. (1989) state, "In the face of increasing species extinction rates and impending reduction in overall biological diversity, translocation of rare species may become an increasingly important conservation technique." For species with limited dispersal abilities, translocation may be required to maintain community composition in fragmented habitats (Griffith et al. 1989). One important aspect of enhancing success with translocation efforts is releasing the animal into the appropriate habitat (Griffith et al. 1989). The proposed relocation of individuals from construction areas to nearby suitable habitat as an avoidance/minimization measure is very different from the reintroductions and translocations described in the Griffith et al. (1989) study, which focuses on translocations, defined in the study as "intentional release of animals to the wild in an attempt to establish, reestablish, or augment a population…" (p. 477). Refer to Master Response 4, Covered Species Threats and Potential Threats from Covered Activities.

- The commenter cited Halpin (1997) with respect to climate change's effects on rare, threatened, and endangered species and the importance of wildlife linkages. Refer to Master Response 13, Climate Change.
- The commenter cited Harvell et al. (2002) with respect to climate change's effects on rare, threatened, and endangered species. Refer to Master Response 13, Climate Change.
- The commenter cited Hedlund (Hedlund and Penland 2009), referred to in this response as *The Mountain Enterprise* article, with respect to inaccuracies in the Draft EIS. This article, and responses to information provided in the article, is discussed in detail in Section 9.2.3.2, *The Mountain Enterprise* Article, above.
- The commenter cited Holyoak and Koch-Munz (2008) to support its comment that dense stands of elderberry should be encouraged for the valley elderberry longhorn beetle. Holyoak and Koch-Munz (2008) evaluated the success of habitat mitigation efforts for valley elderberry longhorn beetle and its host plant in California's Central Valley. Given the very high habitat conservation levels proposed and other avoidance or minimization measures, additional creation and enhancement beyond that be required under the CWA and FGC for effects on jurisdictional wetlands are not proposed under the TU MSHCP at this time. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Jennings (1987) in comments tying the decline in coast horned lizard to the curio trade. Jennings (1987) documents the history of the curio trade in coast horned lizards from its beginnings in the late 19th century to its abrupt decline in the early 20th century (approximately 1910). The TU MSHCP includes measures to protect the coast horned lizard.
- The commenter cited Horne (1981) in comments regarding Castac Lake and Chumash settlements. Cultural resources concerns are addressed in Master Response 14, Cultural Resources.
- The commenter cited Housing Predictor (2009a in comments regarding market conditions and housing demand. Market condition and housing demand issues are addressed in Master Response 11, Alternatives.
- The commenter cited Housing Predictor (2009b regarding market conditions and housing demand. Market condition and housing demand concerns are addressed in Master Response 11, Alternatives.
- The commenter cited Intergovernmental Panel on Climate Change (2007) regarding the effect of climate change to species. Refer to Master Response 13, Climate Change.
- The commenter cited International Union for Conservation of Nature (2008) regarding comments on the effect of climate change to amphibians. Refer to Master Response 13, Climate Change.
- The commenter cited International Union for Conservation of Nature (2009) regarding the effect of climate change to amphibians and species in general. Refer to Master Response 13, Climate Change.
- The commenter cited Jackson (1996) in comments regarding roadkill effects on Tehachapi slender salamander and possible mitigation through roadway designs that include tunnels with drift fences. Refer to Master Response 2, Amphibians.
- The commenter cited to Kelley and Goulden (2008) regarding the effect of climate change on species. Refer to Master Response 13, Climate Change.
- The commenter cited to Kelsey (2008) with respect to increased numbers of tricolored blackbirds in the Central Valley. Kelsey (2008) documents the results of a 2008 statewide census of the tricolored blackbird population. The tricolored blackbird is near endemic species

with at least 95 percent of the population restricted to California. This is consistent with the description of the tricolored blackbird in the TU MSHCP and Section 3.1, Biological Resources, in Volume 1 of this Supplemental Draft EIS.

- The commenter cited the introduction to the Kern County General Plan (Kern County 2007) in regards to population growth projections. Population growth concerns are addressed in Master Response 11, Alternatives.
- The commenter cited Kern County (2009), the TMV EIR regarding cultural resources analysis and air quality modeling. Refer to Master Response 10, TMV Project and EIR, and Development-Related Effects Analysis; Master Response 16, Air Quality; and Master Response 14, Cultural Resources.
- The commenter cited Kidd et al. (1997) regarding the declining population of the burrowing owl, stating that it could soon be extirpated in southwestern California. The commenter correctly cited Kidd et al. (1997) as attributing the declining trend of burrowing owl populations to increasing destruction and fragmentation of habitat and lack of sufficient mitigation. This is consistent with Section 3.1.7.3, Birds, in the subsection entitled Burrowing Owl, in Volume 1 of this Supplemental Draft EIS and Section 5.2.2.3.1 Status and Distribution, of the TU MSHCP. Refer to Master Response 3, Raptors.
- The commenter cited Knight and Knight (1984) regarding adverse effects of boating on bald eagles. Knight and Knight (1984) examined flushing responses and flight distances of bald eagles to a canoe on two adjacent rivers with widely disparate levels of boating activity. The commenter overstated the results of Knight and Knight (1984). The study by Knight and Knight (1984) found very mixed results in the response of bald eagles to boating activities. The study found that eagles perched in trees showed inter-river differences but eagles standing or feeding on the ground did not respond. Knight and Knight (1984) acknowledge that they could not discern whether the eagles perched in trees in winter were actually responding to the boating activity or to decreased food abundance. Refer to Master Response 3, Raptors.
- The commenter attached Kochert et al. (1999), but has not cited to the article in its comment letter.
- The commenter cited Krajick (2004) in its comments regarding the effect of climate change on butterflies and alpine species. Refer to Master Response 13, Climate Change.
- The commenter attached a letter from Crystal Krause (pers. comm.) regarding a review performed of the Draft TU MSHCP habitat modeling. This letter was also included as Attachment A to the commenter's letter and is discussed in Master Response 5, Habitat Suitability Model.
- The commenter cited Laymon and Halterman (1989) in comments regarding conservation of the western yellow-billed cuckoo and enhancement of riparian habitat. Laymon and Halterman (1989) make recommendations for the conservation of all existing habitat regardless of quality, and for habitat restoration along specific rivers in California, with minimum goals for reforestation and subpopulations, in order to provide protection from extinction and sufficient genetic diversity, to cover the original species range and habitats in California, and to provide colonists to occupy outlying sites. Laymon and Halterman (1989) do state that “a management plan for yellow-billed cuckoo in California requires more than habitat preservation,” in the context of establishing goals for reforestation and populations. The Covered Lands are not included in their list of California rivers to be reforested. The Covered Lands do not contain any of the specific rivers noted in Laymon and Halterman (1989). Additional creation and enhancement of riparian areas (beyond what would be conserved in open space areas or would be required under the CWA and FGC for effects on jurisdictional wetlands) are not proposed under the TU MSHCP. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.

- The commenter cited Mayhew et al. (2007) regarding climate change's effects on species extinction. Refer to Master Response 13, Climate Change.
- The commenter cited Marsh (2007) in comments regarding major effects on amphibians when roads are built through their habitats. Marsh (2007) investigates the impact of edge effects (created by forest roads built through habitat) on terrestrial salamander populations in the Appalachian Mountains. Marsh (2007) compared roads that were open and closed to vehicle entry, roads with varying width, varying widths of gravel, varying width of the roadside verge, and the magnitude of habitat gradients at the forest edge. Marsh (2007) found that ungated roads were associated with edge effects and the width of the road was a good predictor of the magnitude of the edge effect. However, the Marsh (2007) paper only investigated the impact of edge effects of different types of forest roads and not all road systems. In addition, the study only looks at the impacts of edge effects on red-backed salamanders in the Appalachian Mountains and not on all amphibian species. With respect to the TU MSHCP, the intersection of roads with suitable habitat would affect a very small percentage of the total habitat for amphibians. Refer to Master Response 2, Amphibians.
- The commenter cited Marsh et al. (2005) in comments regarding major effects on amphibians when roads are built through their habitats. Marsh et al. (2005) investigate if forest roads act as a barrier to the movement of red-backed salamanders. The study concluded that roads do act as a barrier and that steep road edges may exacerbate the problem. However, the Marsh et al. (2005) paper only investigated if forest roads act as a barrier to red-backed salamander and not all road systems. In addition, the study only looks at the effects of edge effects on red-backed salamanders in the Giles County, Virginia and not on all amphibian species. With respect to the TU MSHCP, the intersection of roads with suitable habitat would affect a very small percentage of the total habitat for amphibians. Refer to Master Response 2, Amphibians.
- The commenter attached Maschinski et al. (2006), but has not cited to the article in its comment letter.
- The commenter cited McGahan (1968) in comments regarding golden eagles' need for alternative nests. McGahan (1968) is an investigation of the population dynamics of the golden eagle. The author states that the species is threatened by a number of factors and that early detection of the causes of a population decline of the species is critical. McGahan states that "the conservation and management of any species is contingent upon an understanding of its population dynamics." McGahan (1968) investigated the density, productivity, nesting success, and mortality of a Montana population of golden eagles. McGahan (1968) discussed how 56% of the golden eagle pairs in its study utilized alternative nests. This is consistent with Section 3.1.7.3, Birds, in the subsection entitled Golden Eagle, in Volume 1 of this Supplemental Draft EIS and Section 5.2.2.4.1, Status and Distribution, of the TU MSHCP. Refer to Master Response 3, Raptors.
- The commenter cited McNerney and Sears (2007) regarding the need to survey for burrowing owls, including before fire safety measures. McNerney and Sears (2007) discuss the emergency disking ordinance adopted by the City of Davis in January 2001 to prevent destruction of burrowing owl nests or nest burrows by minor land alterations such as grading, tilling, or disking. McNerney and Sears (2007) concluded that the disking ordinance was successful in preventing effects on burrowing owls nests. McNerney and Sears (2007) also discuss the limitations of such an ordinance, including that the ordinance does not address the indirect effects of loss of foraging habitat. It also does not include language that requires offsite mitigation for the loss of breeding or foraging habitat. Refer to Master Response 3, Raptors, and Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity.
- The commenter cited Mee and Snyder (2007) regarding effects on condors from loss of foraging habitat and microtrash ingestion. Mee and Snyder (2007) review the three "major conservation

problems facing condor populations in the wild: achieving adequate survival rates, adequate reproduction, and normal behavior." The commenter cited Mee and Snyder (2007) as stating that habitat loss will likely become the most important factor limiting the successful recovery of the California condor. This inaccurately reflects the Mee and Snyder (2007) paper, which emphasizes that lead poisoning is the highest priority threat to the condor. Additionally, Mee and Snyder (2007) recommend additional research, reducing human habituation, release of the last historically wild condors, a variety of new initiatives, expanded radiotelemetry, and scientific review of the condor program. The commenter accurately stated based on this article that "the time available to condors for nonessential activities, coupled with their attraction to areas of human activity where such trash is abundant and obvious, may promote their propensity to search for and ingest trash." Mee and Snyder (2007) also state that there are no reported problems with trash ingestion in the Arizona population of California condors and suggest that the difference in behavior may be due to time and budget considerations and site characteristics. Measures to control microtrash are included in the TU MSHCP. Refer to Master Response 1D, California Condor Microtrash and Lead Ingestion, and Master Response 1E, California Condor Loss of Foraging Habitat.

- The commenter cited Mitchell and Beck (1992) in comments regarding the effect of domestic pets on amphibians. Mitchell and Beck (1992) investigate the diversity and seasonality of domestic cat predation on native Virginia vertebrates in both a rural and an urban environment. The study indicates that domestic cats "have become major predators of native vertebrates." Mitchell and Beck (1992) state that no salamanders were recorded as domestic cat prey in their study and only one of the five cats studied caught and killed frogs. The authors also note that only one other study in North America reported frogs as domestic cat prey. Mitchell and Beck (1992) note the limitation of their study in the extrapolation of the results from their small dataset to a large area. The authors also conclude that domestic cats play an important role in the control of some rodent populations. Refer to Master Response 2, Amphibians.
- The commenter cited Moilanen and Wintle (2007) in comments about the TU MSHCP reserve design. Moilanen and Wintle (2007) discuss how the aggregation of reserve networks is considered desirable for both biological and economical reasons. Moilanen and Wintle (2007) develop a quantitative model that introduces aggregation into reserve networks. Moilanen and Wintle (2007) does not appear to provide specific reserve design methodologies that can be directly applied to the proposed action considering the article examines an aspect of species reserve design that functions at a larger scale than the TU MSHCP. Refer to Master Response 5, Habitat Suitability Model.
- The commenter cited Morris et al. (2002) in its comments regarding PVA in reserve design. Morris et al. (2002) found that although there was a significant increase in the percentage of plans for endangered and threatened species using PVA, PVA was still utilized in less than half of the plans approved since 1991. Generally speaking, large conservation planning efforts in California have not performed PVAs due to a lack of available data for the species necessary to conduct a credible model, the questionable value of such PVAs for the particular conservation planning efforts, and the time and expense of doing so. Refer to Master Response 5, Habitat Suitability Model.
- The commenter attached National Science and Technology Council (2008), but has not cited to the article in its comment letter.
- The commenter cited Noss et al. (1997) in comments on the purposes of conservation planning and conservation biology to emphasize that conservation planning must contribute to the recovery of species, not just maintain species in a landscape, in part through preservation of blocks of habitat. Noss et al. (1997) provides principals for species conservation and reserve design. These principles include:

- Species well-distributed across their native range are less susceptible to extinction than species confined to small portions of their range.
- Large blocks of habitat, containing large populations, are better than small blocks with small populations.
- Blocks of habitat close together are better than blocks far apart.
- Habitat in contiguous blocks is better than fragmented habitat.
- Interconnected blocks of habitat are better than isolated blocks.
- Populations that fluctuate widely are more vulnerable than populations that are more stable.

The Service generally believes the TU MSHCP incorporates these principles. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities, and Master Response 5, Habitat Suitability Model, for a more detailed discussion of open space preservation and species recovery.

- The commenter cited Price and Kelly (1994) with respect to reserve design to state that PVA has been used on a variety of species including the Stephen's kangaroo rat. The Price and Kelly (1994) paper cited by the commenter as a PVA for Stephens' kangaroo rat was not a PVA. Price and Kelly developed an age-structured demographic model that would provide the kind of detailed population information necessary to perform a PVA. Price and Kelly criticize a PVA model developed by Gilpin (1991) for not including critical demography data (e.g., age-related death rates). Their concluding statement is revealing regarding the utility of PVAs without adequate data:

  > A believable viability assessment for *D. stephensi* populations will therefore depend critically on establishing the quantitative link between environmental variation, both in space and time, and variation in population growth rates. Although our study does not achieve this end, it indicates what parameters we should focus on and highlights some important issues in the design of field population studies. (p. 819).

  Refer to Master Response 5, Habitat Suitability Model.

- The commenter cited Reed et al. (1998) in comments relating to reserve design and advocating PVA. However, Reid et al. (1998) also state the PVA has a number of limitations and restrictions. The authors state that in some circumstances, resources may be better spent on gathering data rather than used to estimate population parameters for PVA. Reid et al. (1998) indicate that PVAs should be couched in terms of uncertainty; subjected to sensitivity analysis; peer reviewed; be only one step in the management process; and treated as hypotheses to be tested in the field. Refer to Master Response 5, Habitat Suitability Model.
- The commenter cited Relyea (2005a) and Relyea (2005b) to reference that the use of agricultural chemicals and herbicides are known to cause reproductive failure in amphibians. Relyea (2005a) documents negative effects of insecticides and herbicides on amphibian species, particularly tadpoles. Refer to Master Response 2, Amphibians.
- The commenter quoted Richardson and Miller (1997) regarding human disturbances in raptor nesting or hunting habitat and in raptor viewsheds. The commenter also stated that regardless of distance, a straightline view of disturbance affects raptors, and an effective approach to mitigate effects of disturbance for raptors in general and golden eagle specifically involved calculation of viewsheds using a three-dimensional GIS tool and development of buffers based on this, citing Richardson and Miller (1997). Richardson and Miller (1997) do not recommend using GIS to calculate viewsheds but do recommend taking into account site specific information

such as topography and vegetation when establishing raptor buffer zones. Refer to Master Response 3, Raptors.

- The commenter cited Roberts and Gaber (2007) to state that the burrowing owl populations continue to decline in the San Joaquin Valley. However, the commenter does not note that Roberts and Gaber (2007) state that their results are 'somewhat conjectural' and that further analysis is required before definite conclusions on the status of the burrowing owl in the San Joaquin Valley are drawn. Roberts and Gaber (2007) also note that conflicting conclusions about the burrowing owl have been drawn from Breeding Bird Survey and Christmas Bird Count data for the burrowing owl as a whole. The authors also state that they are not aware of any other burrowing owl surveys in the San Joaquin Valley. Roberts and Gaber (2007) attempted to extrapolate a trend for the San Joaquin Valley from two quantitative sources. However, the authors admit that the two sources they used were not a census and may only provide "some clues to burrowing owl numbers and trends". The possible decline of burrowing owls in San Joaquin Valley is reflected in Section 3.1.7.3, Birds, in the subsection entitled Burrowing Owl, in Volume 1 of this Supplemental Draft EIS and Section 5.2.2.3.1, Status and Distribution, of the TU MSHCP. Refer to Master Response 3, Raptors.
- The commenter cited Rohr et al. (2008) to state that the use of agricultural chemicals and herbicides are known to cause reproductive failure in amphibians (*Comment O4-521*). Rohr et al. (2008) discuss the effects of atrazine on amphibians. Rohr et al. (2008) find that atrazine is linked to an increase in elevated trematode loads, especially in tadpoles. Trematode infections in amphibians can cause immune suppression, kidney damage and limb malformations. Refer to Master Response 2, Amphibians.
- The commenter cited Schroeder (1982) as providing a habitat suitability index for yellow warbler. The purpose of Schroeder's (1982) habitat suitability index model for yellow warbler was to evaluate the breeding season habitat needs of the species. The model addresses deciduous shrubland and deciduous scrub/shrub wetland and identifies three habitat variables: (1) percent deciduous shrub crown cover (60% to 80% is optimal); (2) average height of deciduous shrub canopy (greater than 2 meters or 6.6 feet is optimal); and (3) percent of shrub canopy comprised of hydrophytic shrubs (100% is optimal). Refer to Master Response 5, Habitat Suitability Model, and Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Servheen et al. (2007) regarding climate change's effects on species and the importance of wildlife linkages. Servheen et al. (2007) state that access to habitat in response to climate changes might be one of the several expected results of including wildlife linkages for highways. The commenter correctly indicates that Servheen et al. (2007) state that wildlife linkages provide access to habitat, however Servheen et al. do not emphasize that this is a critical function as a response to climate change. They indicate that it may be a factor along with multiple other factors related to climate change that may be important biologically for ecosystem function. In fact, the authors' goal is to provide multiple benefits of linkages so that the general public and agencies will more easily be swayed to include wildlife linkages in highway design. Wildlife linkages and the preservation of the important I-5 crossings are discussed in this Supplemental Draft EIS and TU MSHCP. Refer to Master Response 13, Climate Change.
- The commenter cited Shore et al. (1999) regarding use of rodenticides to control human exposure to bubonic plague. Shore et al. (1999) investigate the effect of rodenticides on nontarget terrestrial invertebrates in Britain. The study concluded that at least 25% to 35% of small mammal predators have been secondarily exposed to rodenticides in Britain. The authors comment further study needs to be conducted in order to interpret the survey data with more

accuracy. Shore et al. (1999) also cite a number of other studies that found little or no effect of rodenticides on terrestrial mammals and birds. Refer to Master Response 2, Amphibians.

- The commenter cited Small (1994) in support of comments regarding the declining population of the white-tailed kite in southern California and the San Joaquin Valley. Small (1994) notes that there has been an increase in the population of white-tailed kites in California in recent years. Small (1994) states that there was a decline in some coastal and southern California populations in the 1980s but that this has since leveled off, except for some local population fluctuations. Small (1994) notes that during the 1980s, the extensive conversion of agricultural land to urbanization in southern California and west-central California led to decline in white-tailed kite populations. This is reflected in the discussion of the existing conditions in Section 3.1, Biological Resources, in Volume 1 of this Supplemental Draft EIS and the TU MSHCP. Refer to Master Response 3, Raptors.
- The commenter cited Soulé (1991) and Soulé et al. (1992) to support its statement that "edge effects are well studied and invariably lead to destruction of habitat values and ecosystem values.". However, Soulé (1991) also states that the degree to which edge effects will diminish the value of a site depends on the habitat, the region, and the species under consideration. Soulé et al. (1992) investigated the effect of fragmentation on chaparral plants and animals. These reports do not discuss measures to address edge effects. Refer to Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity.
- The commenter cited South Coast Wildlands (2006) (cited above as CBI and South Coast Wildlands 2006) as a source of additional data known about the Covered Lands in its comments on surveys and as a potential alternative. Refer to Master Response 11, Alternatives, and Master Response 6, Surveys.
- The commenter cited South Coast Wildlands (2003) in regards to comments about additional sources of survey data for Tejon Ranch. However, SCW (2003) does not deal specifically with conservation values in Tejon Ranch but across the Tehachapi Mountains area as a whole. Refer to Master Response 6, Surveys.
- The commenter cited Stalmaster and Kaiser (1998) with respect to effects on bald eagles from boating. Stalmaster and Kaiser (1998) found that the number of eagles in their study area was negatively correlated with the number of recreational events. The commenter accurately cited Stalmaster and Kaiser (1998) as stating that wintering bald eagles were detrimentally affected by boating including non-motorized boating. However, the authors found that food traffic was more disturbing to eagles than boating. Refer to Master Response 3, Raptors.
- The commenter cited Stalmaster and Newman (1978) to support a larger buffer around bald eagle roosting sites. Stalmaster and Newman (1978) concluded that human activity adversely affected eagle behavior and distribution. The commenter cited Stalmaster and Newman (1978) as stating that they recommend an activity restriction zone of 250 to 400 meters around bald eagle wintering grounds. However, Stalmaster and Newman (1978) only recommend 250 meters as an activity restriction zone, not 400 meters. Also, Stalmaster and Newman (1978) state that bald eagles can become tolerant of human activity. A 300-foot setback is proposed in the TU MSHCP. Refer to Master Response 3, Raptors.
- A commenter cited Stanton and Teresa (2007) in support of mowing or controlled grazing as fire control instead of disking in burrowing owl habitat. The commenter correctly states that Stanton and Teresa (2007) note that artificial burrows are a potential method to enhance nesting opportunities for burrowing owl, and that fuel management activities such as mowing and grazing are beneficial for burrowing owls. Grazing would be the primary fuel management technique on open space areas in the Covered Lands. Refer to Master Response 3, Raptors.

- The commenter cited Talley et al. (2007) as providing improvements for the habitat suitability model used for the valley elderberry longhorn beetle. Talley et al. (2007) characterize valley elderberry longhorn beetle on the basis of the host plant (elderberry [*Sambucus* spp.]), as well as an array of environmental characteristics. Their goal is to develop habitat definitions that reliably indicate occupancy and local persistence and abundance, in order to assess whether unoccupied sites are suitable habitat and to prioritize land acquisitions and identify management actions. Talley et al. (2007) found that higher densities of elderberry plants, and larger mature elderberry plants (i.e., larger size, number of stems, range of branch sizes) were associated with increased valley elderberry longhorn beetle populations. In addition, proximity to habitat edge and topography were also important. In the absence of specific mapping for elderberry trees and shrubs in the Covered Lands, suitable habitat parameters for the TU MSHCP for valley elderberry longhorn beetle include oak woodland and savannah vegetation communities and an intermixed conifer vegetation community; elevations between 1,900 and 3,000 feet above mean sea level (amsl); and proximity to a USGS blue line stream (buffer of 150 feet on either side) (Appendix D, Habitat Suitability Criteria Methods, of this Supplemental Draft EIS). These parameters are considered to represent the best available associations for presence of elderberry. Refer to Master Response 5, Habitat Suitability Model.
- The commenter quoted from Tejon Ranchcorp (1999) the Stipulation for Stay and Related Provisions on Basis of Parties' Entry into Memorandum of Agreement). Refer to Master Response 15, Procedural Considerations.
- The commenter quoted from Tejon Ranchcorp (2002) a Protective Order granted to Tejon Ranch by the U.S. District Court for the Eastern District of California. Refer to Master Response 15, Procedural Considerations.
- The commenter attached and cited Tejon Ranchcorp et al. (2008) the Ranchwide Agreement, in its comments regarding alternatives. The Ranchwide Agreement is included as Appendix E to the TU MSHCP. Refer to Master Response 11, Alternatives.
- The commenter cited Tricolored Blackbird Working Group (2007) as providing a conservation plan that should be incorporated in the TU MSHCP. The Tricolored Blackbird Conservation Plan (Tricolored Blackbird Working Group 2007) has two stated conservation and management goals: 1) to protect, create, restore, and manage habitats needed to support viable, self-sustaining populations of tricolors; and 2) to protect silage-nesting tricolors until sufficient, permanent breeding habitat is available to maintain viable self-sustaining populations. The habitat conservation required by the TU MSHCP is consistent with Goal 1 of the Tricolored Blackbird Conservation Plan. Goal 2 of the Tricolored Blackbird Conservation Plan does not apply to the TU MSHCP as the tricolored blackbirds are not nesting in silage (grain fields) in the Covered Lands. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter attached the Central Valley Birdclub Bulletin, Special Double Issue on the Tricolored Blackbird, but does not cite the article in its comment letter.
- The commenter attached a report by the U.S. Climate Change Science Program, but does not cite this report in its comment letter.
- The commenter cited U.S. Fish and Wildlife Service (1984), the Services' recovery plan for the valley elderberry longhorn beetle with respect to grazing, pesticide use, and exotic species. It details site-specific management actions for private, Federal, and state cooperation in conserving the valley elderberry longhorn beetle and its habitat. U.S. Fish and Wildlife Service (1984) recommends removal of exotic species and other conservation actions, and states that grazing and pesticide use are known to affect the valley elderberry longhorn beetle. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Species.

- The commenter attached U.S. Fish and Wildlife Service (1994) in comments regarding TRC's cooperation with condor recovery activities. Refer to Master Response 15, Procedural Considerations.
- The commenter cited U.S. Fish and Wildlife Service (1999) in comments regarding TRC's cooperation with condor recovery activities. Refer to Master Response 15, Procedural Considerations.
- The commenter cited U.S. Fish and Wildlife Service (1998) in comments regarding TRC's cooperation with condor recovery activities. Refer to Master Response 15, Procedural Considerations.
- The commenter cited U.S. Fish and Wildlife Service (1999) in comments regarding TRC's cooperation with condor recovery activities. Refer to Master Response 15, Procedural Considerations.
- The commenter cited U.S. Fish and Wildlife Service (2002) in comments regarding disclosure of documents. The commenter accurately states that U.S. Fish and Wildlife Service (2002b) contains an extensive review of the evidence available at that time documenting the historical use of Tejon Ranch by condors. Refer to Master Response 15, Procedural Considerations.
- The commenter attached excerpts of U.S. Fish and Wildlife Service (2005), which it cites in comments related to the spread of disease to amphibians. Refer to Master Response 2, Amphibians.
- The commenter cited U.S. Fish and Wildlife Service (2009a) various Freedom of Information Act requests. Refer to Master Response 15, Procedural Considerations.
- The commenter cited and attached U.S. Fish and Wildlife Service (2009b) in regards to comments on Freedom of Information Act (FOIA) requests regarding condor issues. Refer to Master Response 15, Procedural Considerations.
- The commenter cited and attached U.S. Fish and Wildlife Service (2009c) in regards to comments on FOIA requests regarding condor issues. Refer to Master Response 15, Procedural Considerations.
- The commenter cited and attached U.S. Fish and Wildlife Service (2009d) in regards to comments on FOIA requests regarding condor issues. Refer to Master Response 15, Procedural Considerations.
- The commenter cited and attached U.S. Fish and Wildlife Service (2009e) in regards to comments on FOIA requests regarding condor issues. Refer to Master Response 15, Procedural Considerations.
- The commenter cited U.S. Global Change Research Program (2009) regarding general climate change issues. Refer to Master Response 13, Climate Change.
- The commenter cited U.S. Department of Interior (2001 ) regarding consideration of climate in long-term planning. Refer to Master Response 13, Climate Change.
- The commenter cited Vandergast et al. (2008) in its comments regarding reserve design. Vandergast et al. (2008) describes a GIS-based approach for explicitly mapping patterns of genetic divergence and diversity for multiple species. Using this approach, this study aimed to identify areas in southern California with common phylographic breaks and high inter-population diversity. Their analysis identified 14 biodiversity hotspots that can be grouped into eight geographic areas, of which five are unprotected at this time. Vandergast et al. (2007) do not appear to provide specific reserve design methodologies that can be directly applied to this TU MSHCP considering the article examines an aspect of species reserve design that functions at a larger scale than the TU MSHCP. Refer to Master Response 5, Habitat Suitability Model.

- The commenter cited Vandergast et al. (2007) in its comments regarding detrimental effects of fragmented landscapes. Vandergast et al. (2007) note how loss of habitat and habitat fragmentation can lower migration rates and genetic connectivity between populations of native species but it can be difficult to separate the effects of recent anthropogenic fragmentation from the genetic signature of prehistoric fragmentation due to previous natural geological and climatic changes. Vandergast et al. (2007) examined the phylogenetic and population genetic structure of a flightless insect endemic to cismontane southern California, *Stenopelmatus 'mahogani' (Orthoptera: Stenopelmatidae*). Vandergast et al. (2007) suggested that the effects of increased drift following anthropogenic fragmentation are already being seen. However, Vandergast et al. (2007) only investigated the effects of habitat fragmentation on one species of insect. In addition, the species included in the study is large, relatively slow moving, and most likely has a small home range that would contribute to high genetic divergence among regions (Vandergast et al. 2007), regardless of habitat fragmentation. Refer to Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity.
- The commenter cited Walther et al. (2005) in comments regarding climate change effects on species range. Refer to Master Response 13, Climate Change.
- The commenter cited Webwire (2009) regarding market conditions and describing a drop in housing demand. Housing demand concerns are addressed in Master Response 11, Alternatives.
- The commenter cited White et al. (2007) in comments regarding the importance of Tejon Ranch to condors. The commenter accurately quoted White et al. (2007); however, the declaration by White et al. (2007) preceded the publication of the TU MSHCP. Refer to Master Responses 1A through 1I regarding topics specific to the California condor.
- The commenter cited Wolf et al. (1996) in comments addressing bird and mammalian translocations. Wolf et al. (1996) broadly define as "intentional release of captive-propagated and/or wild-caught animal into the wild for the purpose of establishing a new population, re-establishing an extirpated population, or augmenting a critically small population…" (p. 1143). The proposed relocation activities are quite different from most of those described in the literature cited by the commenter. It is not the intent of the TU MSHCP mitigation measures to translocate or reintroduce individuals as defined by Wolf et al. (1996). Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.
- The commenter cited Woods et al. (2003) in comments regarding the effect of domestic pets on amphibian and toad species. Woods et al. (2003) investigated the predation of wildlife by domestic cats in Great Britain. The commenter did not mention that the Woods et al. (2003) paper is only concerned with domestic cat predation and not all domestic pets, or that the authors caution about the results of their study. The authors suggest that their results should be treated as an early assessment of the likely order of magnitude of wild animals killed by domestic cats and that their study should not be viewed as an assessment of the effects of cats on wild populations. Refer to Master Response 4, Covered Species Threats and Potential Effects from Covered Activities.

# Master Response 10
# TMV Project, EIR, and Development-Related Effects Analyses

**Table MR10-1. Comments Addressed in Master Response 10**

| Comment | Commenter |
|---|---|
| G2-9 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-10 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-11 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-12 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-17 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-23 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-24 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-41 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-42 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-43 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-45 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-46 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-47 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-48 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-55 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-56 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| O4-61 | Center for Biological Diversity (Keats, Adam) |
| O4-294 | Center for Biological Diversity (Keats, Adam) |
| O4-303 | Center for Biological Diversity (Keats, Adam) |
| O4-333 | Center for Biological Diversity (Keats, Adam) |
| O4-434 | Center for Biological Diversity (Keats, Adam) |
| O8-5 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-18 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-18A | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-19 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-20 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O12-1 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-2 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-15 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-27 | TriCounty Watchdogs (de Leeuw, Jan) |
| I18-2 | Allavena, Stefano |
| I73-1 | Balbona, Gina |
| I73-2 | Balbona, Gina |
| I313-1 | Conroy, Gerard |

| Comment | Commenter |
|---|---|
| I425-5 | Duchamp, Mark |
| I425-6 | Duchamp, Mark |
| I502-2 | Forster, Peggy |
| I502-3 | Forster, Peggy |
| I502-4 | Forster, Peggy |
| I502-5 | Forster, Peggy |
| I502-7 | Forster, Peggy |
| I502-10 | Forster, Peggy |
| I502-13 | Forster, Peggy |
| I-527-1 | Fry, Kenneth B. |
| I-527-3 | Fry, Kenneth B. |
| I625-3 | Hamber, Janet A. |
| I626-11 | Hamber, Robert |
| I626-12 | Hamber, Robert |
| I626-13 | Hamber, Robert |
| I627-1 | Hamber, Robert |
| I627-2 | Hamber, Robert |
| I627-4 | Hamber, Robert |
| I627-5 | Hamber, Robert |
| I627-9 | Hamber, Robert |
| I627-11 | Hamber, Robert |
| I627-12 | Hamber, Robert |
| I627-13 | Hamber, Robert |
| I627-25 | Hamber, Robert |
| I627-27 | Hamber, Robert |
| I627-28 | Hamber, Robert |
| I627-33 | Hamber, Robert |
| I627-39 | Hamber, Robert |
| I904-1 | Lopez, Irene |
| I930-2 | MacKay, Linda |
| I1210-1 | Pinard, John W. |
| I1563-1 | Trudell, Heidi |
| I1567-2 | Tuszynki, Jacek |
| I1686-1 | Wyatt, Tynan |

# 10.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to the TMV Project, EIR, and development-related effects analysis. Table MR10-1 provides a list of the commenters and a reference to the individual comment.

Some commenters asked for more detail regarding the effects related to potential development under the Proposed TU MSHCP Alternative, specifically regarding the TMV Project that was approved by the Kern County Board of Supervisors on October 5, 2009. In particular, various commenters suggested that the Draft EIS should include details about the TMV Project that are available in the TMV Environmental Impact Report (TMV EIR ) (Kern County 2009; this citation applies to all further references to the TMV EIR) prepared pursuant to the California Environmental Quality Act (CEQA), which was certified in conjunction with Kern County's October 5, 2009 approval. Other commenters appeared to equate the Draft EIS with the TMV EIR, and imply in their comments that the Service's approval of the TU MSHCP and issuance of an incidental take permit (ITP) would directly authorize the TMV Project and other development on the Covered Lands. Other commenters apply CEQA standards to the EIS, which was prepared in compliance with the National Environmental Policy Act (NEPA). Some commenters stated it is necessary to submit comments on the Draft EIS and TMV EIR simultaneously because they are interdependent.

To address these and similar comments and to clarify the regulatory requirements and consequences of the Services review of the TU MSHCP in this EIS, this master response explains the requirements under NEPA for assessing the secondary or indirect effects of the Federal action, and discusses the approach taken by the Service to address such comments on indirect effects.

The proposed Federal action that is analyzed in the EIS is the approval of the TU MSHCP (forming part of the ITP application) and the issuance of an ITP for the Covered Species, pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act (ESA). The purpose of the TU MSHCP is to ensure that the effects of the taking on federally listed species are adequately minimized and mitigated to the maximum extent practicable. Accordingly, the scope of analysis of effects in the EIS is focused principally on the direct, indirect, and cumulative effects of the proposed action on affected resources in the human environment, including the Covered Species. The proposed action does not approve or authorize development, but may be viewed as facilitating development as it addresses one of various statutory and regulatory requirements governing the effects of development. In light of the comments received on the Draft EIS, the Service has reviewed and considered the information in the TMV EIR, as detailed below.

The Service recognizes that NEPA encourages agencies to make comprehensive information available to the public and agency officials concerning the potential effects of their actions before decisions are made and before actions are taken. Given the comments received and the Services commitment to ensure that the information provided in the EIS is comprehensive, the agency has considered the information set forth in the TMV EIR. The information contained in the EIR assists the Service in responding to comments and expands the base of information before the decision makers and the public. However, the TMV EIR was prepared at a more project-specific level, based on the approval of specific development plans, pursuant to state law, which has different standards and scope than NEPA as discussed further below. The EIR only addresses the effects of the TMV Project, and does not consider the effects of the other Commercial and Residential Covered Activities or Plan-Wide Activities included as Covered Activities in the TU MSHCP. The Service does not believe that the level of detail in the TMV EIR is appropriate for this EIS, which analyzes the proposed action relative to the TU MSHCP and issuance of an ITP.

# 10.2 Responses to Substantive Comments

## 10.2.1 Scope of Agency Action

Section 10 of the ESA provides a statutory mechanism to permit the incidental take of federally listed fish and wildlife species by private parties during lawful activities. Congress intended this process to reduce conflicts between federally listed species and economic development activities, and to provide a framework that would encourage "creative partnerships" between the public and private sectors, as well as state, municipal, and Federal agencies, in the interests of endangered and threatened species and habitat conservation (H.R. Rep. No. 97-835, 97th Congress, Second Session; U.S. Fish and Wildlife Service 1996, Chapter 1, Section A).

As described in Section 1.4.1, Federal Endangered Species Act, in Volume I of this Supplemental Draft EIS and Master Response 8, Regulatory Considerations, pursuant to ESA Section 10(a)(2)(A) and associated regulations, the following requirements must be met for the Service to issue an ITP:

- the taking will be incidental to an otherwise lawful activity,
- the effects will be minimized and mitigated to the maximum extent practicable,
- adequate funding will be provided,
- the taking will not appreciably reduce the likelihood of the survival and recovery of the species,
- the applicant will ensure that any other necessary measures required by the agency are met, and
- the Service has assurances that a habitat conservation plan (HCP) will be implemented.

As stated in the *Habitat Conservation Planning Handbook* (U.S. Fish and Wildlife Service 1996), the "purpose of the habitat conservation planning process and subsequent issuance of incidental take permits is to authorize the incidental take of threatened or endangered species, not to authorize the underlying activities that result in take." Here, the proposed action is approval of the TU MSHCP and issuance of an ITP. Any development that would occur on the Covered Lands would be subject to a separate approval process under the jurisdiction of Kern County, and other local, state and Federal regulatory agencies.

## 10.2.2 Consideration of Indirect Effects of Project-Specific Effects

### 10.2.2.1 NEPA Requirements

An EIS must consider the direct, indirect, and cumulative effects of the Federal action (40 Code of Federal Regulations (CFR)1508.8 and 1502.16). Indirect effects are those that are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems" (40 CFR 1508.8(b)). The level of detail in an analysis of indirect effects is driven by the underlying action before the agency. Cumulative effects are effects on the environment which result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7). Where, as here, a Federal action would facilitate but not approve a development project, the agency is not required to exhaustively review the effects of the development. A Federal project that enables but

does not approve a specific development project can rely on more generic analysis of the reasonably foreseeable development plans that may result from the Federal action.

The level of analysis in this Supplemental Draft EIS complies with NEPA standards. The proposed Federal action analyzed in the EIS is the approval of the TU MSHCP and issuance of an ITP. The Covered Activities considered in the TU MSHCP, including Commercial and Residential development, have the potential to result in incidental take of the Covered Species; the take that may result incidental to the Covered Activities is what the Service is considering authorizing. Any development proposed as a Covered Activity under the TU MSHCP must ultimately be approved by other agencies, and the effect from such development is an indirect effect of the proposed Federal action. Development in the Covered Lands is under Kern County's jurisdiction and subject to a separate, rigorous environmental review process under CEQA. The level of detail provided in the EIS complies with NEPA and is consistent with case law.

As required, this Supplemental Draft EIS includes a general analysis of the likely direct, indirect, and cumulative effects that could result from the proposed action. This analysis provides agency decision makers and the public with a reasoned comparison of the available alternatives. However, as discussed above, the effects from site-specific development plans correspond to specific development approvals issued by Kern County, which is beyond the scope of analysis of the Federal proposed action. The EIS recognizes that more thorough analysis of potential environmental effects from commercial and residential development would be considered by Kern County, and during that review process, detailed project design features and mitigation measures would be imposed on any development project. This level of analysis enables the agency and the public to consider the alternative courses of action and take a "hard look" at the environmental consequences of the proposed alternatives. Therefore, the level of analysis in the EIS is appropriate under NEPA; the public has been offered the opportunity to comment on potential development and other covered activity effects that could follow from the proposed Federal action and the other alternatives.

### 10.2.2.2 Level of Information in the EIS

As summarized below, many commenters stated that more detail on specific potential effects associated with the TMV Project should have been included in the Draft EIS. The TMV EIR, which was issued and approved after the Draft EIS was issued, provides details regarding potential site-specific development effects associated with the TMV Project. However, based on the nature of the proposed Federal action, the EIS does not include the type of project details and effect analysis that are included in a CEQA document prepared as part of the development entitlement and approval process. NEPA compliance relative to issuance of ITPs pursuant to the ESA is generally more programmatic in scope compared to a project-specific CEQA compliance document prepared for a specific development based on the nature of the proposed action. CEQA requires the local agency to reach significance conclusions and mitigate the project effects to a less-than-significant level unless the project benefits are affirmatively found to outweigh the environmental effects. NEPA, in contrast, has been found to be an informational and analytical statute, such that once an action is determined to have potential substantial effects on the environment, then an EIS is required. The EIS is intended to provide decision-makers with sufficient information to assess and disclose the potential environmental effects of a proposed action, along with a reasonable range of alternatives, and make an informed selection of the alternative to implement based on the purpose and need of the proposed action (40 CFR 1502.14 [the alternatives section is the "heart of the environmental impact statement"]).

Accordingly, the analysis of potential development effects in the EIS does not precisely align with the discussion in the TMV EIR, nor should it. For example, as discussed below, while both the EIS and the EIR analyze traffic effects associated with the respective actions at issue, these analyses have different scopes (given that the actions analyzed under each—issuance of an ITP for take of federally

listed species versus approval of the proposed development project—are different) and are organized in different manners; the EIS includes all Covered Activities, and the TMV EIR includes a more specific analysis of the TMV Project, including location of roads and intersections , which is only one component of the Commercial and Residential Development Activities included in the TU MSHCP (compare Section 4.8, Transportation, in Volume I of this Supplemental Draft EIS to Section 4.15, Transportation, in the EIR). Similarly, the analysis of public services in the TMV EIR considers a more detailed review of schools, and fire and police stations, and focuses on how the TMV Project would fully offset all potential effects (compare Section 4.7, Community Resources, in Volume I of this Supplemental Draft EIS, with Section 4.13 in the EIR). The TMV EIR also considers certain development-related effects on humans, such as potential effects on the local mineral production economy that are not addressed in the EIS. Likewise, the cumulative effects discussion in this Supplemental Draft EIS focuses on reasonably foreseeable development projects outside the Covered Lands that could result in cumulative effects on Covered Species and associated resources. Because the focus of the EIR is the effects that development of the TMV Project itself could have on the environment, the additional level of detail included in the EIR is appropriate under CEQA, but not required for NEPA.

Nevertheless, this Supplemental Draft EIS has been revised to better incorporate relevant information from that document at a level that is appropriate for the EIS and can be generalized over all the development areas. For example, based on response to comments, the traffic and air analyses have been revised to better incorporate assumptions from the TMV EIR. Similarly, the greenhouse gas (GHG) analysis has been revised to do the same. However, the proposed action at issue considers a general land management scheme with development areas and conservation areas, and the development areas include, and go beyond, the TMV Project; therefore, the revised assumptions (refined by review of the TMV EIR) have been applied more generally in this Supplemental Draft EIS. These revisions are intended to provide decision makers and other stakeholders with the information they need to understand the potential environmental effects of the proposed action and to compare the consequences and tradeoffs between the alternatives.

Finally, this Supplemental Draft EIS recognizes that that the TMV Project has been approved and incorporates revised assumptions in Chapter 4, Environmental Consequences. It also recognizes that Kern County's approval of amended general plan designations changes the underlying land use assumptions considered in the Draft EIS alternatives; therefore, the alternatives in this Supplemental Draft EIS have been revised accordingly (Chapter 2, Proposed TU MSHCP and Alternatives, in this Supplemental Draft EIS).

### 10.2.2.3 Use of Thresholds of Significance and Significance Conclusions

One commenter raised the concept of significance criteria, specifically in the context of the visual resources analysis, stating that because the Draft EIS does not use significance criteria, the commenter is concerned that the EIS underestimates the effect of new development on open space. The commenter goes on to say that for all resource areas, the EIS should clearly state levels of significance and significance conclusions.

Thresholds of significance are an important component of analysis under CEQA. Agencies use identifiable qualitative, quantitative or performance levels for particular environmental effects, and if the effect is determined to exceed that level, the effect is considered significant (14 California Code of Regulations (CCR)15064.7). Under CEQA, a finding of significance triggers legal obligations; agencies are required by CEQA to adopt all feasible mitigation measures or feasible alternatives for any project for which significant effects are found (California Public Resources Code 21002). If an agency seeks to approve a project with remaining significant effects, it must make findings based on substantial evidence that specific economic, legal, social, technological or other benefits of the project outweigh its unavoidable adverse effects (14 CCR15093).

Under NEPA, significance is defined by the context and intensity of a Federal action on a particular resource element (40 CFR 1508.27). Federal actions that would result (or are likely to result) in substantial effects require detailed analysis using an EIS. The purposes of an EIS are twofold. First, it serves as an analytical tool for agencies to understand and disclose the effects of their actions on the human environment. It also provides the public an opportunity to participate in the decision making process. Unlike CEQA, NEPA does not dictate or require that particular actions or alternatives be adopted. Those decisions rest with the agency and are disclosed in the Record of Decision (ROD). While NEPA requires that an EIS describe any adverse environmental effects that cannot be avoided (42 United States Code [U.S.C.] 4332(C)(ii)), such a disclosure does not impose any additional legal obligations on the agency. NEPA does not require the identification and use of significance thresholds. However, to better substantiate the analysis provided in Chapter 4, Environmental Consequences, this Supplemental Draft EIS has been revised to include specific parameters for each resource area that are used to assess the potential environmental effects of the proposed action and alternatives, and to generally determine if an alternative would result in an unacceptable consequence (e.g., violation of a state or Federal regulatory standard).

### 10.2.2.4 Approach to Mitigating Indirect Effects

Several commenters questioned the EIS approach to mitigation, stating that it is inappropriate to rely on state and local agencies to sufficiently mitigate the indirect effects of the development that would be facilitated by the TU MSHCP and ITP. These comments question whether reliance on compliance with local, state, and Federal laws and development of site specific measures outside of the framework of the EIS, TU MSHCP, and ITP approval constitutes adequate mitigation with respect to cultural resources, wetlands effects and other effect areas.

These commenters raised another important distinction between CEQA and NEPA. Under CEQA, an agency must find that mitigation measures are feasible, and that they are "enforceable through permit conditions, agreements or other measures to ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded" (*Federation of Hillside and Canyon Assns. v. City of Los Angeles* (2000) 83 Cal.App.4th 1252). Mitigation measures that are within the responsibility and jurisdiction of another public agency, and not the agency approving the project, are considered infeasible and cannot mitigate the project's effects to a less-than-significant level (14 CCR 15091(a)(2)). By contrast, under NEPA a Federal agency must identify mitigation measures to address substantial effects; however, the statute does not require the agency to implement them. Further, the Federal agency may rely on the ability of other agencies to enforce legal requirements and to mitigate effects that are not under the control of the Federal lead agency. (See *Robertson v. Methow Valley Citizens Council* [1989] 490 U.S. 332, 352 [approving mitigation discussion where the Federal action—issuance of a permit for ski resort on national forest land—would have off site effects on air quality and mule deer. State and local governments had jurisdiction over these areas and would have jurisdiction to mitigate the effects]).

Consistent with this standard, and as discussed further below with respect to specific resource areas, the EIS discusses mitigation measures for all eight resource areas considered in Chapter 4, Environmental Consequences. In areas where state, local, or other Federal agencies have regulatory authority over a potential indirect effect, the EIS appropriately assumes compliance with laws and regulations enforced by these agencies to mitigate the potential effects that would be facilitated by the TU MSHCP and ITP. Thus, the EIS includes mitigation measures that establish broad principles intended to be in harmony with the specific mitigation measures imposed by Kern County on the TMV Project, or any other development it approves on the Covered Lands. For example, the EIS states that all development would identify and implement structural and treatment best management practices (BMP) to limit effects on surface waters and comply with Federal, state, and local wetlands laws (Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS).

Visual effects of the potential development would be mitigated through a number of mitigation measures, such as landscaping and design measures that would limit visual effects and maintain the visual character of the site (Section 4.6, Visual Resources, in Volume I of this Supplemental Draft EIS). Traffic effects would be mitigated through development of a construction traffic management plan prior to development and efforts to integrate nonmotorized transportation and transit into the development (Section 4.8, Transportation, in Volume I of this Supplemental Draft EIS). Similarly, the EIS recognizes that Kern County would, in accordance with state law, work with developers to incorporate GHG reductions into development plans, and notes that coordinated development would provide opportunities to limit construction emissions (Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS). These mitigation measures do not dictate site-specific standards. The EIS appropriately recognizes that detailed mitigation measures and project design features that would be developed during the development approval process and are, primarily, under the jurisdiction of Kern County. Review of the TMV EIR reveals that the mitigation measures in the EIR support the EIS conclusions regarding measures likely to be required during the local approval processes.

In addition, with respect to the proposed action, Covered Activities within the Covered Lands (including development) would be required to comply with the species-specific conservation measures required under the TU MSHCP (see Tables 2-3 and T-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS) that operate also to control land use impacts to other resource areas. For example, the TU MSHCP conservation measures would require that BMPs be implemented to protect surface water quality (pollutants, erosion, dust control, sedimentation) in modeled habitat for the Covered Species, in accordance with Federal Clean Water Act (CWA) and Porter-Cologne Water Quality Control Act requirements and air district requirements. If the Service issues an ITP to Tejon Ranchcorp (TRC) for incidental take of the 27 species covered under the TU MSHCP, these measures would be enforceable under the ESA through the ITP and applicable conservation easements.

## 10.2.3 Sufficiency of EIS Analysis of Development-Related Effects

The discussion that follows considers comments questioning the adequacy of the analysis of development-related effects in the Draft EIS, as well as the relationship between the information presented in the TU MSHCP EIS and the TMV EIR. The paragraphs that follow describe the approach to the effects analysis used in the EIS and describe, generally, how the EIS considers the analysis provided in the TMV EIR.

As discussed below, the Service's proposed action is considering approval of the TU MSHCP and issuance of an ITP for the take of the Covered Species incidental to otherwise lawful activities. The proposed action does not involve the approval or disapproval of any specific development; rather those approvals fall under the jurisdiction of Kern County. The analysis presented in the EIS adheres to 40 CFR 1502.16 a-h relative to the proposed action. Thus, although the TMV EIR was used to supplement the setting and data information for this Supplemental Draft EIS, the EIR analysis does not substitute for the EIS analysis. In addition, the TMV EIR supports the Service's conclusions regarding mitigation measures that would be imposed during the commercial and residential development approval process, as referenced in the effects analysis in Chapter 4, Environmental Consequences, of this Supplemental Draft EIS. The discussion below summarizes many of the TMV EIR mitigation measures, all of which are included as Appendix J, TMV Specific and Community Plan Mitigation Monitoring and Reporting Program, to this Supplemental Draft EIS for reference.

### 10.2.3.1 Biological Resources

Many commenters raised issues related to the effect of the TMV Project on biological resources. Commenters stated that development of the TMV Project would adversely affect species on the Covered Lands, including the California condor, by destroying or reducing habitat, introducing bulldozers, diesel emissions and construction noise, domestic pets, and new light sources into habitat, and creating edge effects and fire risks in preserved areas. Some commenters stated that the TMV Project is inconsistent with recovery of the condor, or stated that the TMV Project would be "plopped" into or invade species habitat. Other commenters were opposed to the urbanization of wildlife habitat. Comments relating to effects on biological resources, including vegetation communities, species, and wildlife connectivity, are discussed below.

#### Vegetation Communities

Some commenters stated that the EIS should clarify the extent of vegetation disturbance and effects on vegetation communities that could result from the TMV Project and development covered by the TU MSHCP.

The EIS recognizes that Commercial and Residential Development Activities would result in permanent and temporary effects on vegetation communities from grading, increased human presence and more urban-type uses, and provides a breakdown of the vegetation communities potentially affected under each alternative, including the Proposed TU MSHCP Alternative (Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS). Although these effects were independently analyzed by the Service, the analysis in the TMV EIR informed this Supplemental Draft EIS. Specifically, in its revised assumptions and calculations, this Supplemental Draft EIS uses the Development Envelope (i.e., 8,817 acres for the Proposed TU MSHCP Alternative) identified in the TMV EIR for the TMV Project to analyze effects on vegetation communities. As described in Section 4.1.1.2, Methods, in the subsection entitled Analytical Framework for Biological Effects, in Volume I of this Supplemental Draft EIS, the biological resources section uses this conservative Development Envelope to account for ground disturbance, since the exact location of Commercial and Residential Development Activities are not known. This Supplemental Draft EIS also provides more detail regarding the assumptions and vegetation mapping approach used to complete the analysis (Appendix D, Habitat Suitability Criteria Methods, in this Supplemental Draft EIS), which was derived in part from the TMV EIR.

With respect to the TMV EIR analysis, although the EIR recognizes the potential for the TMV Project to result in short- and long-term effects on these sensitive communities, it includes a variety of mitigation measures to reduce such effects, including commitments to reduce potential effects during the construction period; development of various plans that would reduce development-related effects, such as an integrated pest management plan (IPMP) and golf course maintenance plan; development of a grazing management plan to manage grazing activities; education commitments; implementation of a variety of measures to mitigate for effects on unvegetated streambeds and riparian habitats and wetlands, including creation of comparable habitat; commitments to avoid and minimize effects on riparian habitats through Special Management Areas as well as commitments to avoid, preserve, and replace oak tree habitat and oak trees (Kern County 2009, MM 4.4-47 to 4.4-56). The TMV Project would also be required to apply for permits from other agencies, including the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB), before any jurisdictional wetlands could be filled, which would likely result in permit conditions to further address effects on wetlands and associated riparian vegetation. With implementation of these mitigation measures, the TMV EIR found that effects on sensitive vegetation communities would be mitigated to less than significant.

## California Condors

Commenters raised concerns regarding the potential effects on California condors due to development of the TMV Project. Similar to vegetation communities, the potential effects of the Covered Activities on California condors from the development under the Proposed TU MSHCP Alternative, including the TMV Project, have been independently analyzed by the Service and are described in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS. As discussed in that section, the Federal and state definition of take are different. The TMV EIR supports this conclusion, explaining that no take of the California condor (as defined by the California Fish and Game Code) would result from the TMV Project; however, because of the possibility of habituation to humans, ESA coverage for nonlethal Federal take may be required for the project (this underlies the need for the TU MSHCP and environmental review using an EIS). In addition, the mitigation measures considered in the EIR were based on the Tejon Ranch California Condor Conservation and Management Plan (Condor Plan) (Bloom 2008), which was also the basis of the mitigation program in the TU MSHCP.

## Other Covered and Special-Status Species

Commenters stated that the EIS should better identify potential effects on special-status species. Similar to all biological resources, the potential effects of the Covered Activities, including the TMV Project, have been independently analyzed by the Service and disclosed in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS. Commercial and Residential Development Activities would result in permanent and temporary effects on species habitat from grading, increased human presence and more urban-type uses. This Supplemental Draft EIS clarifies in Section 4.1.1.2, Methods, in the subsection entitled Analytical Framework for Biological Effects, that the biological resources section uses a conservative Development Envelope to account for ground disturbance, since the exact location of all of the Commercial and Residential Development Activities in the TMV Planning Area (including Oso Canyon and West of Freeway) are not known.

With respect to the TMV EIR analysis, the TMV Project species mitigation program in the EIR appears to have been adapted from Section 7, Conservation Plan for Other Covered Species, in the Draft TU MSHCP, and incorporates additional site-specific measures, such as Special Management Areas requiring either avoidance or minimization measures to reduce or avoid effects on species (Kern County 2009, MMMP, pp. 4.4-9 to 4.4-46, pp. 41–73]). Considering the implementation of the mitigation described in the Draft TU MSHCP, Kern County found that all effects on special-status species would be less than significant (Kern County 2009, Findings of Fact, pp. 30 to 63). This finding is consistent with the analysis in this Supplemental Draft EIS.

## Wildlife Linkages

Commenters stated that the TMV Project would remove important wildlife linkages. As noted above, while the TU MSHCP is broader than just the TMV Project, this Supplemental Draft EIS was revised to use the identified TMV Project Development Envelope for more specific analysis of the potential effects of the Covered Activities on wildlife connectivity. This Supplemental Draft EIS was also updated to include the results of the least-cost corridor analysis (which determines the safest movement routes for a species), which was derived from the TMV EIR (Kern County 2009).

The TMV EIR found that a low level of development-related effects on wildlife movement could occur; however, the TMV Project would avoid a large contiguous wildlife linkage to the north and east of the area that encompasses the substantial majority of the land in the western Tehachapi landscape (Kern County 2009, p. 4.4-431). The TMV Project open space areas, which comprise approximately 81% of the Covered Lands, would be integrated with and support this linkage (Kern County 2009, p. 4.4-431). Wildlife linkage functions would also be maintained in the portions of the

project's Development Envelope with very low levels of density, and would be expected to persist in the portions of the Development Envelope with relatively more development (Kern County 2009, p. 4.4-431). The EIR recognized the substantial effect the Ranchwide Agreement would have on preserving wildlife linkages throughout the ranch (Kern County 2009, p. 4.4-433). The regional wildlife linkage would connect directly with the most heavily used Interstate 5 (I-5) undercrossings identified, and maintain existing movement at these locations. Kern County concluded that the TMV Project would not significantly affect movement of native resident or migratory species in the western Tehachapi landscape (Kern County 2009, Findings of Fact, pp. 71–72). These conclusions are generally consistent with the effects analysis provided in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS. For the Supplemental Draft EIS, however, additional analysis was conducted to confirm connectivity for all the Covered Species, further supporting the conclusions.

### 10.2.3.2 Water Resources

Comments regarding water resources related to the disclosure of effects on water quality, groundwater levels and surface water flows, and jurisdictional wetlands and riparian areas resulting from the TMV Project and other development activities are described below.

#### Water Quality

One commenter stated that the EIS included insufficient detail to understand the effects of the TMV Project on surface and groundwater quality.

As noted above, the Service is not approving the TMV Project; however, because approving the TU MSHCP and issuing an ITP would facilitate development, under the Proposed TU MSHCP Alternative, the EIS recognizes the potential for water quality effects from development, and analyzes potential effects on water quality, surface water flow and groundwater recharge, and wetlands as a result of the Covered Activities (Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS). As discussed above, the EIS provides analysis of potential direct, indirect and cumulative effects of the proposed action of issuance of an ITP, based on the TU MSHCP, using acreage of disturbance and type of development. A detailed analysis of specific development plans in the Covered Lands would be conducted by the County when they become available, and as requested by a project proponent, in compliance with CEQA.

Review of the TMV EIR provides additional support for the environmental setting discussion in this Supplemental Draft EIS. Specifically, Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS states that the beneficial uses of water bodies on the Covered Lands would not be affected by the Proposed TU MSCHCP Alternative . These conclusions are consistent with the findings in the TMV EIR (Kern County 2009, pp. 4.8-23 to -50), as well as the Central Valley RWQCB permits issued for the TMV Project (Central Valley RWQCB Waste Discharge Requirements, Order No. R5-2011-0018, April 29, 2011; Central Valley RWQCB 401 Certification, January 14, 2010). The inclusion of specific water quality mitigation measures in the EIR supports the conclusion in the EIS that individual project-level compliance with the Federal, state, and local water quality protection requirements and permitting schemes would reduce the development-related water quality and cumulative effects of the Proposed TU MSHCP Alternative on water resources (Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS). Specifically, the EIR incorporates extensive mitigation measures to reduce the potential water quality effects of the TMV Project during construction and operations, including compliance with the state Construction General Permit including erosion and sediment control during construction; construction worker training and ongoing monitoring and inspections; regular inspection of treatment control systems; control of potential pollutant source areas such as loading docks and parking areas; regular litter control; development of educational materials related to water quality; development of a landscape

management plan to implement integrated pest management to limit pesticide use; equestrian and golf course management standards; use of bioretention areas, other treatment controls and ongoing adaptive management; prohibitions on recreation in Castac Lake; and concentrated development to reduce the amount of new impervious surfaces (Kern County 2009, MM 4.8-1 to 4.8-47). Kern County found that, with the mitigation provided in the TMV EIR, effects on water quality would be less than significant (Kern County 2009, Findings of Fact, pp. 108–116).

Additionally, the EIR indicated that to reduce potential water supply effects, the TMV Project would use recycled water. To address potential water quality effects from water recycling, the EIR also included a detailed analysis regarding potential effects on groundwater and onsite water as a result of biosolids and recycled water from the onsite wastewater reclamation facility (Kern County 2009, pp. 4.8-59 to -60 [MM 4.8-44; MM 4.8-45] and 4.16-21 [MM 4.14-6]). With the application of these mitigation measures, the EIR concluded that all potential effects on surface and groundwater from recycled water use would be less than significant (Kern County 2009, p. 4.8-60). The use of water recycling and associated mitigation to avoid effects on water quality are both additional project-specific measures that would reduce the effects from development-related Covered Activities.

Finally, as described in Section 10.2.2.4, Approach to Mitigating Indirect Effects, above, the Covered Activities would comply with the species-specific conservation measures required under the TU MSHCP (see Tables 2-3 and 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS), some of which would also operate to protect water quality (e.g., incorporating design features to avoid and minimize urban runoff into habitat areas and using erosion control measures during construction). If the Service issues an ITP to TRC for incidental take of the 27 species covered under the TU MSHCP, these measures would be enforceable under the ESA through the ITP and applicable conservation easements.

## Surface Water Flow and Groundwater Recharge

Commenters stated that the EIS contains insufficient information regarding groundwater supplies and fails to sufficiently analyze the effects of the TMV Project on groundwater recharge and surface drainage flows. Other commenters stated the Draft EIS does not address Castac Lake, including the effects of continually drawing groundwater from the Castac basin, which the commenter stated is done to maintain an artificial elevation for aesthetic reasons for the TMV Project.

Again, the Service is not approving the TMV Project or any other residential and commercial development. This Supplemental Draft EIS analyzes the direct, indirect, and cumulative effects of the proposed action—issuance of an ITP—which would facilitate development. Thus, the Services' analytical approach is programmatic, and provides an appropriate level of analysis of effects on surface water flows and groundwater recharge, using acreage of ground disturbance and type of development, to provide a reliable and consistent basis for the alternatives analysis.

With respect to groundwater, TRC's existing groundwater use is discussed in Section 3.2.3.1, Land Uses Affecting Water Quality in the Study Area, in Volume I of this Supplemental Draft EIS. Specifically, the Supplemental Draft EIS provides a revised description of groundwater uses in the Covered Lands, which have historically included water supply for the ranch headquarters complex; irrigation of pasture, landscaping, and agricultural uses (e.g., vineyards, apple orchards); irrigation of Tejon sports fields, El Tejon School grounds and facilities, and firefighting purposes; and maintenance of Castac Lake. No operating wells or significant groundwater extraction activity occurs in other portions of the Covered Lands.

The EIS considers that the pumping of groundwater can degrade water quality (Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS). However, as discussed in this section, periodic water quality tests on the southeast draining streams on the Covered Lands (including Grapevine Creek, to which Castac Lake flows) have not identified any constituents of concern that

have required any water quality-based restrictions on current uses of creek water on Tejon Ranch. Additionally, the Central Valley RWQCB has not found any impairment of the beneficial uses of water bodies on the Covered Lands, established total maximum daily loads, or required water quality corrections. These conclusions are supported by the Central Valley RWQCB permits issued for the TMV Project (Kern County 2009, 4.8-23 to -63; Central Valley RWQCB Waste Discharge Requirements, Order No. R5-2011-0018, April 29, 2011; Central Valley RWQCB 401 Certification, January 14, 2010).

Further, with respect to potential effects on groundwater recharge, Plan-Wide Activities proposed under the TU MSHCP would be restricted by the Ranchwide Agreement, which provides additional protection to the Covered Species, their habitat, and in effect, water resources as well. In particular, groundwater use by ongoing Plan-Wide Activities in the Ranchwide Agreement conservation easement lands, which lands include the TU MSHCP Mitigation Lands, would be restricted by the requirement that no new groundwater extraction that would cause significant groundwater-related adverse effect on conservation values be permitted. This has been clarified in this Supplemental Draft EIS description of Plan-Wide Activities.

Additionally, groundwater use in support of the Commercial and Residential Development Activities under the Proposed TU MSHCP Alternative would be restricted by state and local requirements. For example, California law, Water Code Section 10910 *et seq*. requires that development over 500 units or its equivalent (or an increase in 10% in the number of existing service connections), be supported by a water supply assessment that shows there is existing sufficient water supply to accommodate the development. If groundwater is proposed to be used, the sufficiency of that source must be shown. In addition, under CEQA, all projects must analyze effects on groundwater recharge and mitigate for those effects. Thus, as discussed in Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS, the proposed Federal action's contribution to any cumulative effects on the groundwater basin is anticipated to be minor. With respect to the TMV Project, review of the TMV EIR shows that the TMV Project would not use groundwater as a water supply (Kern County 2009, p. 4.16-11), but would instead use water from the Tejon Castac Water District (TCWD). As described in Section 10.4.7.2, Public Services, below, three sources of water supply would be used for the TMV development:

- tertiary-treated recycled water produced by the TMV wastewater treatment plant,
- water recovered from TCWD water banking facilities in the Kern Water Bank and Pioneer project, and
- State Water Project deliveries, assuming average, dry and multiple dry year deliveries would occur at the lowest levels identified in the current State Water Project reliability report (Kern County 2009, p. 4.16-12).

Future use of groundwater that affects the same basin is not known, and the cumulative effects from other projects are considered in Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS.

With respect to Castac Lake, the figures in this Supplemental Draft EIS have been revised to clearly label the lake (e.g., Figure 2-2). Section 3.2, Water Resources, in Volume I of this Supplemental Draft EIS describes Castac Lake, its location, and the fact that TRC maintains the lake elevation through use of groundwater as necessary to augment surface flows from the surrounding watershed. Management of Castac Lake is ongoing and is part of the existing environmental conditions considered in this Supplemental Draft EIS. The lake has been managed by TRC since 2001. Castac Lake, as managed, is habitat for many Covered Species, and the diversity of species that use Castac Lake is expected to be maintained. The EIS finds that the following Covered Species are likely to utilize Castac Lake and/or its fringes: bald eagle, American peregrine falcon, white-tailed kite, purple martin, least Bell's vireo, the little and southwestern willow flycatcher, western yellow-billed

cuckoo, tricolored blackbird, and yellow warbler (Section 3.1, Biological Resources, in Volume I of this Supplemental Draft EIS). Historical groundwater use is not expected to increase under the TU MSHCP, and, as found in the EIS, the Castac Lake Valley Basin has not been documented to be depleted, in overdraft, or suffering from adverse water quality. Further, no adverse effects on species from use of Castac Lake under the Proposed TU MSHCP is anticipated (Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS), as supported by the analysis in the TMV EIR (Kern County 2009, pp. 7-662 to -663). Indeed, an additional requirement to protect wildlife use was added by Kern County, which would prevent TMV Project residents from using the lake for recreation (Kern County 2009, MMMP, MM 4.8-31, p. 203).

With respect to flooding risks, which could be an indirect effects related to development, Section 3.2, Water Resources, in Volume I of this Supplemental Draft EIS states that Castac lake is managed such that there is excess flood capacity. Specifically, TRC has maintained the lake elevation at 3,503 feet above mean sea level (amsl) since 2002 by recharging the lake with groundwater, as necessary. Flooding at Castac Lake is not anticipated; it is noted that the TMV Project Approvals required that the excess flood capacity be maintained, and found no flooding risk (Kern County 2009, Findings of Fact, pp. 118–121) .

Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS analyzes changes to surface flows and groundwater recharge  Additionally, the TMV EIR provided an in-depth, detailed analysis of hydrologic areas of concern both pre- and post-mitigation for the TMV Project (Kern County 2009, Appendix I-1 and I-2). Kern County concluded that with these mitigation measures (Kern County 2009, MMMP, MM 4.8-39 to 4.8-40, pp. 209–210) effects on existing drainage patterns and the volume of water available for groundwater recharge would be less than significant (Kern County 2009, Findings of Fact, 116–118). This Supplemental Draft EIS cites additional technical information presented in the water quality and hydromodification report and drainage study for  the TMV EIR. Thus, the TMV EIR provides additional analytical support for the EIS conclusion that the potential effects from development on groundwater recharge, surface water flow and volume (including flooding) would not be significant (Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS). The inclusion of specific water quality mitigation measures in the TMV EIR as well as issuance of permits from the Central Valley RWQCB also support the EIS conclusion that individual project-level compliance with the Federal, state, and local water quality protection requirements and permitting schemes would reduce development-related water quality and quantity effects to minor levels (Kern County 2009, Findings of Fact, pp. 108–124).

## Wetlands

Several commenters stated that the Draft EIS does not contain sufficient detail on the effects of the TMV Project (or development more generally) on jurisdictional waters and the species using wetlands and riparian areas, and that the EIS should include more information on efforts to avoid, minimize, and mitigate effects.

As noted above, the Service is not approving the TMV Project or any other residential and commercial development. Detailed development plans, including exact grading locations, for the Commercial and Residential Development Activities proposed under the TU MSHCP do not currently exist, and additional, project-specific analysis of potential effects on wetlands suggested by commenters is beyond the scope of the Service's proposed action. Nevertheless, the EIS provides analysis of potential effects on wetlands that could flow from approving the TU MSHCP and issuing the ITP, using ground disturbance acreage as a basis for comparison. This analytical approach, in combination with measures acknowledging Federal and state compliance laws that prohibit development projects from resulting in a net loss of wetland habitat, form a reliable and consistent basis for the analysis provided in Section 4.2, Water Resources, in Volume I of this Supplemental Draft EIS.

The TMV EIR includes detailed information regarding wetlands delineated in the TMV Project site, as well as detailed information on measures to avoid, minimize and mitigate effects on wetlands. Specifically, the EIR included a jurisdictional wetland delineation of the TMV Planning Area, which identified a total of 103.1 acres of federally regulated wetlands and 318.8 acres of potentially state-regulated nonvegetated streambed and riparian areas (Kern County 2009, Appendix J to the EIR). Section 3.2, Water Resources, in Volume I of this Supplemental Draft EIS has been updated to include this information. While the TMV EIR presented a project-specific analysis with a different proposed action (approval of the TMV Project), this Supplemental Draft EIS addresses a larger area and additional Covered Activities (based on the TU MSHCP) and provides a programmatic analysis of the effects of those activities, including mitigation measures that are geared to be implemented by TRC and the agencies with jurisdictional approval over development. For all alternatives, the EIS analyzes a conservative scenario where 25% of the wetlands in the Development Envelope would be affected. As mitigation, the EIS assumes that Commercial and Residential Development Activities comply with applicable Federal, state and local biological resource protection measures, including those for protection of wetlands and riparian areas.

Review of the TMV EIR demonstrates the type of extensive mitigation that would be imposed during the local approval process to minimize effects on wetlands. Specifically, the EIR requires implementation of a variety of measures to mitigate for effects on unvegetated streambeds, riparian habitat, and wetlands, including creation of comparable habitat and commitments to avoid and minimize effects on riparian habitats through Special Management Areas (Kern County 2009, MMMP, MM 4.4-23, p. 53), as well as commitments to avoid, preserve and replace oak tree habitat and oak trees (Kern County 2009, MMMP, MM 4.4-8 to 4.4-31; MM 4.4-47 to 4.4-56, pp. 40–59, 74–85]). Under the EIR, the TMV Project would also be required to apply for permits from other agencies, including the Service, USACE, CDFG, and the Central Valley RWQCB, before any jurisdictional wetlands could be filled. The Central Valley RWQCB permits have been obtained for the TMV Project and, as expected, include conditions that limit effects on protected habitats (i.e., no Federal jurisdictional wetlands may be affected and 1.18 acres of state jurisdictional wetlands/riparian areas may be affected; mitigation at 2:1 is required to meet the *no net loss of wetlands* policy; Central Valley RWQCB Waste Discharge Requirements, Order No. R5-2011-0018, April 29, 2011, p. 6). Thus, review of the TMV EIR and TMV Project permits supports the EIS conclusion that potential effects on wetlands from Commercial and Residential Development Activities under the Proposed TU MSHCP Alternative would be reduced and would be minor as a result of proposed mitigation measures.

Finally, as described in Section 10.2.2.4, Approach to Mitigating Indirect Effects, above, the Covered Activities would comply with the species-specific conservation measures required under the TU MSHCP (see Tables 2-3 and 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS), some of which would operate to protect wetlands (e.g., avoiding construction in modeled habitat in riparian/wetlands areas to the extent practicable). If the Service issues an ITP to TRC for incidental take of the 27 species covered under the TU MSHCP, these measures would be enforceable under the ESA through the ITP and applicable conservation easements.

### 10.2.3.3 Air Quality

Commenters stated generally that the TMV Project and other development would have adverse air quality effects. One commenter identified differences in the air quality analysis in the TMV EIR and the EIS, and questioned this discrepancy. Other commenters raised specific concerns about potential adverse health effects stemming from air pollution, and that area residents would be exposed to public health risks.

## Air Emissions

Commenters stated there is inadequate information regarding construction emissions and requested additional information on specific measures to reduce air emissions during construction of the TMV Project and other development. Commenters also stated that there should be more specific air quality analysis in the EIS, including more analysis of the cumulative air quality effects of the TMV Project and other development projects and that specific mitigation measures should be described for the TMV Project. Commenters stated that the indirect air quality effects of the proposed action (resulting from the TMV Project and other development projects facilitated by the proposed action) are not adequately described and are not consistent with information in the TMV EIR. Other commenters suggested air quality mitigation measures applicable to a land use project, such as the TMV Project.

A detailed analysis of specific development plans that would be facilitated by the proposed action is not possible. For example exact construction schedules and equipment and traffic routes are unknown at this time. The modeling assumptions used for the analysis presented in the Draft EIS were different from those used in the TMV Project EIR. Revisions to the model have been made to use assumptions consistent with those presented in the TMV Project EIR. As indicated in the revised Section 4.3, Air Quality, in Volume I of this Supplemental Draft EIS, a new model, the CalEEMod, which is the most current emission calculation model, was used to calculate air emissions.

The mitigation measures set forth in the EIS have also been revised to clarify that the alternatives will be required to comply with applicable Federal, state, and local regulations related to air quality emissions. Generally, air quality protection laws under the Federal and state Clean Air Acts, and most Federal air quality regulations adopted by the U.S. Environmental Protection Agency (EPA), are implemented at the state and local levels through adoption of air quality management plans and rules and regulations, which are then applied through local discretionary permitting processes. As indicated in the revisions to Section 4.3, Air Quality, in Volume I of this Supplemental Draft EIS, mitigation for air quality effects would be implemented through local project approvals. For example, Kern County's approval of the TMV Project includes requirements to implement various mitigation measures to protect air quality. In particular, the applicant must submit evidence, verified by the San Joaquin Air Pollution Control District (SJVAPCD), that development has a total project construction and operations mitigated baseline below 2 tons per year for nitrogen oxides ($NO_X$) and a mitigated baseline below 2 tons per year for particulate matter less than 10 micron in diameter (PM10) emissions in the San Joaquin Valley Air Basin. Reductions can be achieved through several measures, including design features and compliance with a developer-mitigation or other voluntary contracts (Kern County 2009, MMMP, pp. 6). The applicant must also submit a dust control plan that must be followed during construction (Kern County 2009, MMMP, pp. 7-8). To further reduce air emissions, TRC committed to reduce energy use by 25% compared to 2008 Title 24 standards, to reduce construction materials waste, and to use alternative fuel technologies and provide bicycle parking and carpooling facilities (Kern County 2009, MMMP, pp. 12–26). While the EIR provides more detail about potential air quality effects resulting from operations of the TMV Project (Kern County 2009, pp. 4.3-78 to -214), it does not contradict conclusions in the EIS regarding the type or magnitude of these effects.

Finally, as described in Section 10.2.2.4, Approach to Mitigating Indirect Effects, above, the Covered Activities would comply with the species-specific conservation measures required under the TU MSHCP (see Tables 2-3 and 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS), some of which would operate to reduce air quality impacts (e.g., implementing dust control measures). If the Service issues an ITP to TRC for incidental take of the 27 species covered under the TU MSHCP, these measures would be enforceable under the ESA through the ITP and applicable conservation easements.

For additional information about the analysis of air quality, see Master Response 16, Air Quality.

### Health Effects

One commenter specifically raised the issue of public health effects related to the TMV Project, and the potential for development to create a "diesel death zone" in the Tejon Ranch area. Another commenter suggested mitigation for air emissions near sensitive receptors.

This Supplemental Draft EIS was revised to include additional discussion of public health effects from toxic air contaminants (TACs) as well as a screening level analysis of diesel particulate matter emitted from offroad mobile equipment during construction (Section 4.3.3.3, Exposure of Sensitive Receptors to Substantial Pollutant Concentrations, in this Supplemental Draft EIS for a discussion related to the Proposed TU MSHCP Alternative). Health effects from TACs associated with construction activities are not anticipated to result in substantial effects individually or cumulatively.

## 10.2.3.4 Geology and Soils

One commenter stated that planning for the TMV Project and other development must more broadly and holistically consider the public safety implications of development.

Section 4.4, Geology and Soils, in Volume I of this Supplemental Draft EIS includes an analysis of seismic and other soil and geology risks to public safety. Specifically, the EIS recognizes potential risk from secondary fault ruptures, and that development could expose people to seismic hazards or risk of ground failure, including compressible, collapsible, or expansive soils, and landslides. The EIS includes mitigation measures requiring compliance with Federal, state, and local regulations that provide specific oversight of these risks, and would prohibit development in active fault zones and lifeline measures for utilities that cross fault zones; require appropriate erosion control during and after construction; require compliance with County requirements for geologic studies at the appropriate planning stage; and require compliance with California Building Codes.

Finally, as described in Section 10.2.2.4, Approach to Mitigating Indirect Effects, above, the Covered Activities would comply with the species-specific conservation measures required under the TU MSHCP (see Tables 2-3 and 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS), some of which would operate to control risks from exposure of people and structures to geologic risks (e.g., allowing only low-density development, incorporating design features to avoid and minimize urban runoff, and using erosion control measures during construction). If the Service issues an ITP to TRC for incidental take of the 27 species covered under the TU MSHCP, these measures would be enforceable under the ESA through the ITP and applicable conservation easements.

While this general analysis of seismic and geologic risks is appropriate for the EIS, the TMV EIR provides additional detailed results of geotechnical analysis and fault rupture analysis relevant to the TMV Project (Kern County 2009, pp. 4.6-24 to -30). Consistent with the EIS, the EIR recognizes the seismic risks in the area, and acknowledges that development could result in exposure to seismic and geologic hazards. The EIR describes potential effects from primary and secondary fault ruptures on structures, roadways, transmission lines, and emergency services (Kern County 2009, pp. 4.6-23 to -29). The EIR also analyzes potential risks from exposing people or structures to landslides; soil erosion or loss of topsoil; location on an unstable geologic unit or soil that could result in on- or offsite landslides; lateral spreading, subsidence, liquefaction, or collapse; and location on expansive soils that creates substantial risks to life or property (Kern County 2009, pp. 4.6-32 to -42).

The EIR demonstrates that the TMV Project includes the implementation of a variety of mitigation measures to reduce additional seismic, soils and geologic risks. For example, various geotechnical studies must be prepared prior to development, buffer zones are required around faults and critical facilities, additional measures to safeguard critical facilities would be incorporated into the design, various emergency shutoff and bypass devices would be included in the project, and seismic criteria from the California Building Code would be followed (Kern County 2009, pp. 4.6-26 to 29 [MM 4.6-1 to 5.6-17], 4.6-30 [MM 4.6-18]). In addition, no habitable structures would be placed in active fault buffer zones surrounding active traces of the Garlock Fault Zone, and no emergency egress route would cross a fault (Kern County 2009, p. 4.6-24). Finally, the EIR requires implementation of various grading and construction approaches to minimize risks associated with landslides and other soil failures, implementation of a stormwater pollution prevention plan, formulation of a long-term maintenance plan to address post-construction issues typically encountered in hillside development, and compliance with the sewer and septic system requirements of the TMV Specific Plan (Kern County 2009, pp. 4.6-31 to 32 [MM 4.6-19], 4.6-33 to 38 [MM 4.6-20 to 26], 4.6-42 [MM 4.6-27]). With implementation of mitigation, the EIR concludes that all seismic, soils and geologic risks would be less than significant.

Thus, the EIR supports the EIS conclusions regarding the type of seismic-related mitigation to be imposed during the local approval process. Finally, consistent with commenter's concern, the EIS recognizes that the integrated planning opportunity provided for in the Proposed TU MSHCP Alternative would permit holistic planning and mitigation, such as detailed geologic studies, engineering of structures for seismic ground shaking, avoidance of potential fault rupture, and design of lifelines to minimize damage from fault rupture.

### 10.2.3.5 Cultural Resources

Commenters stated that the Draft EIS does not adequately identify and provide protection for cultural resources that are in the Covered Lands and that could be effected by development, and that further analysis must be provided before development could be approved. Commenters also stated that the EIS cannot properly rely on the local planning review process or the TMV EIR for identification of effects on cultural resources.

Section 3.5, Cultural Resources, in Volume I of this Supplemental Draft EIS has been updated to include additional information for cultural resource surveys that have been completed within the Covered Lands. In addition, this section has been updated within the latest information about the status of consultation ongoing with the State Historic Preservation Officer (SHPO).

Section 4.5, Cultural Resources, in Volume I of this Supplemental Draft EIS has also been updated. As clarified in this section, the analysis of effects is based on the acreage of ground disturbance associated with Commercial and Residential Development Activities under each alternative. Because the exact location of Commercial and Residential Development Activities are not known for all development areas, ground disturbance is the appropriate comparative proxy for effects. In compliance with Section 106 of the National Historic Preservation Act, the Service is in consultation with the SHPO to verify the potential effects of the Federal action on cultural resources associated with the proposed action.

In addition, as discussed in Section 4.5, Cultural Resources, in Volume I of this Supplemental Draft, mitigation will include a requirement that all cultural resources in and adjacent to Development Areas as identified in the Cultural Resources Survey Reports determined eligible for the NRHP will be avoided/protected in place, or if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary. A copy of the Cultural Resources Survey Reports for the Development Areas are appended to the project EIR (Kern County 2009).

Furthermore, Section 4.5, Cultural Resources, in Volume I of this Supplemental Draft EIS has also been updated to clarify that the local development review process would also require mitigation to address potential effects on cultural resources. For example, as evidenced by Kern County's approval of the TMV Project, the applicant is required identify site-specific potential effects and develop site-specific mitigation measures for individual development projects. Kern County's approval of the TMV Project further requires general and site-specific mitigation measures to ensure effects on cultural, historical and paleontological resources are less than significant. Mitigation measures require comprehensive and confidential mapping of on-site cultural resources; "tailgate" sessions and other training for contractors; and site-specific mitigation that involves, for example, establishing buffers around known sites during construction activities, requiring the presence of onsite Native American monitors, passive preservation of sites in deed-restricted open space, or preservation under geotextile matting and fill (Kern County 2009, pp. 4.5-28 to -34 [MM 4.5-1 through 4.5-37]). All identified sites would be preserved in place, (although one may either be preserved in place or subject to Phase III data recovery). The TMV EIR mitigation measures require that an onsite paleontological monitor be present during excavations in high-sensitivity areas, that excavation work be stopped and the area of potential resources avoided so that the monitor can assess, excavate and salvage any resources, that appropriate data recovery is undertaken, and that any recovered fossils be offered for curation (Kern County 2009, pp. 4.5-35 to -47 [MM 4.5-38 to 4.5-41]). Finally, the EIR establishes procedures consistent with the California Health and Safety Code and Public Resources Code that must be followed in the event potential human remains are discovered on the TMV Project site (Kern County 2009, pp. 4.5-37 to -39 [MM 4.5-42]). With mitigation, the EIR concludes that potential effects on cultural resources would be reduced to less-than-significant levels. For additional information about cultural resources, please see Master Response 14, Cultural Resources.

### 10.2.3.6 Visual Resources

Commenters raised various concerns regarding the visual and aesthetic effects of the TMV Project and other development, including a concern that the criteria by which effects were judged was not clear. A commenter expressed concern that the TMV Project would not be consistent with the existing rural character of the area. Other comments stated that the TMV Project would result in night lighting and adverse effects on scenic vistas, and that effects on open space areas may have been underestimated. Because comments on the TMV Project are outside the scope of this EIS, to the extent applicable, the following responses interpret these comments to apply to the Commercial and Residential Development Activities overall that would be facilitated by the proposed action.

Visual effects of the proposed action are discussed in Section 4.6, Visual Resources, in Volume I of this Supplemental Draft EIS, and include potential effects under the following categories: alteration of visual character (including changes in landform, topography, and vegetation), and increased sources of light and glare. With regard to the commenter's concern that significance thresholds were not identified to explain how the EIS reached its conclusions specific visual effects, agencies are not required by NEPA to use such thresholds if they are not useful in the analysis of an effect. The EIS does consider the significance (i.e., magnitude of effect within relevant context and intensity) of the environmental effects measured against the No Action Alternative and the Supplemental Draft EIS has been revised to provide a discussion of the basis for determining the relative magnitude of visual effects (see 4.6.1.2, Methods). Here, the Service recognizes that aesthetic judgments are inherently subjective, but considered the changes in visual character and light and glare against the No Action Alternative (no development) and in the context of criteria developed to determine if the effects were unacceptable.

With respect to the commenter's concern about visual effects on open space, Section 4.6, Visual Resources, in Volume I of this Supplemental Draft EIS conducted includes a viewshed analysis that identifies sensitive viewers and important visual resources in the study area, and the possible visual

effects relative to each alternative. This analysis includes a discussion of the visual effects of Existing Ranch Uses or Plan-Wide Activities that would occur within the open space areas for each alternative.

With respect to the commenter's concerns regarding "suburbia" and "urban sprawl," to the extent the comments speak to the specific appearance of the Commercial and Residential Development, the EIS does not consider specific design criteria at the project level. As indicated in the revisions to Section 4.6, Visual Resources, in Volume I of this Supplemental Draft EIS, the local jurisdiction that approves the individual project would guide the design criteria. Nevertheless, as described in Section 10.2.2.4, Approach to Mitigating Indirect Effects, above, the Covered Activities would comply with the species-specific conservation measures required under the TU MSHCP (see Tables 2-3 and 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS), some of which would operate to protect visual resources, (e.g., requiring that only low density and low profile construction be allowed and that lighting be directed away from modeled habitat). If the Service issues an ITP to TRC for incidental take of the 27 species covered under the TU MSHCP, these measures would be enforceable under the ESA through the ITP and applicable conservation easements.

The additional, project-specific visual effects analysis suggested by commenters is beyond the scope of this EIS, which considers the effects of the proposed action, approving an HCP and issuance of an ITP.

The TMV EIR does not contradict the analysis provided in this Supplemental Draft EIS. It provides an additional viewshed study specific to the TMV Project and determined that development consistent with design standards in the TMV Special Plan would ensure that future land uses would complement and not detract from the existing setting and visual character of the area (Kern County 2009, pp. 4.1-22 to -23). The TMV EIR also includes more detailed mitigation measures which restrict the development footprint, require low-profile development in mixed-use centers, and minimize grading and require lighting restrictions (Kern County 2009, MM 4.1-4 to 4.1-6, p. 3-4]). These measures are consistent with the mitigation measures identified in this Supplemental Draft EIS. The EIR also includes detailed planning principles and land use policies in the TMV Community and Specific Plan, attached as Exhibit B-1 to the EIR. Thus, the EIR supports the EIS conclusions regarding the type of mitigation measures likely to be implemented per the local approval process.

## 10.2.3.7 Community Resources

### Hazardous Materials and Other Hazards

Several commenters raised the issue of hazardous materials associated with the TMV Project, including the effect of hazardous materials on biological resources, and stated that the Draft EIS does not adequately discuss these risks. Other commenters stated that the TMV Project would result in increased fire risks on the Covered Lands. Because comments on the TMV Project are outside the scope of this EIS, to the extent applicable, the following responses interpret these comments to apply to the Commercial and Residential Development Activities overall that would be facilitated by the proposed action.

Potential effects from exposure to hazardous materials and other hazards are addressed in Section 4.7, Community Resources, in Volume I of the Supplemental Draft EIS. The analysis presented in this section indicates there is the potential to encounter hazardous materials and waste, for some commercial activities to generate hazardous materials and wastes, and potential exposure to electric and magnetic fields associated with transmissions lines. This section also acknowledges the potential for wildfire risks and exposure to vector-borne diseases. The EIS notes that development would be set back from utilities and that operations activities would be required to comply with numerous Federal, state, and local laws and regulations. In addition, as described in Section

10.2.2.4, Approach to Mitigating Indirect Effects, above, the Covered Activities would comply with the species-specific conservation measures required under the TU MSHCP (see Tables 2-3 and 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS), some of which would operate to control the risks of exposure of people to hazards (e.g., preparation and approval of a fuel management plan would protect against fire risks, undergrounded utilities would protect against overhead utility risks, such as EMF, implementation of an Integrated Pest Management Plan and enforcement of the ranchwide lead ammunition ban would protect against chemical/contaminants, and stringent trash storage and disposal controls would protect against disease vectors). If the Service issues an ITP to TRC for incidental take of the 27 species covered under the TU MSHCP, these measures would be enforceable under the ESA through the ITP and applicable conservation easements.

Section 4.7, Community Resources, in Volume I of this Supplemental Draft EIS provides the relevant analysis of these topics. Refer to Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS for a discussion of fire risks to biological resources.

Consistent with the EIS, the TMV EIR recognizes the potential for effects from the generation, use, disposal, release, or emission of hazardous materials, but indicates these effects would be less than significant (Kern County 2009, Findings of Fact, pp. 100–102). The EIR includes a detailed analysis regarding potential exposure to hazardous materials on the TMV Project site, including from agricultural chemicals in the soil, underground pipelines, electrical transformers, the hunting lodge, cattle pen areas, the I-5 corridor, electrical transmission lines, and unknown hazardous material sites, as well as potential hazardous material sites near the TMV Project site (Kern County 2009, pp. 4.7-29 to -41). The EIR includes the additional site analysis and mitigation that would be required through the local approval process; for example, the EIR includes a detailed Phase I Environmental Site Assessment of known hazardous material sites on and near the TMV site (Kern County 2009, Appendix H-1 to the EIR). According to the EIR, with mitigation, all potential hazardous material-related effects would be reduced to a less-than-significant level (Kern County 2009, p. 4.7-41). Consistent with the EIS, the EIR also recognizes the potential to expose people and structures to risks associated with wildfires (Kern County 2009, Impact 4.7-8). The EIR includes a detailed TMV fire protection plan, which was specifically designed to address increased fire risk and provides wildfire risk mitigation meeting or exceeding Kern County Fire Codes (i.e. requiring oversight by the Kern County Fire Department; adherence to plant restrictions and vegetation management; undergrounding of new power lines; adequate construction of access roads, structures, and fire protection infrastructure; public education efforts; and funding toward a reverse 911 calling system) (Kern County 2009, pp. 4.7-49 to -50 [MM 4.7-10 through 4.7-16]). Measures provided in the fire protection plan include requirements for customized fuel modification based on fire risk; building design and construction, including interior sprinklers; significant onsite fire-fighting capabilities; a modern water delivery system; and access roadways throughout the community to provide a layered system of fire protection that serves the dual purpose of minimizing the threat from wildfire to the TMV Project and the threat of a TMV Project fire "escaping" into open space areas (Appendix D to Appendix B-1 to the EIR). Also consistent with the mitigation required in the EIS, the EIR requires that the TMV Project provide funding, equipment and dedicated land for construction of fire stations on the TMV Project site (Kern County 2009, pp. 4.13-14 to -16). The EIR concludes that effects on fire services would be less than significant (Kern County 2009, p. 4.16-18). The effects of the fire prevention plan (FPP) in the Covered Lands open space areas are analyzed in the EIS and discussed further in the Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity.

Similarly, consistent with the EIS, the EIR also recognizes the potential to expose people to diseases and vectors through exposure to rodents, mosquitoes and other insects. The EIR concludes that the potential for such exposure is limited, and with mitigation that would impose measures to reduce

mosquitoes at golf courses (Kern County 2009, p. 4.7-50, MM 4.7-17), all effects would be reduced to a less-than-significant level.

The information presented in the TMV EIR provides more detail about potential effects from hazardous materials and other hazards of the TMV Project and provides an example of how potential effects from exposure to hazardous materials and other hazards from Commercial and Residential Development would be mitigated through the local approval process.

## Public Services and Utilities

Commenters stated that the TMV Project would cause pressures to existing public services, including water supply. One commenter raised a concern that effects of development on schools, financial resources, and public safety, need to be holistically addressed through a regional planning effort. Commenters also stated that the TMV Project would decrease groundwater levels. Commenters expressed concern that the TMV Project would lead to water shortages for other users, and that the TMV Project's water demand is unproven. Because comments on the TMV Project are outside the scope of this EIS, to the extent applicable, the following responses interpret these comments to apply to the Commercial and Residential Development Activities overall that would be facilitated by the proposed action.

Potential effects on the provision of public services and utilities are discussed in Section 4.7, Community Resources in Volume I of this Supplemental Draft EIS. As indicated in this section, the EIS recognizes that increased population would generate additional need for emergency, fire, medical and rescue, sheriff department, school, water and utility resources, requiring a substantial expansion of facilities. With respect to the provision of adequate water supply, Section 3.2, Water Resources, in Volume I of this Supplemental Draft EIS, presents information regarding the size, capacity, recharge, and jurisdiction of the two large groundwater aquifers and several smaller subbasins located to the north and south of the Covered Lands. The potential effects on groundwater recharge in the context of increased demand for water supply are also discussed in this section.

As indicated in the revisions to Section 4.7, Community Resources, in Volume I of this Supplemental Draft EIS, potential effects on public services and utilities would be primarily addressed through compliance with applicable Federal, state, and local regulations. For example, Kern County's approval of the TMV Project requires the implementation of many mitigation measures to address potential effects. The information presented in the TMV EIR, summarized below, provides more detail about potential effects on public services from the TMV Project and provides support for the conclusions in the EIS that indicate potential effects on public utilities and services would not be expected to exceed capacity.

Development-related public facility needs would be addressed as part of the development approval process. With respect to fire, police and schools, the TMV EIR includes detailed analysis regarding potential effects on fire services, sheriff facilities and public schools. Consistent with the EIS, the EIR recognizes that commercial and residential development would place additional demands on all of these resources (Kern County 2009, pp. 4.13-15 to -25). Extensive mitigation measures are identified, including fair-share funding measures and dedication of land to reduce potential effects to a minor level (Kern County 2009, pp. 4.13-14 to -24 [MM 4.13-1 through 13]).

With respect to water supply, the TMV EIR also includes further detail on water demand and supply for the TMV Project, consistent with CEQA and the California Water Code. Section 4.16, Utilities and Service Systems, in the TMV EIR, demonstrates sufficient water supplies are available to TCWD to serve the TMV Project, as well as the Tejon Industrial Complex, from existing entitlements. TCWD would serve the TMV Project with water delivered through an existing turnout of the California Aqueduct that would be refurbished and enhanced.

The EIR and water supply assessment clarify that no groundwater would be used for the TMV Project and identify the following three sources of water supply for the TMV development:

- tertiary-treated recycled water produced by the TMV wastewater treatment plant
- water recovered from TCWD water banking facilities in the Kern Water Bank and Pioneer project; and
- State Water Project deliveries, assuming average, dry and multiple dry year deliveries would occur at the lowest levels identified in the current State Water Project reliability report (Kern County 2009, p. 4.16-12).

The analysis concludes that with these three sources of supply, TCWD can meet all District demands, including TMV project demands, and maintain a 7-year indoor water use supply for the TMV Project in the TCWD water banking facilities (Kern County 2009, p. 4.16-18). Water supplies would be sufficient given conservative assumptions incorporating long-term hydrologic data spanning more than eight decades and even under more conservative scenarios than those suggested under the most recent State Water Project reliability report (Kern County 2009, pp. 7-1428 to -34).

As discussed in the TMV EIR, the TMV Project water supply assessment incorporates conservative assumptions (including use of the most severe drought condition on record) and none of these supply sources represent "paper water" or other speculative supplies. Further, the TMV EIR stipulates that no groundwater source would be used to serve the TMV Project (Kern County 2009, p. 4.16-14); thus, the TMV project is not expected to result in depletion of the water table.

Consistent with the EIS prediction that the smaller population and integrated development plan of the TMV Project would enable use of measures to reduce per capita water demand, the EIR identifies numerous mitigation measures and project design features to reduce the TMV Project effects related to water supply to less-than-significant levels, including implementation of a water-wise program that establishes a maximum applied water allowance budget for each lot or home (Kern County 2009, p. 4.16-18 [MM 4.16-1]); plant selection requirements and landscape design measures to limit outdoor water needs (Kern County 2009, p. 4.16-18 [MM 4.16-2]); an environmental education program to promote the advantages of water conservation; and the building of a temporary Eco-House to model sustainable development technologies and best practices (Kern County 2009, pp. 4.3-128 to -135 [MM 4.3-6]). Finally, to the extent available, recycled water would be used to irrigate golf courses and community landscaped areas.

With respect to the TMV Project, the analysis in the TMV EIR demonstrates that TCWD's mix of recycled, water bank and State Water Project supplies are sufficient to recharge water banks and meet all demands during normal, dry and multiple year dry periods. As discussed above, the information presented in the TMV EIR provides more detail about potential effects on public services from the TMV Project, and provides support for the EIS significance findings and conclusions regarding mitigation to be imposed to compensate for additional demands on public services during the local approval process.

### 10.2.3.8 Transportation

Several commenters raised the issue of traffic and transportation, generally stating that the development and operation of the TMV Project would cause congestion effects that were not fully analyzed and mitigated in the EIS. One commenter stated that the TMV Project would result in new roads and an exceedance of capacity on existing roads. The commenter stated that these effects are due in part to the "isolated nature" of the proposed developments related to existing transportation, and suggested that the EIS should expand the discussion of potential avoidance measures for these effects by considering relocating the proposed development, increasing the density, reducing the

footprint, concentrating development along the I-5 corridor, and committing to measures to improve public transportation.

## Construction Effects on Existing Roadways

As discussed above, commenters suggested the EIS should expand the discussion of potential avoidance measures to reduce construction-related effects on existing roads during development.

Because the EIS does not approve development, a detailed analysis of specific development plans, including the exact phasing of development or layout of buildings and roads, is beyond the scope of this analysis. Section 4.8, Transportation, in Volume I of this Supplemental Draft EIS has been revised to reflect the most current modeling approach and includes a discussion of potential effects from construction traffic that could result from the proposed action considered in the EIS. Prior to revising the modeling approach in the EIS, the TMV EIR was reviewed to ensure the assumptions in the revised model were consistent with the TMV Project assumptions included in the EIR.

While the EIS provides programmatic analysis, the TMV EIR incorporates more detailed assumptions about the phasing of development construction, resulting in construction trip information that is not available for all development in the EIS. However, consistent with the EIS, the EIR recognizes that development would generate construction-related truck and commuter trips (Kern County 2009, p. 4.15-23), and includes a mitigation measure requiring development and implementation of a construction traffic control plan (Kern County 2009, p. 4.15-36 [MM 4.15-4]). As indicated in the revisions to Section 4.8, Transportation, in Volume I of this Supplemental Draft EIS, Kern County's approval of the TMV Project demonstrates that potential effects from Commercial and Residential Activities facilitated by the proposed action would be mitigated through the local approval process.

## Highway Network

Several commenters raised concerns regarding traffic congestion associated with the TMV Project. One comment stated that a conservative approach to assessing potential traffic effects must be taken, and that a simulation of traffic trips per day should be conducted. Another commenter suggested that the EIS should analyze potential measures to avoid the project's contribution to exceedance of existing highway capacities.

As discussed above, the traffic study supporting the analysis in this Supplemental Draft EIS has been revised and incorporated into Section 4.8, Transportation in Volume I of this Supplemental Draft EIS. Revisions to this section clarify that there is potential for the Proposed TU MSHCP Alternative and other alternatives to exceed the capacity of the surrounding roadway system at certain locations.

The TMV EIR provides more detailed analysis of potential traffic effects associated with the TMV Project. Consistent with the EIS, the EIR recognizes that the TMV Project would generate a large number of new trips. The EIR includes a detailed analysis of potential effects on specific roadway segments, freeway ramps, and intersections, and analyzes the effect the TMV Project would have on level of service standards and volume to capacity ratios (Kern County 2009, pp. 4.15-23 to -38). The analysis in the EIR is organized differently than in the EIS, and includes some additional detail regarding potentially effected roadways. However, both documents recognize that commercial and residential development would generate new trips that would place additional demands on the roadway system.

The EIR includes mitigation measures, including preparation of various reports, monitoring commitments, potential implementation of transportation demand management measures, and the provision of sufficient parking facilities (Kern County 2009, p. 7-76 to -84 [MM 4.15-1 through 4.15-

10]). With implementation of these mitigation measures, the EIR concludes that all project-specific effects from the TMV Project would be less than significant (Kern County 2009, p. 4.15-41). The EIR found that cumulative effects would be significant. These conclusions are consistent with the analysis in Section 4.8, Transportation, in Volume I of this Supplemental Draft EIS.

The information presented in the TMV EIR provides more detail about potential operations transportation effects from the TMV Project to the existing highway network, and supports the EIS conclusions regarding effects of the Proposed TU MSHCP Alternative on transportation resources. In addition, the EIR supports the EIS conclusions regarding the type of traffic mitigation that would be appropriate for a project-specific development.

## Effects Associated with New Roadways

One commenter stated that the EIS should expand the discussion of potential avoidance measures that could be implemented to reduce effects from new roads, such as increased density and a reduced project footprint.

In this Supplemental Draft EIS, new roads are included in the Disturbance Area and analyzed quantitatively for each alternative. The analysis of effects from new roads in the Disturbance Area is included in each of the resource elements discussed in this Supplemental Draft EIS. Likewise, the TMV EIR recognized that the TMV Project would generate the need for new roads (Kern County 2009, 4.15-49). More details about the internal roadway system are provided in the TMV EIR, as Kern County is the agency that approves the specific development. The EIR notes that the TMV Project fulfills multiple Kern County General Plan land use and planning policies encouraging compact development. Additionally, various measures are included in the EIR that would reduce potential internal roadway effects (Kern County 2009, p. 4.15-24).

The information presented in the TMV EIR provides more detail about potential effects from the internal roadway network for the TMV Project, and supports the conclusions in the EIS regarding the type and magnitude of those effects and their significance.

## Public Transit

One commenter stated that the proposed development should be located closer to existing transit networks and metropolitan areas, and that the EIS should include descriptions of potential commitments to improve public transportation if the TMV Project were approved.

The Service is not approving the TMV Project; however, because approving the TU MSHCP and issuing an ITP would facilitate development, the EIS examines the potential for the alternatives to affect transit systems. This Supplemental Draft EIS concludes that the Proposed TU MSHCP Alternative would be concentrated in close proximity to areas already served by Kern Regional Transit. It is expected that this provider would establish stops for their bus service, increase frequency of the buses, and/or increase the size of the buses to serve increased demand. It is also expected that individual development projects would have the authority to impose such mitigation as requested by the commenter.

Kern County specifically reviewed potential effects on transit from the TMV Project, and included mitigation measures in the EIR to promote alternative forms of transportation, including potential implementation of a transportation demand management program, construction of a transit connection (including a bus stop), and additional measures, such as pedestrian, bicycle and alternative-vehicle access to commercial areas, installation of bicycle storage facilities, designation of parking spots for alternative fuel vehicles and carpools or vanpools, required use of alternative fuel for community service vehicles, and installation of high-speed communication technology to facilitate telecommuting (Kern County 2009, pp. 7-79, 7-82 [MM 4.15-3, 4.15-5], 7-83 to -84; 7-96 [MM 4.3-7

through 4.3-10; MM 4.3-11 through -13]). The EIR concluded that all effects on transit resulting from the TMV Project would be less than significant.

Local project approvals and the EIR are the appropriate place to consider and mitigate such project-specific effects. The EIR provides additional detail and supports the conclusions in the EIS regarding the type and magnitude of effects on transit services.

### 10.2.3.9 Climate Change

Comments related to the TMV Project and climate change question the methodology through which emissions from development were calculated and suggest mitigation applicable to development projects (e.g., solar power for homes, use of recycled materials for construction).

The GHG emissions analysis was revised in this Supplemental Draft EIS to use the most recent GHG model (CalEEMod), which, in turn, incorporates a series of updated assumptions for the GHG analysis. These updated assumptions were informed, in part, by review of the TMV EIR, as noted above. Revisions to the Supplemental Draft EIS also clarify that the alternatives would be required to comply with applicable Federal, state, and local regulations related to GHG emissions. As noted in Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS, the local jurisdiction will require implementation of mitigation during local project approval. For example, Kern County's approval of the TMV Project includes specific mitigation measures intended to reduce GHG emissions. These measures are referenced in Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS, and presented in Appendix J, TMV Specific and Community Plan Mitigation Monitoring and Reporting Program as examples of the types of measures that would be implemented for Commercial and Residential Development Activities for the proposed action. Specifically, emission reductions must be achieved consistent with the state's ambitious GHG reduction goals reflected in California Assembly Bill (AB) 32, or 29% below what it would otherwise emit in the absence of project design features and emission reduction commitments; and incorporation of design elements to encourage ride-sharing, alternative vehicle use, and recycling (Appendix JMMs 4.3-6 through 4.3-14 and 4.3-18) (Kern County 2009). The EIR also includes a variety of mitigation measures intended to reduce GHG emissions associated with construction activities, such as use of alternative fuels and sustainable materials during construction; and additional specific measures to reduce energy use (Appendix J, MMs 4.3-1 through 4.3-5, 4.3-18 through 4.3-21) (Kern County 2009). These air quality mitigation measures, in combination with the voluntary emissions reduction agreement (VERA) entered into between the TMV Project applicant and the SJVAPC, are anticipated to result in substantial GHG emission reductions. Many of the mitigation measures suggested by commenters have been incorporated into the TMV Project.

For additional information about GHG emissions, please see Master Response 13, Climate Change.

### 10.2.3.10 Growth-Inducing Effects

Several comments raised the issues of induced growth and urbanization that could be facilitated by the TMV Project, and that indirect, growth-inducing effects must be analyzed under NEPA, including GHG emissions due to increased vehicle travel and other effects on air, water, and natural resources. Commenters stated that the EIS must estimate the amount, location and time frame of growth, determine the significance of such effects, and identify mitigation measures or alternatives to reduce potential effects. Commenters stated that new residents would be subject to urban sprawl, including suburban development and chain stores. Another commenter suggested that the development would lead to homeless encampments. Yet another commenter stated that the TMV Project is "leapfrog development" and growth would extend from Gorman into the Antelope Valley to

Lancaster. One commenter stated that the Federal action would lead to 26,000 homes, not including 23,000 additional homes in Centennial.

This Supplemental Draft EIS has been revised to include a discussion of growth inducing effects (Section 5.2, Growth-Inducing Effects in Volume I of this Supplemental Draft EIS). The Proposed TU MSHCP Alternative has been identified as indirectly resulting in growth inducement by removing an existing obstacle to development. Many growth inducing effects are mitigated by conservation restrictions as described in the EIS, TU MSHCP, and the EIR, which was prepared pursuant to CEQA as part of the local entitlement process for a proposed development. Additionally, development activities covered under the TU MSHCP would not result in growth in the Covered Lands that exceeds regional growth projections. However, compared to existing conditions, the development contemplated as a Covered Activity under the TU MSHCP would result in a substantial increase in residential and commercial structures on Tejon Ranch, compared to what was in existence at the time that this document was prepared (Section 5.2, Growth-Inducing Effects, in Volume I of this Supplemental Draft EIS).

Regarding the effect of homeless encampments, there is no reason to believe that the proposed action would lead to the establishment of these types of areas. Any homeless encampments that could result indirectly from the proposed action, and associated effects on biological resources from such homeless encampments, are anticipated to be very limited and highly speculative.

The TMV EIR determined that the TMV Project, as a sustainable resort community, would involve less growth than identified in the Kern County General Plan, and would maintain open space and the existing rural context of the region and natural topography of the TMV Project site. Nevertheless, the EIR concluded that the TMV Project would result in significant growth-inducing effects (Kern County 2009, p. 4.12-11). The information presented in the TMV EIR is consistent with the conclusions in this Supplemental Draft EIS.

**Table MR11-1. Comments Addressed in Master Response 11**

| Comment | Commenter |
|---|---|
| O4-245 | Center for Biological Diversity (Keats, Adam) |
| O4-246 | Center for Biological Diversity (Keats, Adam) |
| O4-247 | Center for Biological Diversity (Keats, Adam) |
| O4-248 | Center for Biological Diversity (Keats, Adam) |
| O4-249 | Center for Biological Diversity (Keats, Adam) |
| O4-249A | Center for Biological Diversity (Keats, Adam) |
| O4-250 | Center for Biological Diversity (Keats, Adam) |
| O4-251 | Center for Biological Diversity (Keats, Adam) |
| O4-252 | Center for Biological Diversity (Keats, Adam) |
| O4-253 | Center for Biological Diversity (Keats, Adam) |
| O4-254 | Center for Biological Diversity (Keats, Adam) |
| O4-255 | Center for Biological Diversity (Keats, Adam) |
| O4-256 | Center for Biological Diversity (Keats, Adam) |
| O4-257 | Center for Biological Diversity (Keats, Adam) |
| O4-258 | Center for Biological Diversity (Keats, Adam) |
| O4-259 | Center for Biological Diversity (Keats, Adam) |
| O4-260 | Center for Biological Diversity (Keats, Adam) |
| O4-261 | Center for Biological Diversity (Keats, Adam) |
| O4-262 | Center for Biological Diversity (Keats, Adam) |
| O4-263 | Center for Biological Diversity (Keats, Adam) |
| O4-264 | Center for Biological Diversity (Keats, Adam) |
| O4-265 | Center for Biological Diversity (Keats, Adam) |
| O8-8 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O12-3 | TriCounty Watchdogs (de Leeuw, Jan) |
| I293-46 | Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone |
| I948-8 | Manning, Jeffrey A |
| I948-9 | Manning, Jeffrey A |
| I948-10 | Manning, Jeffrey A |
| I948-11 | Manning, Jeffrey A |
| I948-12 | Manning, Jeffrey A |
| I948-13 | Manning, Jeffrey A |
| I73-2 | Balbona, Gina |
| I627-22 | Hamber, Robert |
| I627-23 | Hamber, Robert |
| I627-24 | Hamber, Robert |

| Comment | Commenter |
|---|---|
| I627-26 | Hamber, Robert |
| I657-1 | Heintzelman, Donald |
| I1648-1 | Willer, Benjamin |
| I1300-7 | Risebrough, Robert |
| G2-5 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-18 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-44 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-49 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-50 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-53 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-54 | U.S. Environmental Protection Agency (Goforth, Kathleen) |

# 11.1 Summary of Substantive Comments

The following summarizes the substantive comments received on Draft EIS regarding the alternatives analysis. Table MR11-1 provides a list of the commenters and a reference to the individual comments, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided. Section 11.2.1, Regulatory Overview, below, provides an overview of the regulations governing the alternatives analysis in the context of the National Environmental Policy Act (NEPA).

- The purpose and need of the Federal action were unclear and too narrowly defined. (Response provided in Section 11.2.2, Scope of Purpose and Need Statement.)
- The Draft EIS used an improper and inconsistent baseline. (Response provided in Section 11.2.3, Use of a Consistent Baseline.)
- The Ranchwide Agreement was improperly excluded from all alternatives except for the Proposed TU MSHCP Alternative. (Response provided in Section 11.2.4, Incorporating the Ranchwide Agreement.)
- The No Action Alternative improperly assumed full buildout of the Kern County General Plan and overstated its effects. (Response provided in Section 11.2.5, Analysis of the No Action Alternative.)
- The Kern County General Plan Buildout MSHCP Alternative and Proposed TU MSHCP Alternative in the Draft EIS improperly assumed full buildout of the Kern County General Plan and overstated its impacts. (Response provided in Section 11.2.5, Analysis of the No Action Alternative, and Section 11.2.6, Analysis of the Kern County General Plan Buildout Alternative.)
- A broader range of alternatives should have been considered; specifically, comments suggested the following alternatives:
    - an alternative that does not allow development in the California condor critical habitat on Tejon Ranch (concentrating development near Interstate 5 [I-5]),
    - an alternative with a habitat conservation plan (HCP) covering all of Tejon Ranch,
    - alternatives in which development would be concentrated in different parts of Tejon Ranch,

- an alternative based on the South Coast Wildlands proposed reserve design, and
- an alternative of establishing a national park or wildlife preserve on the Covered Lands.

(Response provided in Section 11.2.7, Range of Alternatives Considered.)

# 11.2 Responses to Substantive Comments

## 11.2.1 Regulatory Overview

NEPA requires that an EIS include, in comparative form, a rigorous exploration and objective evaluation of a reasonable range of alternatives to a proposed Federal action (42 United States Code [U.S.C.] 4332(c); 40 Code of Federal Regulations [CFR]. 1502.14). As quoted correctly by a commenter, the regulations state that the alternatives analysis is the "heart" of the EIS; it must include a no action alternative, and it must describe the environmental effects of the proposed action and the alternatives in comparative form so as to sharply define the issues and provide a clear basis for choice among options by the decision-maker and the public (40 CFR 1502.14). An agency must follow a "rule of reason" in preparing an EIS, in terms of which alternatives the agency must discuss and the extent to which it must discuss them (*Natural Res. Def. Council v. Morton*, 458 F.2d 827, 834 [D.C. Cir. 1972]; *Alaska v. Andrus* 580 F.2d 465, 475 [D.C. Cir. 1972]).

The alternatives analysis is based upon a lead agency's statement of the underlying purpose and need to which the agency is responding (40 CFR 1502.13). In developing the purpose and need, the lead agency is guided by consideration of the applicant's purposes and needs as well as the statutory objectives of the agency and its authorizations to act (48 *Federal Register* [FR] 34263, 34267).

Once the purpose and need have been identified, the Council on Environmental Quality (CEQ) regulations require an agency to "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated" (40 CFR 1502.14). The term "reasonable alternatives" refers to alternatives "that are technically and economically practical or feasible and meet the purpose and need of the proposed action" (43 CFR 46.420(b)). An agency need not give detailed consideration to alternatives similar to alternatives actually considered (or with environmental consequences that are similar), or alternatives that are infeasible, ineffective, or inconsistent with the basic policy objectives for the management of the area or the purpose and need of the action (*Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 551 [1978]; see also *Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d 853, 868 [9th Cir. 2004][agency not required to separately analyze alternatives with substantially similar consequences]; *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.,* 123 F.3d 1142, 1159 [9th Cir 1997][agency not required to evaluate alternative submitted during comment period and characterized as environmentally superior where alternative would not meet project purposes or were similar to alternatives already analyzed]).

Approval of the TMV Project by Kern County in the TMV Project Approvals and Tejon Mountain Village Environmental Impact Report (TMV EIR) (Kern County 2009a) resulted in changes to some of the general plan land use designations underlying the alternatives previously considered in the Draft EIS; therefore, these changes were incorporated into the revised alternatives considered in this Supplemental Draft EIS. This Supplemental Draft EIS considers five alternatives in detail:

- No Action Alternative
- Proposed Tehachapi Uplands Multiple Species Habitat Conservation Plan Alternative (Proposed TU MSHCP Alternative) (Preferred Alternative)
- Condor Only HCP Alternative

- Condor Critical Habitat Avoidance Multiple Species Habitat Conservation Plan Alternative (CCH Avoidance MSHCP Alternative)
- Kern County General Plan Buildout Alternative

As discussed in Section 2.3, Summary and Comparison of Alternatives, in Volume I of this Supplemental Draft EIS, the primary differences between the five alternatives are their underlying approach to species protection, the intensity and location of development, and the extent of permanently preserved open space areas. Thus, in response to comments, the Supplemental Draft EIS alternatives expands the range of species conservation management approaches—from no management/no action, to multiple species coordinated management, to management for one species, to project-by-project management approach; and development scenarios—from no development, to proposed development, to alternative development locations, to full buildout under the Kern County General Plan.

## 11.2.2 Scope of Purpose and Need Statement

The comments related to the EIS statement of purpose and need state that:

- NEPA requires agencies to define the purpose and need statement of a proposed action in a sufficiently broad manner so as to allow for consideration of a reasonable range of alternative ways to accomplish the underlying goals of a proposal.
- The Service defined the purpose and need statement—responding to Tejon Ranchcorp's (TRC) application for a multispecies incidental take permit (ITP)—too narrowly, thereby eliminating other viable alternatives from consideration.
- The need for the ITP should be discussed further and an analysis of commercial and residential demand performed, because it is unclear why there is a need for commercial and residential development in the currently undeveloped areas of Tejon Ranch.

As discussed above, an EIS must "briefly specify the underlying purpose and need to which the agency is responding" to form a basis for its alternatives analysis (40 CFR 1502.13). It is the lead agency's responsibility to define the purpose and need. In doing so, the lead agency is guided by the agency's mission, statutory objectives, and authorizations to act. When asked to approve a permit application, the agency should also consider the needs and goals of the parties involved in the application or permit as well as the public interest (43 CFR 420(a)(2)). The statutory purpose underlying the Federal action is critical to consider, and courts have noted that referencing the statutory objectives provides a reasonable compromise between unduly narrow objectives and hopelessly broad societal objectives that would expand the range of relevant alternatives (*Native Ecosystem Council v. U.S. Forest Serv.*, 428 F.3d 1233 [9th Cir. 2005] [discussion of alternatives required by NEPA is limited by an agency's statutory objectives]; *Citizens Against Burlington v. Busey,* 938 F.2d 190, 196 [D.C. Cir. 1991]; *City of New York v. U.S. Dep't of Transp.*, 715 F.2d 732, 743 [2d Cir. 1983]; *Vt. Pub. Interest Research Group v. U.S. Fish & Wildlife Serv*., 247 F. Supp. 2d 495, 526-527 [D. Vt. 2002][upholding a narrow purpose and need statement in light of a "clear Congressional directive" to the agency]). In defining the purpose of the Federal action, the court stated, "[p]erhaps more importantly, an agency should always consider the views of Congress, expressed, to the extent that the agency can determine them, in the agency's statutory authorization to act, as well as in other congressional directives" (*Citizens Against Burlington v. Busey*, 938 F.2d at 196 [1991]).

Here, the purpose and need statement set forth in Section 1.3, Purpose of Supplemental Draft EIS, in Volume I of the EIS is defined primarily by the statutory and regulatory requirements of the Federal Endangered Species Act (ESA), but also considers the applicant's purpose and need for their project. Section 10 of the ESA provides a regulatory mechanism to permit the incidental take of federally listed fish and wildlife species by private interests and non-Federal government agencies during

lawful activities, such as development. Congress intended this process to reduce conflicts between listed species and economic development activities, and to provide a framework that would encourage "creative partnerships" between the public and private sectors and state, municipal, and Federal agencies in the interests of endangered and threatened species and habitat conservation (H.R. Rep. No. 97-835 1982).

ESA Section 10 states, "[i]f the Secretary finds, after opportunity for public comment, with respect to a permit application and related conservation plan that [certain conditions are met,] the Secretary shall issue the permit." In order to issue an ITP, the Service must find that:

- the taking is incidental to an otherwise lawful activity;
- the applicant will, to the maximum extent practicable, minimize and mitigate the effects of such taking;
- the applicant will ensure that adequate funding for the HCP will be provided;
- the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and
- any measures required by the Service as necessary or appropriate for purposes of the HCP will be met.

See Master Response 8, Regulatory Considerations, for more information on the Service's regulatory requirements.

The Service's *Habitat Conservation Planning Handbook* (U.S. Fish and Wildlife Service 1996) emphasizes that the "purpose of the habitat conservation planning process and subsequent issuance of incidental take permits is to authorize the incidental take of threatened or endangered species, not to authorize the underlying activities that result in take" (Chapter 1, Section A). Contrary to the commenter's statements, it is neither reasonable nor consistent with the statutory purposes underlying ESA Section 10 to ignore the applicant's needs or the statutory purpose of ESA Section 10, which is to allow for otherwise lawful activity on private property, such as development, to proceed by authorizing the Service to permit the limited, regulated take of federally listed animal species incident to such lawful activity, if the impacts of such take are minimized and mitigated to the maximum extent practicable and the take will not appreciably reduce the likelihood of the survival and recovery of the listed species in the wild.

Consistent with this guidance and the statutory purpose of ESA Section 10, the Service developed a purpose and need statement that accurately specifies the underlying purpose and need:

- Protect, conserve, and enhance the California condor and other Covered Species and their habitat within the Covered Lands.
- Provide a means and take steps to conserve the ecosystems on which the California condor and other Covered Species depend.
- Contribute toward the long-term survival and recovery of the Covered Species through protection and management of the California condor and other covered species and their habitat.
- Respond to TRC's application for an ITP based on proposed Covered Activities that could result in the incidental take of the Covered Species on the Covered Lands, including incidental take resulting from habitat modification associated with ranch uses and planned future community development and construction of related infrastructure on approximately 5,533 acres in the Tehachapi Uplands of Tejon Ranch.

The purpose and need statement in this Supplemental Draft EIS reflects the applicant's shared commitment to the purposes identified in the first three bullets above (Section 1, Introduction and Background, in the TU MSHCP). The purpose and need statement also takes into account TRC's specific need to support, through development of the TU MSHCP, its application for an ITP for the Covered Species pursuant to ESA Section 10(a)(1)(B) and its implementing regulations and policies.

In this way, the Service acknowledges both the agency's purpose and need based on ESA statutory and public interest purposes, and the applicant's need. Specifically, the applicant's need for the ITP is based on intended development that would require land disturbance development activities on approximately 5,533 acres in the Tehachapi Uplands of Tejon Ranch, which account for approximately 4% of the Covered Lands. These development activities and ranch uses could potentially lead to incidental take of species as a result of habitat modification. As set forth in Section 1, Introduction and Background, of the TU MSHCP, the applicant's proposed development is intended to serve the market needs for an ecotourism mountain resort community in proximity to Los Angeles and Bakersfield; provide sufficient space for infrastructure required by Kern County and necessary for a self-serving community; provide extensive open space to preserve the natural and cultural heritage, including ongoing ranching activities; and provide adequate sales fees to generate intended conservation fees. The ESA statutory needs require the Service to respond to the application and evaluate whether its approval of the proposed HCP meets the public interest and ESA species protection and management goals listed above. The purpose and need statement was not drawn too narrowly. It appropriately considers the applicant's goals and need for obtaining an ITP while focusing on the Service's statutory objectives under the ESA, including public interest goals. The purpose and need statement in this Supplemental Draft EIS allows for consideration of a full spectrum of alternatives that examine varying development and take scenarios and species management mechanisms, as discussed more fully below in Section 11.2.7, Range of Alternatives Considered.

With respect to the comment that the need for development should be discussed further and an economic analysis performed, NEPA does not require an agency to conduct independent analysis of an applicant's purpose and goals (*Stop The Pipeline v. White,* 233 F. Supp. 2d 957, 970-71 [S.D. Ohio 2002] [upholding the U.S. Army Corps of Engineers (USACE) purpose and need statement for issuance of a Clean Water Act Section 404 permit required for an oil pipeline based on applicant's projections of petroleum demand]; *Anson v. Eastburn,* 582 F. Supp. 18, 21-3 [S.D. Ind. 1983] [upholding an agency's need statement for permits required for a power plant that relied on the applicant's determination that there was a need for a new coal plant: "It should be noted at the outset that no provision of NEPA (42 U.S.C. 4321 *et seq.*) mandates an independent evaluation by the agency involved of the need for a project."]).Moreover, nothing in Section 10 of the ESA directs the Service to evaluate the merits of the underlying lawful activities that trigger the applicant's ITP permit, nor does Section 10 establish a presumption against development, requiring the applicant to justify the need for the project. Rather, under Section 10, the Service is required to evaluate the applicant's permit application, including the underlying habitat conservation plan, to determine whether it meets the statutory permit issuance criteria. Accordingly, the merits of the TU MSHCP, and not the TMV Project and other development, are the focus of the analysis presented in this EIS.

## 11.2.3 Use of a Consistent Baseline

Comments related to the baseline used in the alternatives analysis state that reliance on a baseline that incorporates future conditions, such as general plan buildout, creates an inaccurate comparison of alternatives.

Description of the environmental baseline is an analytical tool that enables the agency to evaluate changes that the alternatives would make to existing environmental conditions. The baseline, or existing environmental condition, is described in Chapter 3, Affected Environment, in Volume I of

this Supplemental Draft EIS and does not assume future general plan buildout. Each of the alternatives, including the No Action Alternative and the four action alternatives, are evaluated against existing environmental conditions in Chapter 4, Environmental Consequences, in Volume I of this Supplemental Draft EIS. In addition, each of the action alternatives is evaluated against the No Action Alternative.

With respect to the Ranchwide Agreement, the discussion of existing conditions in this Supplemental Draft EIS acknowledges the Ranchwide Agreement has been executed, and the range of alternatives considers a range of possible implementation outcomes, as discussed further below. In thisSupplemental Draft EIS, the No Action Alternative has been revised to assume that no action would be taken by the Service; no ITP would be issued, and no Covered Species-related mitigation measures would be undertaken. Under the revised No Action Alternative, this Supplemental Draft EIS assumes that the Ranchwide Agreement would remain in effect, that development of the TMV Project and other future commercial or residential development allowed within the Covered Lands under the Ranchwide Agreement would not occur, and that the ranch's existing activities would continue at current levels into the future. As noted above, in this Supplemental Draft EIS, the No Action Alternative and each of action alternatives are evaluated against the existing environmental conditions, and each of the action alternatives are evaluated relative to the No Action Alternative.

## 11.2.4 Incorporating the Ranchwide Agreement

One commenter stated that the alternatives analysis in the EIS improperly excludes the protections provided to the Covered Lands by the Ranchwide Agreement from all but the preferred alternative, when in fact the Ranchwide Agreement and its protections are part of the environmental baseline. The commenter points out that, although the conservation easement conveyances in the Ranchwide Agreement are triggered by development approvals, as long as any one development is approved, all easements would be conveyed. The commenter also stated that the Ranchwide Agreement does not rely on, or require, an HCP; its terms are not dependent on an HCP being approved. The commenter states that the Service must withdraw the entire Draft EIS to issue new descriptions and analyses of the alternatives that include the Ranchwide Agreement.

As discussed in Section 2.3, Summary and Comparison of Alternatives, in Volume I of this Supplemental Draft EIS, it is acknowledged that the Ranchwide Agreement has been executed and, for NEPA purposes, it is assumed that the Ranchwide Agreement remains in effect (although implementation levels may vary). The conservation requirements associated with the Ranchwide Agreement are assumed to remain in place for all of the alternatives except one, the Kern County General Plan Buildout Alternative, to represent a reasonable range of alternatives to the proposed action. The Ranchwide Agreement is a private agreement between parties, and the Service is not a party to, and has no contractual standing under, the agreement. Thus, it can be amended (or even terminated) by mutual agreement of the parties such that the land preservation outcome of the Ranchwide Agreement on Covered Lands may not be realized. While the Service considers the likelihood that the Ranchwide Agreement would be terminated remote, for purposes of comprehensive NEPA analysis, the Kern County General Plan Buildout Alternative does not assume continuation of the Ranchwide Agreement except for the permanent protection of the already-recorded conservation easements on the Existing Conservation Easement Areas.

The Ranchwide Agreement was entered into in furtherance of the TU MSHCP, and is provided as Appendix E to the TU MSHCP. Its land conservation requirements, in significant part, form the basis of mitigation measures for the TU MSHCP. It is thus both appropriate and furthers the conservation goals of the ESA to “credit” as mitigation under the TU MSHCP the extensive land preservation commitments made by TRC under the Ranchwide Agreement. To fail to credit this conservation as mitigation would discourage landowners from proactively entering into separate conservation agreements during the HCP development process.

Although entered into with private parties and broader than just the Covered Lands, the Ranchwide Agreement was developed in furtherance of the TU MSHCP. The habitat conservation planning process has spanned more than 10 years since the Stipulation for Stay and the Memorandum of Agreement were entered by the court in 1999 (Master Response 15, Procedural Considerations), committing TRC and the Service to work toward preparation of an HCP. During that time, the boundaries and focus of the HCP have changed (Master Response 8, Regulatory Considerations, regarding Covered Species, and Section 11.2.7, Range of Alternatives Considered, below, regarding the geographic scope of the Covered Lands). Meanwhile, TRC has made more specific development plans. While still pursuing an HCP with the Service that would cover only a portion of the ranch (Covered Lands), TRC worked with Audubon California, the Endangered Habitats League, Natural Resources Defense Council, Planning and Conservation League, Sierra Club, and the newly formed nonprofit Tejon Ranch Conservancy (Resource Groups) to establish a broad conservation agreement, the Ranchwide Agreement, which was entered into on June 17, 2008, after the Notice of Intent to develop an EIS for the TU MSHCP was issued on March 26, 2008.

The agreement provides for the permanent protection, through a combination of dedicated conservation easements and designated open space areas, of up to approximately 90% of the 270,000-acre Tejon Ranch in exchange for certain development on the ranch, including the TMV Project (consistent with the development scenario included in the Proposed TU MSHCP Alternative) and Centennial and Grapevine projects. This agreement covers the entirety of the ranch, not only the 141,886 acres included in the Covered Lands under the TU MSHCP. While it is true that the permanent land conservation protections (recording of the conservation easements) are triggered by the final approval of any one of the three projects noted above, the stated goals of the Ranchwide Agreement are consistent with the purpose and need of the proposed action, and the Ranchwide Agreement specifically contemplates the TU MSHCP. Approval of an HCP is defined as an anticipated project approval under the Ranchwide Agreement. In addition, the agreement requires the TMV Project to comply with the TU MSHCP. The Resource Groups do not have authority to approve the TU MSHCP; rather they covenanted with TRC in Section 10.5 of the Ranchwide Agreement not to challenge the TU MSHCP. The agreement need not be reliant on approval of the TU MSHCP to be in furtherance of the plan. For these reasons, the Ranchwide Agreement conservation lands form the basis of the TU MSHCP Mitigation Lands, and the conservation provided under the Ranchwide Agreement on the Covered Lands is appropriately credited as mitigation under the TU MSHCP and considered in this Supplemental Draft EIS analysis.

## 11.2.5 Analysis of the No Action Alternative

Several comments state that the No Action Alternative of the Draft EIS is improper. Specifically, comments state that:

- The no action scenario should reflect existing conditions, stated as follows:
  - The Federal action at issue is a Federal action on a project proposal, rather than an approval of a land management plan, as described in the CEQ's NEPA guidance; therefore, the No Action Alternative should mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity, as opposed to a comparison of the proposed action to conditions under ongoing management under the existing plan.
  - Full buildout of the general plan is not likely, given current market conditions, slow growth rates in the Tehachapi Uplands, and analysis in the Kern County General Plan showing that most population growth occurs in incorporated cities.

  - Reliance on general plan buildout inflates the baseline and results in a false comparison between the preferred alternative and the No Action Alternative by masking the environmental impacts of the Federal action.
  - General plan buildout is no less likely to occur if the Proposed TU MSHCP Alternative is adopted.
  - The No Action Alternative should describe the existing ranching, agriculture, mining, hunting, and other activities that currently take place on Tejon Ranch.
- A general plan is not a reasonable indicator of future actions, as it does not vest any rights. Site-specific approvals, including an ITP, would be required prior to development.
- The No Action Alternative improperly assumes that no take of California condors would occur outside of the Condor Study Area and 2-mile buffer.
- The No Action Alternative should not have assumed that the 8,272 acres designated for mineral and petroleum uses would actually be disturbed, as they are currently undeveloped.

This response is divided into four subsections addressing the regulatory context, revisions in this Supplemental Draft EIS to the No Action Alternative, the use of the Kern County General Plan, the assumption regarding no take of California condors; and the assumption regarding mineral and petroleum acreage.

### 11.2.5.1 Regulatory Guidance and the No Action Alternative in the TU MSHCP

Commenters stated that under the CEQ NEPA guidance, the Federal action should be reviewed in the "project" context, where no action means not building the project, rather than in the "land management plan" context, where no action means continuation of land management activities. The commenter stated that the land management plan is the Kern County General Plan, but because it has not been under permit review or permitted by Federal or state governments for potential effects on species, any development pursuant to the general plan should be considered a new "project." Another commenter cited the CEQ regulations with respect to no action and stated that an accurate comparison of the preferred alternative to the No Action Alternative would compare the proposed development with the status quo, and defines the status quo as the continuance of existing activities on the ranch, including ranching, agriculture, mining, and hunting.

CEQ NEPA regulations section 1502.14(d) requires the alternatives analysis in the EIS to "include the alternative of no action." CEQ's NEPA guidance distinguishes between no action that is in a project context (where it means not building the project) and no action in the land or plan management context (where it means continuing the current management plan rather than going back to the *status quo ante*) (46 FR 18026, 18027).

Here, although the Service recognizes that approval of the TU MSHCP and issuance of an ITP would facilitate development of a project (e.g., the TMV Project), approval of the TU MSHCP is approval of a land management plan, the TU MSHCP, and thus, the No Action Alternative is appropriately described in the land management plan context, which assumes continuation of Existing Ranch Uses. Because the No Action Alternative, as revised in this Supplemental Draft EIS, assumes that the TMV Project and other commercial and residential development would not occur, and that existing ranch activities and management would continue, the No Action Alternative is the same whether framed in terms of “no project” or “continuing an existing land management plan” under the CEQ NEPA guidance. As revised, the No Action Alternative reflects existing conditions and provides a basis of comparison with each of the action alternatives.

### 11.2.5.2 Revisions of the No Action Alternative in This Supplemental Draft EIS

The No Action Alternative in this Supplemental Draft EIS has been revised. Under the revised No Action Alternative, it is assumed for purposes of the NEPA analysis that the proposed action—issuance of an ITP—would not occur, that the Ranchwide Agreement would remain in effect, that development of the TMV Project and other future commercial or residential development allowed within the Covered Lands under the Ranchwide Agreement would not occur, and that existing ranch uses would continue at current levels into the future. The conditions of approval for the TMV Project by Kern County identify certain actions to be undertaken by the Service, including directing the potential operation of a supplemental feeding program and capture of California condors that have become habituated. The No Action Alternative does not assume future action on the part of the Service, including future Service action identified as a condition of Kern County's approval of the TMV Project. It is assumed the Service would continue to provide technical assistance to TRC regarding the California condor.

### 11.2.5.3 Reliance on the Kern County General Plan to Predict Development in the No Action Alternative

One commenter stated that a general plan designation is not a reasonable indicator of predictable future action and that buildout of the general plan is "not even remotely likely," stating that growth projections in the Draft EIS contradict projections in the general plan, and references "[f]uture indicators of residential market sales," which indicate a slowing of growth in Kern County. The commenter stated that the general plan buildout projected under the No Action Alternative is no less likely if the preferred alternative is selected. Finally, this commenter stated that an ITP under the ESA would be required before building anything according to the general plan. The commenter states that this problem with the No Action Alternative fatally skews the analysis of alternatives under NEPA.

As discussed above, the No Action Alternative in this Supplemental Draft EIS has been revised to reflect existing conditions without an ITP or other Service action. No Commercial and Residential Development Activities would occur under this alternative.

The Kern County General Plan Buildout Alternative does reflect buildout of the land use designations provided for in the amended general plan. Incremental development on a project-by-project basis is a realistic alternative to the proposed action because, even if the Service did not issue an ESA Section 10 permit based on a comprehensive HCP as reflected in the TU MSHCP, the Service anticipates that development could still proceed on a building-by-building or project-by-project basis in the Covered Lands, with individual incidental take authorizations issued as appropriate through either ESA Section 7 or Section 10. Currently, there are only four federally listed species that potentially occur in the Covered Lands, and the Service expects that some individual projects on the Covered Lands could be undertaken in a manner that is unlikely to result in take under the ESA. Alternatively, if a future specific project were likely to cause take of a listed species, then incidental take could be authorized either under ESA Section 7, assuming the presence of a Federal nexus, such as a jurisdictional wetland under the Clean Water Act, or through a project-specific HCP and ITP under ESA Section 10. The difference between the proposed TU MSHCP and ITP and a project-by-project approach is that, in the latter case, evaluation of effects on listed species and take minimization and mitigation measures would be done on a project-specific basis rather than on a landscape scale. The Kern County General Plan Buildout Alternative analyzed in this Supplemental Draft EIS is discussed further below.

### 11.2.5.4 Assumption that the No Action Alternative Would Not Involve Take of California Condors

Commenters stated that the Draft EIS does not support or prove that the Condor Study Area, along with a 2-mile buffer, would prevent any need for a take permit, and the No Action Alternative would likely result in take. One commenter stated that this creates a comparison between illegal development and the preferred alternative, in violation of NEPA.

As noted above, the No Action Alternative has been revised. No development is contemplated under the No Action Alternative in this Supplemental Draft EIS. This comment is no longer relevant.

### 11.2.5.5 Inclusion of Effects on Mineral and Petroleum Acreage in the No Action Alternative

One commenter stated that the inclusion of effects on 8,272 acres of mineral and petroleum activities under the No Action Alternative is incorrect because there is no current proposal to mine those areas. The commenter states that because the 8,272 acres are currently undeveloped, assuming that this area would be mined under the No Action Alternative infers that the No Action Alternative contains significantly less habitat available to listed species than the Proposed TU MSHCP Alternative and biases the effects analyses and anticipated levels of take.

The Supplemental Draft EIS range of alternatives has been revised. Future mineral and petroleum activities are not assumed under the revised No Action Alternative and are not included as Covered Activities in the Proposed TU MSHCP Alternative, the Condor Only HCP Alternative, or the CCH Avoidance MSHCP Alternative. Within the Covered Lands, there are two existing mining operations, the La Liebre mine and the National Cement mine, facilities that are not owned or operated by TRC and that collectively occupy 2,636 acres. The Ranchwide Agreement, which is assumed under all of the action alternatives except, the Kern County General Plan Buildout Alternative, restricts mining activity in the Covered Lands to these two mine areas. Under the Kern County General Plan Buildout Alternative, all areas with a mining general plan designation would remain undeveloped, in consideration of the absence of pending mine proposals and the speculative nature of assessing a type or level of mining without an actual proposal. Because the two mines are in the Covered Lands, they are acknowledged and described as part of the baseline; however no new mining is considered under any of the alternatives.

## 11.2.6 Analysis of the Kern County General Plan Buildout Alternative

A commenter stated that the “MSHCP General Plan Buildout Alternative” from the Draft EIS was improper because it inflates the effects of that alternative in comparison to the Proposed TU MSHCP Alternative. The commenter further stated that it is a "straw man" alternative that does not properly reflect an HCP alternative, and was included only to be disregarded without any realistic consideration. The commenter stated that the alternative allows for more disturbance of Covered Species and their habitat and provides for less conserved habitat than the No Action Alternative and would lead to greater jeopardy through adverse modification of critical habitat, sensitive habitat, and wildlife than the No Action Alternative, resulting in an unrealistic habitat conservation plan scenario.

This Supplemental Draft EIS includes a revised Kern County General Plan Buildout Alternative that reflects the current general plan, including approval of the TMV Project, but does not include the assumption of an MSHCP. Under this alternative, development is assumed to proceed in accordance with the Kern County General Plan, including implementation of the TMV Project (as it is already

approved by Kern County in the TMV Project Approvals and TMV EIR[Kern County 2009a]). Development of the Covered Lands would require Kern County approval and ESA authorization if take of federally listed species would result. For purposes of this NEPA analysis, development is assumed to proceed on a project-by-project basis with the Service considering project-specific incidental take authorizations, as necessary, through either ESA Section 7 or Section 10. With respect to open space, in total, the Kern County General Plan Buildout Alternative would include 119,392 acres of open space, including 34,130 acres of permanently protected open space—12,795 acres of Existing Conservation Easement Areas and 21,335 acres of permanent open space required by the TMV Project Approvals—as well as 85,262 acres of Restricted Open Space that would be available for mitigation and species management on a project-by-project basis.

The revised Kern County General Plan Buildout Alternative in this Supplemental Draft EIS assumes the continuation of development trends consistent with the general plan without the comprehensive landscape-level conservation planning proposed under the TU MSHCP and provided for in the Ranchwide Agreement. This alternative was selected for analysis because, if the Service did not issue anESA Section 10 permit based on a comprehensive land management plan, development could still proceed on a building-by-building or project-by-project basis with the Service considering incidental take authorizations as appropriate through either ESA Section 7 or Section 10.

It is reasonable to look to the general plan as a source of development assumptions. The general plan has been described as the “constitution for all future developments” within the city or county...." (*California Native Plant Soc. v. City of Rancho Cordova*, 172 Cal. App. 4th 603, 636 [2003]). Each county and each city is required to prepare, adopt, and maintain a general plan to govern the physical development of all the land area under its jurisdiction. While general plans may be amended up to four times per year to accommodate specific projects, as was done for the TMV Project, and specific projects must undergo individual environmental review and obtain local approvals, general plans remain a meaningful long-term plan for development.

The Service may rely on the projections for land use and development set forth in the Kern County General Plan (*City of Carmel-by-the-Sea v. U.S. Dep't of Transp.,* 123 F.3d 1142, 1162 [9th Cir. 1997] [upholding purpose and need statement that relied, in part, on the city's master plan]; *Laguna Greenbelt v. U.S. Dep't of Transp.*, 42 F.3d 517, 526 [9th Cir. 1994][upholding growth inducing impacts analysis of a toll road where the EIS concluded that the toll road would not influence growth in Orange County because local planning documents assumed the existence of the toll road]; *Nat'l Wildlife Fed'n v. Norton* 2005 U.S. Dist. LEXIS 33768 [E.D. Cal. Sept. 7, 2005] [upholding the Service’s reliance on city and county general plans to determine the probable extent of development as best current information]). The Kern County General Plan notes the increasing population of unincorporated areas. According to the general plan, "substantial resource designated areas still exist within the plan to accommodate future population increases projected for the County," which includes the agriculturally designated land on Tejon Ranch (Kern County 2009b, page xiii). Even if the growth is lower relative to areas like Bakersfield, as a commenter suggested, that does not mean the general plan buildout will not occur as Kern County's historic growth trend has continued through numerous cycles in the housing market. Without further information, attempting to determine the effects of recent economic activity on housing demands in Kern County in the future would be speculative. Thus, the Service reasonably relied on the predictions of the local government.

The Service agrees with the comment that site-specific environmental review, permits, and approvals are required prior to building, and that general plans do not vest any rights or entitlements. This is also consistent with the general plan itself. As described in this Supplemental Draft EIS, the Kern County General Plan specifies that individual projects must comply with other laws, and threatened and endangered species should be protected in compliance with Federal and state requirements (Section 4.1.1.1, Regulatory Setting, in Volume I of this Supplemental Draft EIS). If approved by the Service, the TU MSHCP and ITP would not authorize any land development on

Tejon Ranch. Such decisions would be made by Kern County subject to compliance with applicable Federal, state, and local laws.

## 11.2.7 Range of Alternatives Considered

Several comments state that the Draft EIS should have considered a broader range of alternatives and suggest several specific alternatives that should have been included in the analysis.

Comments specifically referenced the following alternatives:

- An alternative avoiding all development in designated California condor critical habitat (this alternative should consider clustering development near I-5).
- An alternative in which development is limited to areas close to existing metropolitan areas and/or existing rail transportation.
- An alternative in which the Covered Lands include all of Tejon Ranch.
- Alternatives involving developments in specific areas of the Covered Lands and surrounding areas, including the foothills and flatlands outside of the Covered Lands; one commenter provided specific parameters on housing cost and neighborhood design.
- An alternative based on the South Coast Wildlands' proposed reserve design.
- An alternative involving establishment of the Covered Lands as a park or natural preserve.

This response sets forth the general requirements on the scope of the alternatives analysis, then addresses the four remaining types of additional alternatives suggested by commenters.

### 11.2.7.1 General Requirements and Scope of Alternatives

CEQ regulations require an agency to "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated" (40 CFR 1502.14). The Supplemental Draft EIS revises and supplements the range of alternatives, providing an evaluation of a reasonable range of alternatives. Because the Federal proposed action is issuance of an ITP pursuant to Section 10(a)(1)(B) of the ESA based on the TU MSHCP, a species conservation plan, in setting the range of reasonable alternatives, this Supplemental Draft EIS looks to explore different levels of species and habitat protection and management. The Supplemental Draft EIS provides a range of alternatives: from no management actions by the Service and no development under the No Action Alternative; to comprehensive management of multiple species to minimize and mitigate the effects of the Covered Activities on the Covered Species and their habitats in the Proposed TU MSHCP Alternative; to a single-species management approach in the Condor Only HCP Alternative, focused solely on mitigating the effects of the Covered Activities on the California condor; to restricted development outside of California condor critical habitat with comprehensive species and habitat management in the CCH Avoidance MSHCP Alternative; to an *ad hoc*, project-by-project management approach in the Kern County General Plan Buildout Alternative, assuming mitigation of future development through project-specific take authorizations. The level of development considered in this Supplemental Draft EIS ranges from none in the No Action Alternative, to the proposed development in the Proposed TU MSHCP Alternative and Condor HCP Alternative, to restricted development outside of California condor critical habitat in the CCH Avoidance MSHCP Alternative, to general-plan-consistent development as set forth in the Kern County General Plan Buildout Alternative.

### 11.2.7.2 Alternatives Suggested by Commenters

The other alternatives suggested by commenters, as further discussed below, reflect several slight variations on species management and development assumed under the five alternatives considered in this Supplemental Draft EIS. One would expand multispecies HCPs to the boundaries of Tejon Ranch, and a number of suggested alternatives would provide additional or reconfigured open space without considering specific species management, and would concentrate development in more urbanized areas or other parts of Tejon Ranch. As described in more detail below, the Service considered the alternatives raised by commenters and, in general, concluded that the suggested alternatives either were not practical or feasible, were within the range of alternatives already considered, were inconsistent with the purpose and need of the proposed Federal action, or a combination of these three scenarios. One suggested alternative—an alternative that would avoid development in California condor critical habitat (and cluster a more dense development near I-5) was carried forward into this Supplemental Draft EIS for detailed consideration, and is reflected as the CCH Avoidance MSHCP Alternative.

#### Alternative Avoiding Critical Habitat

In response to several comments on the Draft EIS, this Supplemental Draft EIS has been revised to include the CCH Avoidance MSHCP Alternative, in which species management would occur through an MSHCP, and where,no development would occur in federally designated California condor critical habitat. Instead, more dense development would be clustered near I-5.

#### Alternative Covering All of Tejon Ranch

One commenter stated that, with respect to alternatives, it was unclear why the covered area does not include the entirety of the Tejon Ranch and the proposed development that would occur outside of the currently proposed Covered Lands.

An alternatives analysis may properly limit the geographic scope of alternatives because of the underlying statutory and applicant objectives (*Citizens Against Burlington v. Busey*, 938 F.2d 190, 196–197 (D.C. Cir. 1991][approving of Toledo airport expansion EIS that considered applicant's job creation goals and eliminated consideration of expansion projects outside of the Toledo area]). . As discussed above, the alternatives analyzed in this Supplemental Draft EIS present varying levels of development and species management within the Covered Lands. The Covered Lands represent 141,886 acres of the 270,365-acre Tejon Ranch. Based on the landform, there are two distinct areas of the Tejon Ranch: the Tehachapi Uplands and the valley floor.

While originally the Service and TRC discussed an HCP for the entire ranch, the parties recognized that the valley floor areas reflect different biological areas generally, as discussed in Master Response 12, Cumulative Effects. As the California condor was the key species driving the HCP, and the valley floor is sufficiently biologically distinct, TRC elected not to include the entire ranch in its application for an ITP. TRC has not requested coverage for either the Centennial project or the Grapevine project (two other possible future projects on Tejon Ranch contemplated in the Ranchwide Agreement) as part of their application.

The Covered Lands encompass areas of California condor activity on Tejon Ranch based on historic and current radio telemetry, global positioning system (GPS), and observational data, and elevation limits that define most current condor activity, and county boundaries. The Covered Lands encompass the Tehachapi Uplands areas of the ranch and associated biota, located roughly between 2,000 feet above mean sea level (amsl) on the north side of the mountains and 3,500 feet amsl on the south. Consistent with these two dissimilar biological areas, the TU MSHCP is directed at the mountain landscape, with its distinct species, uses, and habitat types that differ substantially from the species, agricultural uses, and habitat types on the valley floor.

As explained above, the alternatives need not extend beyond those reasonably related to the statutory purposes of the Federal action. The agency has considerable discretion to define the purpose and need of a Federal action. The Service considered the specific species management purposes of the TU MSHCP, and the proposed goals of the applicant, to reasonably define the scope of the Covered Lands, and therefore limited the range of alternatives to those that encompass the Covered Lands and its montane habitats and species—particularly the California condor—rather than the ranch as a whole.

## Alternative Involving Different Development Sites

Other commenters stated preferences for specific development sites that would create a development in other areas of Tejon Ranch, and further suggest that such alternatives would still be profitable. Specifically, one commenter suggested development at the bottom of the Grapevine near the IKEA development. Another commenter suggested development of three or four small, scattered developments (less than 2 square miles and 2,000 residents) on the periphery of the Tejon Ranch in the foothills and flat areas outside of the Covered Lands, including the Centennial site, and potentially a small development near I-5 on the south side of Castac Lake, with specific design and housing cost guidelines. Finally, one commenter suggested an alternative that would concentrate development nearer to existing metropolitan areas and rail service.

NEPA requires the analysis of a reasonable range of alternatives that are consistent with the proposed Federal action and its related purpose and need. Given that the proposed Federal action is not development, but rather responding to an ITP application—specifically issuance of a permit based on the ITP application (i.e., the TU MSHCP)—evaluating a range of development scenarios that the applicant has no interest in pursuing, or development on other lands owned by the applicant for which it does not request incidental take authorization, is not reasonable and is beyond the scope of the proposed action.

As discussed above, the alternatives analyzed in this Supplemental Draft EIS represent a reasonable range of alternatives as required by NEPA and explore varying levels of development and species management in response to the applicant's proposed development and HCP for the Covered Lands. The variety of proposed development alternatives suggested in the comments summarized above represent variations on a theme of requesting consideration of various development scenarios (generally outside the boundaries of the Covered Lands), along with additional or reconfigured open space, without considering specific species management needs. Consequently, such alternatives do not contain any of the comprehensive biologically protective measures offered under the TU MSHCP and reflect the more *ad hoc* species management approach of the Kern County General Plan Buildout Alternative.

Moreover, all of these suggested alternatives to the proposed action involve development outside of the Covered Lands, and therefore fail to account for the applicant's purpose, which is to pursue development in the Covered Lands. Specifically, one commenter suggested that development should be located at the bottom of the Grapevine, at the northwest tip of Tejon Ranch, which is outside of the Covered Lands. Another commenter suggests that the applicant should build scattered developments at the periphery of Tejon Ranch outside the Covered Lands, except in a small area next to I-5. Alternatives that reflect development scenarios that the applicant has not expressed an interest in pursuing on other lands owned by the applicant for which it does not request incidental take authorization is not reasonable. Finally, with respect to another commenter's suggestions to place development nearer to metropolitan areas or rail service, there are no areas on the Covered Lands that are served by existing rail services or are substantially closer to existing metropolitan areas than the development areas identified for the Proposed TU MSHCP Alternative. The Supplemental Draft EIS notes that there is no local rail service in the Covered Lands and the demand for rail would be met by existing facilities and/or the proposed high-speed train facilities in

Bakersfield. It also notes that development under the Proposed TU MSHCP Alternative would be concentrated in areas already served by Kern Regional Transit (Sections 3.3, Air Quality, 3.8, Transportation,and 4.8, Transportation in Volume I of this Supplemental Draft EIS). Therefore, the suggested alternative also would have to involve development outside of the Covered Lands.

The ESA does not direct the Service to evaluate the merits of the underlying lawful activities that trigger the applicant's ITP permit; rather, the Service is directed to evaluate the HCP against the statutory and regulatory permit issuance criteria. Accordingly, potential alternatives to the proposed issuance of an ITP based on the TU MSHCP, and not the merits of the TMV Project and other development, are the focus of the Service's analysis.

Where the essential purpose of the Federal action is to respond to an ITP permit application and ensure compliance with the ESA, consideration of alternatives reflecting potential development on other areas of Tejon Ranch that the applicant has not proposed and for which the applicant does not seek incidental take authorization is beyond the scope of the proposed action. The alternatives suggested by commenters for development in different areas of Tejon Ranch are therefore outside of the range of reasonable and feasible alternatives that must be considered under NEPA (*City of Carmel-by-the-Sea v. U.S. Dep't of Transp.* 123 F.3d 1142, 1155, 1159 [9th Cir. 1997]; see also *Laguna Greenbelt, Inc. v. U.S. Dep't of Transp.* 42 F.3d 517, 524-525 [9th Cir. 1994]). These alternatives do not meet the Services statutory purposes or the applicant's objectives of the TU MSHCP and ITP application.

## South Coast Wildlands Report

A commenter suggested that the South Coast Wildlands' Proposed Reserve Design for Tejon Ranch: A Threatened California Legacy (Conservation Biology Institute and South Coast Wildlands 2006) was among the alternatives that should have been addressed in the Draft EIS.

As discussed in the responses above, in considering a reasonable range of alternatives, a lead agency need not analyze alternatives that do not meet the project purpose or are within the range of alternatives already considered.

The stated purpose of the reserve design is "to design a wildland reserve for the [Tejon] Ranch that captures the broad array of landscape functions and conservation values that it supports." The reserve design includes the entirety of Tejon Ranch, and shows a reserve and three development areas, one of which is on the Covered Lands, largely within the TMV Planning Area.

For the same reasons given in the discussion regarding "Alternative Covering All of Tejon Ranch" and "Alternatives Involving Different Development Sites" above, the scope of the alternatives in this Supplemental Draft EIS must be reasonably related to the Covered Lands; thus, the report's consideration of areas outside of the Covered Lands is not consistent with the purpose of the action and is not relevant here.

Further, the reserve design described in the report excludes an area of approximately 8,247 acres in the subbasins of Castac Lake and Grapevine Creek watersheds for development, which is essentially consistent with the development and open space scheme presented in the Proposed TU MSHCP Alternative. This excluded area set aside for development would allow development surrounding Castac Lake and adjacent to I-5, in the southwest corner of the Covered Lands, with slight spillover into areas in Los Angeles County, south of the Covered Lands (Conservation Biology Institute and South Coast Wildlands 2006, p. 13, Figure 6d. Compare to Figure 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS). This design would result in a concentrated development pattern that correlates roughly to the densest development under the Proposed TU MSHCP Alternative. Although the 8,247 acres excluded from the South Coast Wildlands' reserve design would not follow the exact boundaries of the TMV Specific Plan in that it

would not include much of the large-lot residential development, which could potentially provide benefits to species due to connectivity in those areas, the reserve design would potentially allow disturbance of a larger total acreage in the Covered Lands than the 5,533 acres disturbed for development of Covered Activities under the Proposed TU MSHCP Alternative. Thus, to the extent the South Coast Wildlands reserve design encompasses the full ranch and includes development outside the Covered Lands, it fails to meet the project purpose. In addition, proposed development in the Covered Lands under the reserve design reflects an approach similar to the Proposed TU MSHCP Alternative and therefore is within the range of alternatives already considered.

## National Park or National Wildlife Refuge

One commenter stated that the Covered Lands should become a new national park or wildlife refuge. Another commenter stated that while this is the most attractive alternative, it is not feasible.

As described above, NEPA requires the analysis of a reasonable range of alternatives that are consistent with the purpose and need of the proposed Federal action and take into account the purpose and need of the applicant for whom the Federal action is requested. The national park or wildlife refuge alternative is beyond the stated purpose and need for the Service in this EIS and is inconsistent with the purpose and need of TRC; therefore, this alternative is not within the range of reasonable alternatives that must be considered under NEPA. Specifically, an alternative contemplating a transfer to Federal ownership of the privately owned lands on Tejon Ranch to create a national park or refuge is inconsistent with Services purpose and need to respond to the ITP application before it, and the statutory directive of ESA Section 10 to allow limited regulated take of federally listed species on private property incidental to otherwise lawful activities, provided statutory permit issuance criteria are met. The national park or wildlife refuge alternative is also inconsistent with TRC's goals and expectations for use of its property.

Moreover, this alternative raises practicality issues and is not feasible for technical and economic reasons, such as the private property status of the covered lands. The Service cannot require a private landowner to dedicate its land as a park or wildlife refuge, and TRC has not indicated an interest in doing so.

Therefore, an alternative under which the Covered Lands become a park or wildlife refuge is not within the range of reasonable and feasible alternatives that must be evaluated under NEPA (*City of Carmel-by-the-Sea v. U.S. Dep't of Transp*., 123 F.3d at 1155, 1159; see also *Colo. Envtl Coal. v. Dombeck,* 185 F.3d 1162 [10th Cir. 1999][holding that EIS with purpose and need of ski expansion project was not required to analyze conservation biology alternative]).

**Table MR12-1. Comments Addressed in Master Response 12**

| Individual Comment | Company |
|---|---|
| G2-36 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-37 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-38 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-39 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-40 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| I375-1 | DeVries, Pamela |
| I375-2 | DeVries, Pamela |
| I627-12 | Hamber, Robert |
| I628-2 | Hamber, Robert |
| I628-3 | Hamber, Robert |
| I628-25 | Hamber, Robert |
| O4-110 | Center for Biological Diversity (Keats, Adam) |
| O10-5 | TriCounty Watchdogs (de Leeuw, Jan) |
| O10-23 | TriCounty Watchdogs (de Leeuw, Jan) |

# 12.1 Summary of Substantive Comments

The following summarizes the substantive comments received related to the cumulative effects analysis in the Draft EIS. This response begins with a discussion of the National Environmental Policy Act (NEPA) requirements for considering the cumulative effects of a proposed action, followed by an overview of the Supplemental Draft EIS's approach to analyzing cumulative effects. Responses to individual comments are provided after the overview.

Table MR12-1 provides a list of the commenters and a reference to the individual comments, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The cumulative effects analysis of biological resources should have more thoroughly considered the effects of other regional projects, particularly the proposed Centennial development in Los Angeles County, given its overlap with the biological resources on the Covered Lands and cumulative effects on condor flyways between Tejon Ranchcorp (TRC) developments and Centennial and Frazier Park Estates. (Response provided in Section 12.2.3, Cumulative Effects Analysis for Biological Resources.)
- The potential cumulative effects of climate change on biological resources should have been more thoroughly analyzed. (Response provided in Section 12.2.4, Cumulative Effects Analysis for Climate Change.)
- The cumulative effects for all environmental resources did not sufficiently consider other existing and future projects, including Interstate 5 (I-5), Gorman, Lebec, Frazier Park, Lake of the

Woods, Pinion Pines, and Pine Mountain Club, as well as the Tejon Mountain Village (TMV) Project, Centennial, and Grapevine projects. Cumulative effects for each alternative should be more thoroughly analyzed. (Response provided in Section 12.2.5, Cumulative Effects Analysis for Other Regional Projects.)

- Holistic regional planning is difficult if not all regional projects are analyzed in the EIS. (Response provided in 12.2.6, Holistic Regional Planning.)

It should be noted that some comments about the cumulative effects of the proposed action appear to be focused on the Tejon Mountain Village Environmental Impact Report (TMV EIR) (Kern County 2009), not the Draft EIS. The TMV EIR has already been certified by Kern County in an independent process. The relationship between the TMV EIR, the TU MSHCP, and the EIS for the TU MSHCP is discussed in detail in Master Response 10, TMV Project, EIR, and Development-Related Effects Analysis. To the extent that these comments raise issues that may apply to the EIS, they are addressed below.

# 12.2 Responses to Substantive Comments

## 12.2.1 NEPA Requirements for Cumulative Analysis

NEPA requires Federal agencies to consider the effects of both cumulative actions and cumulative impacts (40 Code of Federal Regulations [CFR] 1508.25, 1508.7). Cumulative actions are those "which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement" (40 CFR 1508.25(a)(2)). A cumulative impact is defined as "The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7).

All reasonably foreseeable actions with potential cumulative effects must be addressed in an environmental impact statement (EIS). Cumulative effects need not be discussed if they are speculative. The "rule of reason" test determines whether the discussion of cumulative impacts is reasonably thorough and would allow a decision maker to make an informed decision.

## 12.2.2 Approach to Cumulative Effects Analysis in the Supplemental Draft EIS

The methods used for the cumulative analysis are set forth in Section 4.0.4, Methods for Assessing Cumulative Effects, in Volume I of this Supplemental Draft EIS. In response to comments, this Supplemental Draft EIS includes additional detail about other, reasonably foreseeable regional projects and their potential to result in a cumulative effect when considered in combination with the proposed action. In addition, the analyses presented in Chapter 4, Environmental Consequences, in Volume I of this Supplemental Draft EIS have been revised to include a clearer, supplemented analysis of cumulative effects for each of the nine environmental resource elements considered in this EIS—biological resources, water resources, air quality, geology and soils, cultural resources, visual resources, community resources, transportation, and greenhouse gases and climate change. Because the Service's action is issuance of an incidental take permit (ITP), not approving development, the discussion related to biological cumulative effects is the most in-depth; however, for all resources areas, the Supplemental Draft EIS effects analysis includes a discussion and comparison of cumulative effects under the various alternatives.

Additionally, the final section of each resource analysis in this Supplemental Draft EIS provides a summary and comparison of the alternatives. For the purposes of disclosure and understanding the magnitude of the potential effects among the alternatives, this Supplemental Draft EIS provides a discussion of the criteria used in assessing the relative effects of the proposed action on each resource element. As explained in Section 4.0.4.3, Determination of Scope of Cumulative Effects, the determination of cumulative effects under an EIS involves the analysis of the direct and indirect effects of the proposed action; determination of which resources, ecosystems, and human communities would be affected; consideration of the additive, synergistic, and environmental consequences over time of other actions; and analysis of the magnitude of effects on affected resources from a cumulative effects perspective.

This analysis satisfies NEPA's mandate to consider cumulative effects, particularly given the scope of the Federal action at issue—issuance of an ITP—which could facilitate, but would not approve, development in the Covered Lands.

## 12.2.3 Cumulative Effects Analysis for Biological Resources

Some commenters raised concerns about the Draft EIS's analysis of biological cumulative effects. These commenters suggest that the Draft EIS failed to consider the cumulative effects other regional projects might have on the Covered Species. In particular, some commenters questioned the Draft EIS's analysis of the potential for cumulative effects with respect to the proposed Centennial development in Los Angeles County. Commenters also raised specific questions about the Draft EIS's analysis of cumulative effects on the California condor and its critical habitat.

As discussed above, the cumulative effects analysis provided in Chapter 4, Environmental Consequences, in Volume I of this Supplemental Draft EIS has been supplemented with additional information specific to other reasonably foreseeable regional projects in an expanded cumulative effects analysis area, some of which were noted in comments. In general, these projects are described in Section 4.0.4.2, Other Reasonably Foreseeable Actions, and include the Centennial project. Additional regional projects are also specifically considered in the biological resources section (e.g., Newhall Ranch development project, various wind energy projects), as described in Section 4.1.7, Cumulative Effects, in Volume I of this Supplemental Draft EIS. The cumulative effects analysis specific to biological resources considers the effects of the proposed action alternative, in combination with these other reasonably foreseeable projects, on vegetation communities, and wildlife and plant species, including the California condor, and habitat connectivity.

With respect to vegetation, while the Centennial Specific Plan Area and the Covered Lands both support many of the same general types of vegetation (e.g., grasslands, scrub, native and nonnative grasslands, woodlands, chaparrals, and riparian and wetland communities), these broadly defined communities generally occur in all nonmontane and nondesert regions of California. Due to the elevation, geographic, and climate differences between the two areas, there are substantial differences in the relative amounts of some important vegetation communities that reflect important biological differences between the two sites. The lower and drier Centennial Specific Plan Area is dominated by grasslands, with native and nonnative grasslands accounting for about 77% of the cover, whereas grasslands account for only 18% of the cover on the Covered Lands. The montane setting of the Covered Lands is characterized primarily by savannah and woodland vegetation communities. As such, the potential for a combined cumulative effect on vegetation communities from the alternatives and Centennial project is limited. Nevertheless, the analysis in Section 4.1.7, Cumulative Effects, in Volume I of this Supplemental Draft EIS, considers the Centennial project.

With respect to condor flyover habitat, some commenters asserted that the TU MSHCP must distinguish other populated areas over which condors are known to fly from the TMV Project because of the TMV Project's size and location. Section 4.7, Cumulative Effects, in Volume I this

Supplemental Draft EIS acknowledges that while condors have been known to fly over the Centennial project, they do not fly over that area as frequently as they fly over the study area, However, California condors regularly fly over developed areas as part of their home ranges, and for the reasons discussed in Section 4.1.3.3 and 4.1.7.2, Wildlife Movement and Connectivity, in Volume I of the Supplemental Draft EIS, the Service does not believe the TMV Project or other potential development adjacent to the Covered Lands would act as a barrier (either directly or cumulatively) to condor movement, such that it would preclude access to other areas of their historic range. Please refer to Master Response 1G, California Condor Overflight Habitat Connectivity, in Volume II of the Supplemental Draft EIS, for further discussion.

Finally, the cumulative effects analysis in this Supplemental Draft EIS considers potential effects on other Covered Species that would also be affected by other projects, including the Centennial project. See Section 4.1.7.2, Wildlife and Plant Species, in Volume I of the Supplemental Draft EIS.

In sum, consistent with NEPA regulations, this Supplemental Draft EIS has been revised to include additional quantification and detailed information about potential cumulative effects on biological resources. The Service has also clarified its consideration of the past, present, and reasonably foreseeable actions considered in this Supplemental Draft EIS. Where relevant, the analysis of effects has been quantified in terms of the nature of the resource being affected, size, duration, and intensity of effect (where possible), and possible mitigation scenarios. As explained in this Supplemental Draft EIS, due to the substantial open space commitments of each of the alternatives, including the Proposed TU MSHCP Alternative, and the anticipated mitigation and regulatory requirements that would be imposed on them, substantial cumulative effects on biological resources are not expected.

## 12.2.4 Cumulative Effects Analysis for Climate Change

As noted above, some commenters suggested that the Draft EIS failed to adequately consider the potential for future climate change to affect the Covered Species.

The Service agrees that climate change may affect habitat used by the Covered Species, both on and off the Covered Lands, and act as an additional stressor to the Covered Species. In response to comments, the Draft EIS has been supplemented to add specific discussion regarding the potential for climate change to affect each of Covered Species considered in the EIS. This analysis is included in Section 4.9, Climate Change and Greenhouse Gases, and Appendix C, Climate Change Effects Analysis and the TU MSHCP, of this Supplemental Draft EIS.

In addition, the Supplemental Draft EIS includes an analysis of the relationship, to the extent it is understood, between climate change, biological resources, and each alternative. This discussion considers the ability of each alternative to satisfy the management prescriptions recommended by Halpin (1997), including the following:

- selection of redundant reserves,
- selection of reserves that protect habitat diversity,
- management for buffer zone flexibility,
- management for landscape connectivity, and
- management for habitat maintenance.

Refer to Supplemental Master Response 13, Climate Change, for additional information regarding the Supplemental Draft EIS's discussion of the effects of climate change on Covered Species.

## 12.2.5 Cumulative Effects Analysis for Other Regional Projects

Some commenters raised specific questions regarding the sufficiency of the Draft EIS's discussion of other regional projects—both existing and future—with respect to cumulative effects on other environmental resources. These commenters also questioned whether the TMV Project was sufficiently considered in the cumulative analysis.

The approach for analyzing cumulative effects is described in Section 12.2.2, Approach to Cumulative Effects Analysis in the Supplemental Draft EIS, above. As noted in that section, the Supplemental Draft EIS now considers the potential cumulative effects of the alternatives for all resource areas discussed in Chapter 4, Environmental Consequences, in Volume I of this Supplemental Draft EIS. In addition, this Supplemental Draft EIS includes an expanded discussion regarding potential future development in the Tehachapi Uplands, as well as the valley foothill areas, including Frazier Park Estates, Gorman Post Ranch, Centennial, Grapevine, and the Tejon Ranch Commerce Center.

Several commenters also raised questions regarding the adequacy of the Draft EIS's cumulative effects analysis with respect to baseline and consideration of the TMV Project.

The discussion in the Supplemental Draft EIS has been augmented to consider existing development in the region, such as the mountain communities of Pine Mountain Club, Lebec, and Frazier Park, as part of the affected environment. For example, Section 3.7.3, Socioeconomic Conditions, in Volume I of the Supplemental Draft EIS describes current population growth and demographic and socioeconomic data for Census Designated Places to the west of the Covered Lands, which include Lake of the Woods, Lebec, and Frazier Park. Specifically, this Supplemental Draft EIS has been revised to explain that although there was little residential development in Frazier Park between 1990 and 2000, the housing stock in Bear Valley Springs, to the northeast of the Covered Lands, rose by 180% between 1990 and 2000. Similarly, Section 3.8, Transportation, in Volume I of this Supplemental Draft EIS has been revised to describe Kern Regional Transit service to existing communities such as Frazier Park, Lake of the Woods, Pinion Pines, Gorman, and Pine Mountain Club, and provides traffic counts that capture traffic from existing development for locations along I-5, State Route (SR) 138, SR 223, SR 58, and SR-14 near the Covered Lands. Thus, existing development is appropriately accounted for in Supplemental Draft EIS analysis. As noted earlier, Section 4.0.4.2, Other Reasonably Foreseeable Actions, in Volume I of this Supplemental Draft EIS includes a comprehensive listing of the projects considered in the cumulative effects analysis, including Frazier Park Estates and Gorman Post Ranch in the montane area, and Centennial, Grapevine and Tejon Ranch Commerce Center projects in the valley and foothill areas.

With respect to the question regarding whether the TMV Project itself was adequately considered in the EIS analysis, the TMV Project is considered as part of the Proposed TU MSHCP Alternative. Additionally, the TMV Project is considered in the Condor Only HCP Alternative and the Kern County General Plan Buildout Alternative.

## 12.2.6 Holistic Regional Planning

Some commenters suggested that the Draft EIS engaged in inappropriate "piece-mealing", which precludes holistic regional planning by failing to consider other regional projects, such as Centennial or Frazier Park Estates. Other commenters were concerned about Centennial's growth-inducing or other impacts.

"Piece-mealing" or "segmentation" problems arise under NEPA if an agency has planned for a number of related or interdependent actions, but prepares individual EISs or environmental assessments, thereby avoiding considering the effect of the entirety of the undertaking (see *W. Radio*

*Servs Co. v. Glickman,* 123 F.3d 1189, 1194 [9th Cir. 1997] ). Segmentation may subvert NEPA's purposes by committing the agency to future action or foreclosing the consideration of alternatives to the future action.

Neither the Draft EIS nor this Supplemental Draft EIS engage in improper piece-mealing or segmentation of any projects, such as Centennial and Frazier Park Estates. The Federal action under consideration here is approval of the TU MSHCP and issuance of an ITP. Other projects, such as Centennial and Frazier Park Estates, are separate, independent undertakings not covered under the TU MSHCP and must undergo their own environmental review process. A detailed analysis of these projects is beyond the scope of the proposed action being considered by the Service.

Such projects are, however, appropriately considered in the cumulative effects analysis. Despite the suggestion that additional information regarding proposed regional projects must be made available to conduct a thorough cumulative effects analysis, the Service does not have authority over these environmental review processes and cannot control the level of information available. However, as discussed above, to the extent information is available for Centennial and other regional projects, reasonably foreseeable projects are considered and discussed in the cumulative effects analysis for each resource element in this Supplemental Draft EIS in accordance with NEPA's requirements for analysis of cumulative effects.

**Table MR13-1. Comments Addressed in Master Response 13**

| Comment | Commenter |
|---|---|
| I502-9 | Forster, Peggy |
| I502-14 | Forster, Peggy |
| O4-266 | Center for Biological Diversity (Keats, Adam) |
| O4-267 | Center for Biological Diversity (Keats, Adam) |
| O4-268 | Center for Biological Diversity (Keats, Adam) |
| O4-269 | Center for Biological Diversity (Keats, Adam) |
| O4-270 | Center for Biological Diversity (Keats, Adam) |
| O4-271 | Center for Biological Diversity (Keats, Adam) |
| O4-272 | Center for Biological Diversity (Keats, Adam) |
| O4-273 | Center for Biological Diversity (Keats, Adam) |
| O4-274 | Center for Biological Diversity (Keats, Adam) |
| O4-275 | Center for Biological Diversity (Keats, Adam) |
| O4-276 | Center for Biological Diversity (Keats, Adam) |
| O4-277 | Center for Biological Diversity (Keats, Adam) |
| O4-278 | Center for Biological Diversity (Keats, Adam) |
| O4-279 | Center for Biological Diversity (Keats, Adam) |
| O4-280 | Center for Biological Diversity (Keats, Adam) |
| O4-281 | Center for Biological Diversity (Keats, Adam) |
| O4-282 | Center for Biological Diversity (Keats, Adam) |
| O4-283 | Center for Biological Diversity (Keats, Adam) |
| O4-284 | Center for Biological Diversity (Keats, Adam) |
| O4-285 | Center for Biological Diversity (Keats, Adam) |
| O4-286 | Center for Biological Diversity (Keats, Adam) |
| O4-287 | Center for Biological Diversity (Keats, Adam) |
| O4-288 | Center for Biological Diversity (Keats, Adam) |
| O4-289 | Center for Biological Diversity (Keats, Adam) |
| O4-290 | Center for Biological Diversity (Keats, Adam) |
| O4-291 | Center for Biological Diversity (Keats, Adam) |
| O4-292 | Center for Biological Diversity (Keats, Adam) |
| O4-292A | Center for Biological Diversity (Keats, Adam) |
| O4-293 | Center for Biological Diversity (Keats, Adam) |
| O8-6 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-7 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-7A | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-09 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-10 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |

| Comment | Commenter |
|---|---|
| O8-10a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-11 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-11a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-11b | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-12 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-12a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-13 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-13a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-13b | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-14 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-15 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-15a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-16 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-16a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-16b | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-17 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-19 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-21 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-22 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-22a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-23 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-24 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-25 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-26 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-26a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-27 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-27a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-27b | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-28 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-29 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-29a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-29b | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-30 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-31 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-31a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-31b | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-31c | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-32 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-33 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-33a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-34 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-35 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |

| Comment | Commenter |
|---|---|
| O8-35a | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-35b | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O12-4 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-5 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-6 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-7 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-8 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-9 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-10 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-11 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-12 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-20 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-21 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-22 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-23 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-24 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-25 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-26 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-26a | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-27a | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-27b | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-27c | TriCounty Watchdogs (de Leeuw, Jan) |

# 13.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP specific to climate change analysis. Table MR13-1 provides a list of the commenters and a reference to the individual comment, as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The affected environment and environmental baseline should reflect the effects of climate change on the environment. (Response provided in Section 13.2.1, Environmental Setting.)
- The analysis of greenhouse gas (GHG) emissions is inadequate; it should include indirect effects of climate change from the proposed action, it should include Plan-Wide Activities, and it was cursory and inconsistent with the analysis in the Tejon Mountain Village Environmental Impact Report (TMV EIR). (Response provided in Section 13.2.2, Adequacy of Analysis of Indirect Climate Change Effects.)
- The Draft EIS failed to reach a significance conclusion. (Response provided in Section 13.2.3, Significance of Climate Change Effects.)
- Black carbon emissions should be analyzed and mitigation measures should be imposed. (Response provided in Section 13.2.4, Black Carbon.)
- Embodied emissions from manufacturing of concrete should be analyzed. (Response provided in Section 13.2.5, Embodied Emissions.)

- Additional, specific mitigation commitments should be made. (Response provided in Section 13.2.6, Adequacy of Mitigation Measures).
- The proposed action would be inconsistent with Assembly Bill (AB) 32 and Executive Order S-3-05. (Response provided in Section 13.2.7, Consistency of Proposed Action with Implementation of AB 32 and Executive Order S-3-05.)
- The effect of climate change on biological resources, including ecosystem processes, biodiversity, specific biota, such as amphibians, butterflies, alpine species, and plants, diseases and vectors, and wildlife habitat connectivity, should be reflected in the analysis. (Response provided in Section 13.2.8, Analysis of Climate Change Effects on Biological Resources.)
- The effect of climate change on air quality should be reflected in the analysis. (Response provided in Section 13.2.9, Climate Change Effects on Air Quality.)
- The effect of climate change on water resources should be reflected in the analysis. (Response provided in Section 13.2.10, Climate Change Effects on Water Resources.)
- Analysis of compliance with Federal Endangered Species Act (ESA) requirements regarding conservation and recovery should account for climate change. (Response provided in Section 13.2.11, Climate Change Analysis Required by Endangered Species Act.)

# 13.2 Responses to Substantive Comments

## 13.2.1 Environmental Setting

Various commenters raised questions regarding the adequacy of the Draft EIS's discussion of the environmental setting with respect to climate change. Commenters questioned the discussion of the "affected environment," as well as the Draft EIS's treatment of the baseline with respect to climate change effects, and suggested that the Draft EIS failed to account for background climate change conditions. The following describes the consideration of climate change in the description of the affected environment and baseline conditions in the Supplemental Draft EIS.

### 13.2.1.1 Affected Environment

The discussion of the affected environment with respect to climate change has been updated and is presented in Section 3.9, Climate Change and Greenhouse Gases, in Volume I of the Supplemental Draft EIS based on comments and new information available since issuance of the Draft EIS. Specifically, the regulatory setting has been updated and discussions have been updated regarding the primary sources of GHGs, California's role in emissions of GHGs, alternative global warming scenarios, and the potential effects of climate change, including the cumulative nature of GHGs. More information has been provided in Section 4.9, Climate Change and Greenhouse Gases, in the Supplemental Draft EIS on the potential effects of climate change on various environmental resources, including air quality, water resources, and species.

With respect to specific regulatory documents mentioned by commenters, since the Draft EIS was issued, the Council on Environmental Quality (CEQ) issued its *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions* (Draft NEPA Guidance) (Council on Environmental Quality 2010). The public comment period on the Draft NEPA Guidance closed on May 19, 2010. Although the Draft NEPA Guidance is not yet effective or applicable, the Draft EIS has been revised to comply with its recommendations (Section 4.9.1.1, Regulatory Setting, in Volume I of this Supplemental Draft EIS). The EIS's approach to discussing the affected environment is also consistent with the Draft NEPA Guidance recommendation of describing reasonably foreseeable

effects on the environment from climate change in order to frame the analysis of how a proposed action would or would not interact with these effects (Council on Environmental Quality 2010, p.7). Additionally, Department of the Interior (DOI) Order No. 3289, which replaces Order No. 3226 cited by one commenter, provides internal DOI direction to consider risks associated with climate change, and makes DOI organizational changes, including the establishment of a Climate Change Response Council to develop an integrated climate change strategy for resources managed by the DOI. Although this directive is not specifically related to private lands, the TU MSHCP provides a preservation and adaptive management strategy that accounts for climate change, and the Draft EIS has been revised to consider the effects of climate change consistent with the overall intent of this order, as further discussed below.

Some commenters requested that the discussion of the affected environment include numerical estimates of projected climate change impacts on California. In particular, one commenter cited specific predictions of the consequences of climate change from the California Climate Change Center report Our Changing Climate, Assessing the Risks to California (2006), including temperature, sea level rise, heat wave days and heat-related deaths, critical dry years, ozone formation, electricity demand, wildfire risk, and forest yields. The same commenter requests that the EIS supplement its description of global warming impacts with data from the recently released report by the Committee on Environment and Natural Resources called The Scientific Assessment of the Effects of Global Change on the United States (National Science and Technology Council 2008) (referred to here as The Scientific Assessment).

The commenter is correct that California faces certain challenges associated with climate change that are not universally present, including sea level rise and increased vulnerability to wildfires, and more information has been added in this Supplemental Draft EIS to describe the range of projections under different warming scenarios, consistent with the information presented by the commenter (Section 3.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS). As recognized by the sources cited by the commenter, a single set of numerical estimates has not been established, and the precise nature of the effects from climate change are not fully known and depend on whether the warming scenario is high, medium, or low (California Climate Change Center 2006, p. 15). This Supplemental Draft EIS recognizes these scenarios.

One commenter suggested that the EIS should be supplemented with data from The Scientific Assessment. The commenter does not identify any specific information that should be included from this report. The Service is aware of this report, and it is included in the administrative record.

One commenter notes that scientists model effects based on different emission scenarios, and describes predictions under some of these modeled scenarios. This commenter cites California Climate Change Center (2008) and Kelley and Goulden (2008) as raising concerns about how climate change is affecting California and how this affects plants, animals, and species. The commenter cites Hayhoe et al. (2004) for support of a prediction that, under a low-emissions scenario, heat waves and extreme heat in Los Angeles will quadruple in frequency and heat-related mortality will increase two to three times, alpine and subalpine forests will be reduced by 50 to 75%, and Sierra Nevada snowpack will be reduced by 30 to 70%. The commenter also cites Hayhoe et al. (2004) regarding predictions under a high-emissions scenario, such as heat waves of six to eight times greater frequency, with heat-related mortality increasing five to seven times, alpine and subalpine forest reduction of 75 to 90%, and Sierra Nevada snowpack reduction of 74 to 90%, and effects on runoff and streamflow that, in combination with projected declines in winter precipitation, could disrupt California's water rights system.

The commenter is correct that studies indicate that climate change is affecting California, although neither California Climate Change Center (2008) nor Kelley and Goulden (2008), as cited by the commenter, describe these changes as "severe" or "irreversible" as suggested by the commenter. Kelley and Goulden (2008) recognize that several other factors—including regional heat island

effects or long-term climate functions—may play a role in changing plant distribution. The discussion in Kelley and Goulden (2008) is limited to a study in the Santa Rosa Mountains on the southwest boundary of the Coachella Valley, which is geographically distinct from the Covered Lands.

The commenter is also correct that scientists predict the potential effects of climate change based on different emissions scenarios, including the scenarios described by Hayhoe et al. (2004), cited by the commenter. It should also be noted that many researchers, including Cayan et al. (2006), cited by the commenter, predict the more extreme effects depicted by Hayhoe et al. (2004) can be avoided by requiring emissions reductions that will set us on a lower emissions pathway. California has begun an emissions reduction path through AB 32, for example, which requires that GHG emissions be reduced to year 1990 levels.

As mentioned above, this Supplemental Draft EIS has been revised to include a discussion of various potential warming scenarios and includes many of the statistics cited in these comments. In addition, the EIS has been revised to include a discussion of the potential effects of climate change in California and how they may affect biological resources, water resources, and air quality.

#### 13.2.1.2 Baseline

Some commenters questioned the environmental baseline in the Draft EIS, against which climate change effects from the proposed action are measured.

Revisions to this Supplemental Draft EIS have been made to clarify that the baseline against which the alternatives are compared is the No Action Alternative. The No Action Alternative is compared to existing conditions. Revisions have also been made to clarify that emissions generated under existing conditions occur as a result of Existing Ranch Uses currently occurring on the Covered Lands, which are assumed to occur and result in similar level of emissions under the No Action Alternative. While Existing Ranch Uses do generate some level of GHG emissions, the types of activities currently occurring on the Covered Lands involve only a very small amount of GHG emissions, which are considered to be negligible. Therefore, consistent with NEPA and as discussed above, the analysis measures the potential GHG emissions of all alternatives against a baseline that assumes essentially only very minor existing emissions, thereby providing a worst-case analysis of potential GHG effects.

One commenter suggested that the appropriate baseline against which to compare the proposed action's potential GHG effects was a future scenario that reflects the effects that climate change would have on species and other resources. As discussed above, this Supplemental Draft EIS discusses the projected effects climate change could have on various environmental resources, including air quality, water resources, and species. Section 4.9, Climate Change and Greenhouse Gases, in Volume I of the Supplemental Draft EIS includes discussions of the effect climate changes has on these resources, and the interplay of these relationships with respect to the alternatives. In addition, this Supplemental Draft EIS contains a discussion regarding the potential interplay between climate change and the biological resources affected by the alternatives (Appendix C, Climate Change Effects and the TU MSHCP, of this Supplemental Draft EIS).

### 13.2.2 Adequacy of Analysis of Indirect Climate Change Effects

Several commenters questioned the adequacy of the Draft EIS's analysis of indirect GHG emissions that may result from the proposed action, including whether indirect GHG emissions were quantified at all. One commenter also questioned the propriety of not quantifying GHG emissions that could result from Plan-Wide Activities. Another commenter questioned whether the emissions calculations are accurate because they differ from those in the TMV EIR (Kern County 2009).

Although the Draft NEPA Guidance is not final, consistent with its proposed recommendations, this Supplemental Draft EIS has been revised to quantify indirect GHG emissions that could result from the proposed action and other action alternatives (Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS). This analysis considers the potential emissions of GHGs that would result from construction and operation of the Commercial and Residential Development Activities that could occur under each alternative. Specifically, the emissions inventory includes construction emissions associated with on- and off-road construction vehicle and equipment use; and operational emissions associated with electricity generation, on-road vehicle use, natural gas and hearth combustion, and water supply. This Supplemental Draft EIS has been updated to reflect the most up-to-date information available relating to emissions calculations.

This analysis is consistent with the Draft NEPA Guidance. The Draft NEPA Guidance recommends that a NEPA document discuss the potential effects of a proposed action by:

- quantifying cumulative emissions over the life of the project,
- discussing measures to reduce GHG emissions, including consideration of reasonable alternatives, and
- qualitatively discussing the link between such GHG emissions and climate change.

With respect to Plan-Wide Activities, this Supplemental Draft EIS has been revised to clarify that Plan-Wide Activities do not represent a substantial change from current conditions or the No Action Alternative under any of the action alternatives. For these reasons, GHG emissions were not modeled for these activities.

With respect to the different GHG emissions calculations between the Draft EIS and TMV EIR, as noted by a commenter, these differences were due to the fact that the Draft EIS and TMV EIR used different model assumptions to calculate GHG emissions (e.g., whereas the TMV EIR, which was released after publication of the Draft EIS, used project-specific inputs, the Draft EIS used general construction assumptions regarding phasing, equipment types and quantities, and mix of energy sources, which was appropriate given the program level of the Draft EIS document). However, this Supplemental Draft EIS has been revised to use assumptions consistent with the TMV Project and the most updated emissions model.

## 13.2.3 Significance of Climate Change Effects

One commenter stated the Draft EIS "fails to recognize the significance of GHG emissions under NEPA" and cites *Ctr. For Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 508 F.3d 550 (9th Cir. 2007) as requiring the evaluation of the cumulative significance of GHG emissions on climate change under NEPA.

In *CBD v. NHTSA*, cited by commenters, the court concluded that the environmental assessment prepared by the National Highway Traffic Safety Administration (NHTSA) was inadequate because of NHTSA's failure to justify its cursory conclusion that a proposed fuel efficiency standard would not have any significant climate change effects and, therefore, an EIS was not required. The court was considering "significance" in the context of the need to prepare an EIS, not in terms of drawing significance conclusions. No Federal thresholds of significance have been developed with respect to climate change impacts, and the Service has not developed any guidance on this topic.

Nevertheless, this Supplemental Draft EIS has been revised to clarify that GHG emissions from the proposed action have the potential to emit GHG emissions that would contribute cumulatively to climate change. Given this contribution, and due in part to the uncertainties and changing legal requirements associated with GHG emissions, the analysis determines that the cumulative effect of

the proposed action and alternatives on GHG emissions could be substantial (Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS).

As mentioned above, this Supplemental Draft EIS has been revised to include quantification of the potential GHG emissions from Commercial and Residential Development Activities for each alternative, and a discussion of each alternative's contribution to cumulative climate change effects. Thus, consistent with NEPA requirements, a full disclosure of the magnitude of the effects is provided and an accurate comparison among alternatives is made.

## 13.2.4 Black Carbon

Some commenters believe the EIS should include an analysis of black carbon emissions. Black carbon, which is a component of particulate matter (PM), can be emitted through natural processes (wildfires) or can be anthropogenic in origin (fossil fuel combustion, biomass burning). Commenters pointed out that black carbon is a short-lived pollutant that contributes to climate change. Commenters noted the regional nature of black carbon and stated that it is associated with a number of negative health impacts. According to commenters, black carbon provides an important opportunity for mitigation of climate change effects. These comments cited a number of articles and reports on black carbon, which are discussed below.

Currently, no state or Federal laws regulate black carbon. In particular, neither AB 32 nor the AB 32 Scoping Plan discuss black carbon or call for its reduction. The effect black carbon has on climate change is complex; scientific consensus on the effect black carbon emissions have on global temperature has not been reached. Unlike GHGs, which are pollutants that are emitted in gaseous form, black carbon is emitted in condensed (particulate) form. The effect black carbon emissions have on climate change is typically expressed in units of radiative forcing. The comments accurately describe black carbon's atmospheric effects, all of which can lead to positive radiative forcing. However, it should be noted that the study cited by commenters also notes that black carbon can lead to negative radiative forcing (Ramanthan and Carmichael 2008, p. 222). As with the primary identified GHGs, black carbon potentially contributes to global climate change. However, the commenter's statement that black carbon is the second greatest contributor to climate change after carbon dioxide ($CO_2$) is not put into context with the rest of the cited reference. As explained in the reference, developing nations in the tropics and East Asia are the major source regions of black carbon emissions (Ramanthan and Carmichael 2008, p. 221). According to the Intergovernmental Panel on Climate Change (IPCC), global black carbon emissions are likely to have only 3 to 21% of the climate change effect of $CO_2$ emissions[1] (2007, pp. 131–132). In addition, the commenter's statement that the global warming potential of black carbon is 760 times greater than that of $CO_2$ is not consistent with the cited reference (Reddy and Boucher 2007, p. 1), which states the global warming potential of black carbon for different regions ranges from 374 to 677 with a global mean of 480.

The United States is not a major contributor of black carbon. Several studies, including those cited by commenters, note that developing nations in the tropics and East Asia are the major source regions for black carbon emissions (Ramanthan and Carmichael 2008, pp. 221–227). For example, while East and South Asia are responsible for 53% of global black carbon emissions, North America contributes only about 10% to the global black carbon burden (with the U.S. responsible for only 6.1% of fossil-fuel soot) (Reddy and Boucher 2007, p. 4–5; Jacobson 2007, p. 4; Hadley et al. 2007, p. 1, indicating more than 75% of black carbon found in the spring over the west coast of the U.S. originates in Asia). Most black carbon emissions are the result of open biomass burning and residential biofuel and coal combustion; additional sources include transportation, industrial, and

[1] The radiative forcing associated with $CO_2$ is approximately 1.6 W/m$^2$, while the radiative forcing of BC is +0.20 ± 0.15 W m$^{-2}$ (+0.05 to 0.35 W/m$^2$).

power generation activities (Bond 2007, pp. 30–31). Black carbon emissions in the U.S. have decreased since 1925, despite an increase in coal use, as a result of improved combustion technologies and PM controls (Bond 2007, p. 30). Moreover, it should be noted that with respect to the Covered Lands, the California Air Resources Board conducted the California Regional Particulate Air Quality Study to characterize PM in the San Joaquin Valley and determined that black carbon constituted only about 5% of the PM in the region during the period studied (Held et al. 2004, p. 3,698). Thus, black carbon represents a small component of the region's PM.

Two sources are cited to support statements that black carbon has a number of negative health effects that are additional to the health effects associated with PM: Mortality Risk Associated with Short-Term Exposure to Traffic Particles and Sulfates (Maynard et al. 2007) and Testimony for the Hearing on Black Carbon and Climate Change (U.S. House of Representatives Committee on Oversight and Reform, 2007) . However, these references do not support this assertion. Maynard et al. (2007) uses black carbon as a surrogate for traffic particles emitted primarily by combustion engines and by brake and road wear. The article attributes an observed increase in mortality rate to exposure to traffic particulates as a whole, including black carbon—not solely to black carbon (Maynard et al. 2007, p. 751). Similarly, the testimony on black carbon attributes increases in chronic bronchitis, blood pressure, and infant mortality due to pneumonia to exposure to emissions—both gases and particulates—resulting from combusting coal or biomass for cooking; these health effects are not attributed exclusively to black carbon (U.S. House of Representatives House Committee on Oversight and Reform 2007, p. 9).

Some commenters suggested that reducing black emissions offers important climate change mitigation opportunities. In the atmosphere, black carbon is part of the complex mixture of condensed phase material referred to as *particulate matter*. Control technology that is designed to reduce PM concentrations will also reduce black carbon. Section 4.3, Air Quality, in Volume I of this Supplemental Draft EIS clarifies that a variety of measures to reduce PM emissions would be required by the local jurisdiction at the time an individual development project is approved. This Supplemental Draft EIS has been revised to clarify that Kern County's approval of the TMV Project supports this conclusion. For example, the local approval process required implementation of several mitigation measures to reduce PM emissions, such as requiring construction equipment exhaust controls, and prohibiting wood-burning fireplaces and an overall commitment to fully offsetting $PM_{10}$ emissions in the San Joaquin Valley Air Basin, (Appendix J, TMV Specific and Community Plan Mitigation Monitoring and Reporting Program, of this Supplemental Draft EIS).

The study cited by commenters, Global and Regional Climate Changes Due to Black Carbon (Ramanthan and Carmichael 2008), concludes that certain black carbon control measures can reduce short-term climate change trends, but focuses on potential black carbon control opportunities in Asia that could reduce black carbon associated with biofuel cooking (Ramanthan and Carmichael 2008, p. 226). Such measures are not relevant in the U.S., where biofuel cooking is not widespread. Moreover, another study not cited by commenters, Can Reducing Black Carbon Emissions Counteract Global Warming? (Bond and Sun 2005, p. 5,924) calls into question the efficacy of black carbon mitigation. According to this study, reducing $CO_2$, rather than black carbon, is often the most cost-effective method of reducing climate change effects, because anthropogenic $CO_2$ is mostly emitted by industrialized nations and causes most long-term climate change impacts (Bond and Sun 2005, p. 5,925). This report also concludes that black carbon mitigation may not affect climate change (Bond and Sun 2005, p. 5,925). Finally, with respect to black carbon controls available in the United States, according to the Worldwatch Institute's State of the World: Into a Warming World 2009 report, diesel particulate filters can eliminate over 90% of black carbon particulate emissions from diesel vehicles, while other flow-through or partial particulate filter technologies can eliminate 40 to 90% of black carbon emissions from diesel vehicles (Worldwatch 2009,p. 57). These controls are very common on diesel vehicles in the U.S., and, in fact, are required

for many types of equipment that would be used in the TMV Project, as shown in the TMV EIR (Kern County 2009, p. 7-7).

Revisions to Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS, also clarify that a variety of measures to reduce $CO_2$ emissions would also be required at the time an individual development project is approved. As indicated in this section, Kern County's approval of the TMV Project supports this conclusion. For example, the local approval process included several mitigation measures to reduce $CO_2$ emissions, such as energy efficiency commitments and encouragement of alternative vehicle use and an overall commitment to reduce GHG emissions by at least 29% relative to business as usual (Appendix J, TMV Specific and Community Plan Mitigation Monitoring and Reporting Program, of this Supplemental Draft EIS).

## 13.2.5 Embodied Emissions

Some commenters expressed concern that the Draft EIS does not consider the effects associated with the manufacture of concrete, and suggested that there are methods for analyzing the lifecycle or embodied emissions of concrete manufacture, as discussed in Reducing California's Greenhouse Gases through Product Life Cycle Optimization (Environmental Energy Technologies Division 2005).

Embodied emissions result from a product's production, use, and end of life (product lifecycle). The commenter is correct that the EIS does not estimate embodied emissions associated with concrete production. Estimating embodied emissions requires methodology that is far more uncertain and speculative than for other classes of emissions. Multiple protocols and guidance documents counsel against including embodied emissions in environmental documents. In particular, looking to California for guidance, in the context of the 2010 amendments to the California Environmental Quality Act (CEQA) Guidelines, both the California Natural Resources Agency (CNRA) and the Governor's Office of Planning and Research (OPR) specifically declined to recommend including lifecycle emissions estimates in the GHG analysis in CEQA documents. According to CNRA, no regulatory definition of *lifecycle* exists, and analyzing lifecycle emissions may go beyond the meaning of "indirect effects" and be inconsistent with CEQA (California Natural Resources Agency 2009, pp. 71–72.) CNRA specifically points to emissions associated with the manufacturing of building materials to illustrate an analysis that would be beyond the intended reach of CEQA. Similarly, in its Transmittal of the Governor's Office of Planning and Research's Proposed Senate Bill (SB) 97 CEQA Guidelines Amendments, OPR explained it was suggesting updates to the CEQA Guidelines to avoid an implication that lifecycle analysis is required under CEQA (Governor's Office of Planning and Research 2009, p. 5; see also San Joaquin Valley Air Pollution Control District 2009, p. 175 [for the purposes of CEQA, emissions from raw materials acquisition and manufacturing processes should not be included in the emissions inventory for the project]; California Air Pollution Control Officers Association 2008, p.65 ["The full life-cycle of GHG emissions from construction activities is not accounted for in the modeling tools available, and the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level"]).

Thus, the EIS does not analyze lifecycle emissions generally and embodied emissions associated with manufacture of concrete specifically.

## 13.2.6 Adequacy of Mitigation Measures

Commenters asserted that the Draft EIS failed to provide feasible mitigation measures and alternatives for GHG emissions, and requested the inclusion of a variety of mitigation measures to reduce GHG emissions associated with the proposed action, including the use of renewable energy for electricity generation and preferential contracting with clean truck companies.

This Supplemental Draft EIS has been revised to clarify that potential GHG emissions from individual proposed development projects are regulated at the local level by local air pollution control districts. The discussion in Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS clarifies that the implementation of mitigation measures would be required by the appropriate district and local jurisdiction during individual project approval. For example, Kern County's approval of the TMV Project included several mitigation measures to reduce GHG emissions. This Supplemental Draft EIS has been revised to include compliance with GHG-reducing requirements (Section 4.9.3.3, Mitigation Measures, in Volume I of this Supplemental Draft EIS). Examples of the types of measures that would be required during project-level approvals are provided in Appendix J, TMV Specific and Community Plan Mitigation Monitoring and Reporting Program, of this Supplemental Draft EIS. These measures would apply to Commercial and Residential Development Activities for all the alternatives at the time an individual project is proposed, and would include use of alternative fuels for construction equipment, as suggested by commenters, as well as measures that would reduce GHGs associated with operations, such as energy efficiency and green building commitments, compliance with any relevant GHG reduction plans adopted by the local jurisdiction, and measures to encourage use of alternative modes of transportation and incorporation of renewable energy systems.

Thus, this Supplemental Draft EIS has been revised to include a mitigation measure to comply with applicable Federal, state, and local air quality requirements, including any applicable GHG requirements (Section 4.9.3.3, Mitigation Measures, in Volume I of this Supplemental Draft EIS) and recognizes that detailed mitigation would be developed during the entitlement process for Commercial and Residential Development Activities under Kern County's jurisdiction. For example, Kern County would be responsible for implementing any applicable CEQA guidance or local grading or building permits, and would be the appropriate entity to incorporate avoidance and minimization measures with respect to GHG emissions into local approvals (Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS). Further, the EIS explains that the planned development nature of all the action alternatives (except the Kern County General Plan Buildout Alternative), including the Proposed TU MSHCP Alternative would create opportunities for innovative approaches to sustainability and notes that the Service anticipates the applicant would incorporate measures such as energy- and water-reduction features, requirements for minimizing construction materials and solid waste, and air quality emission reductions that would result in GHG reduction co-benefits (Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS).

As discussed in Master Response 10, TMV Project and EIR, and Development-Related Effects Analysis, the TMV EIR provides support for the efficacy of this EIS mitigation measure, and includes mitigation commitments requested by commenters, including renewable power provisions (Kern County 2009, pp. 4.3-128 to 4.3-135) and construction equipment and bid specification requirements (Kern County 2009, p. 4.3-117).

Additionally, with respect to addressing the effects of climate change, the Supplemental Draft EIS clarifies that species-specific conservation measures would be implemented that would reduce effects from climate change under the Proposed TU MSHCP, Condor Only HCP, and CCH Avoidance MSHCP Alternatives. For example, measures to address changed circumstances from climate change, resulting from drought and fire, would be implemented through an adaptive management program. It is also anticipated that the Kern County General Plan Buildout Alternative would likely include similar conservation measures; however, compliance with applicable regulations, including the ESA would occur on a project-by-project basis.

## 13.2.7 Consistency of Proposed Action with Implementation of AB 32 and Executive Order S-3-05

Some commenters state concern that the TU MSHCP threatens the successful implementation of the California Global Warming Solutions Act (AB 32, 2006) and Executive Order S-3-05, which require reductions of current levels of emissions in California. According to these comments, a revised EIS must be prepared that adequately analyzes the proposed action's cumulative contribution to climate change.

As indicated above, this Supplemental Draft EIS has been revised to include an analysis of the potential GHG emissions for Commercial and Residential Development Activities under each alternative. Executive Order S-3-05 and AB 32 are discussed in Section 4.9.1.1, Regulatory Setting, and in Appendix C, Climate Change Effects and the TU MSHCP, of this Supplemental Draft EIS.

Executive Order S-3-05, which preceded enactment of AB 32, sets forth a series of emissions reduction targets for California: achieving year 2000 GHG levels by 2010, year 1990 levels by 2020, and an 80% reduction below year 1990 levels by 2050. The executive order is not a legal mandate (*Lockyer v. City and County of San Francisco*, 33 Cal. 4th 1055, 1068 (Cal. 2004) ("the legislative power is the power to enact statutes, the executive power is the power to execute or enforce statutes").

AB 32, enacted in 2006, requires California's GHG emissions to return to 1990 levels by 2020. Under AB 32, the California Air Resources Board (CARB) is the lead agency for implementing its emission-reduction mandates. Pursuant to AB 32, CARB approved the Climate Change Scoping Plan: A Framework for Change (Scoping Plan), which establishes an overall framework for achieving AB 32 requirements. The Scoping Plan applies to nearly all sectors of the California economy, and includes measures that will affect commercial and residential development within the state.

CARB is in the process of implementing the Scoping Plan. As indicated in Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS, all the alternatives would be required to comply with applicable regulations, including AB 32 and the Scoping Plan. All Commercial and Residential Development Activities under any of these alternatives would be subject to these requirements and would need to comply with any relevant requirements of the Scoping Plan or AB 32. The alternatives would not be inconsistent with the Scoping Plan or interfere with implementation of any other element of AB 32.

As mentioned previously, Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS indicate that development projects facilitated by the proposed action, would be required to comply with applicable Federal, state, and local laws and policies to address potential effects associated with GHG emissions. For example, Kern County's approval of the TMV Project, which represents the majority of development under most of the alternatives, was approved by the Kern County Board of Supervisors in 2009. The TMV EIR (Kern County 2009), includes an assessment of the project's potential climate change impacts, and a commitment to reduce GHG emissions from the project consistent with AB 32's mandates (Appendix J, TMV Specific and Community Plan Mitigation Monitoring and Reporting Program, of this Supplemental Draft EIS).

## 13.2.8 Analysis of Climate Change Effects on Biological Resources

A commenter suggested that the Draft EIS should adequately consider the effects of climate change on the Covered Species and how these effects might interact with effects from the proposed action.

The commenter is correct that climate change can have effects on biological resources, such as alteration of precipitation and temperature patterns that in turn cause species to seek different habitat types or try to adapt to climatic or habitat changes. The commenter is also correct that these alterations can negatively affect species that are unable to adapt to new conditions. In response to comments, these potential effects—including potential effects on the Covered Species—are analyzed for each alternative in Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS. This discussion includes an analysis of the extent to which each alternative satisfies the management prescriptive for habitat maintenance in response to climate change identified by Halpin (1997). In addition, Appendix C, Climate Change Effects and the TU MSHCP, of this Supplemental Draft EIS includes a detailed analysis of the relative vulnerability to climate change of the Covered Species, concluding that some Covered Species are likely to be more sensitive to climate change, others are expected to be less sensitive, and some are likely to be insensitive to it.

As discussed in this Supplemental Draft EIS, the exact contours of the relationship between climate change and biological resources is not well understood. Moreover, a direct link between emissions from a proposed action and specific species effects cannot be made. This has been recognized by the DOI: "The requisite causal connections cannot be made between the emissions of GHGs from a proposed agency action and specific localized climate change as it impacts listed species or critical habitat. Given the nature of the complex and independent processes active in the atmosphere and the ocean acting on GHGs, the causal link simply cannot currently be made between emissions from a proposed action and specific effects on a listed species or its critical habitat" (U.S. Department of the Interior 2008, p. 6).[2] The EIS recognizes the potential for global climate change to affect Covered Species. This Supplemental Draft EIS includes a detailed analysis of this relationship, to the extent that it is understood, and analyzes how the various alternatives would respond to the potential for climate change to affect Covered Species.

As discussed in this Supplemental Draft EIS, climate change effects on biological resources would occur with or without implementation of any of the alternatives. Although the No Action Alternative would preserve up to 106,317 acres of the Covered Lands, under this alternative, funding would not necessarily be made available to implement other adaptive management strategies; thus, Halpin's (1997) recommendations would not be met. Under the Proposed TU MSHCP and CCH Avoidance MSHCP Alternatives, more than 129,000 acres of the Covered Lands (and, due to the Ranchwide Agreement, 90% of Tejon Ranch) would be preserved, thereby protecting the vast majority of communities expected to be most affected by climate change; design features would be included that would provide for flexible buffers; landscape connectivity would be ensured; features would be included to reduce effects of stressors on the Covered Species and their habitat, thereby counteracting stresses from climate change; and provisions would be included to allow a flexible response to climate change effects such as drought and wildfires. Thus, these alternatives would satisfy Halpin's (1997) recommendations. The Condor Only HCP Alternatives would generally

[2] The recognition of gaps in the scientific understanding of the relationship between climate change and effects on species is consistent with the Ninth Circuit's holding in *Center for Biological Diversity v. Kempthorne*, 588 F.3d 701 (2009). The Ninth Circuit rejected the Center for Biological Diversity's (CBD's) claim that the Service violated the Marine Mammal Protection Act and NEPA by failing to account for the effects of oil and gas activities in the context of a warming climate. The court emphasized that CBD only offered evidence of general effects of climate change on polar bears, but did not synthesize how these effects would interact with the oil and gas activities permitted by the proposed regulations. (*Center for Biological Diversity v. Kempthorne*, 588 F.3d 701, 711–712).

respond to risks from climate change to the same degree; however, no provisions would be included to respond to climate change effects on species other than the condor. Finally, the Kern County General Plan Buildout Alternative may not provide redundant reserves, may not include effective buffers, would result in impaired habitat connectivity, and would not include a holistic adaptive management regime; this alternative would not satisfy Halpin's (1997) recommendations.

The Supplemental Draft EIS's discussion of climate change, and its approach to the potential effects of climate change on Covered Species, complies with all standards cited by the commenter, including *Massachusetts v. EPA*, DOI Order No. 3226, and *CBD v. NHTSA*. Specifically, although not addressing climate change in the context of NEPA and environmental review requirements, the commenter is correct that, in *Massachusetts v. EPA*, the U.S. Supreme Court recognized that the "harms associated with climate change are serious and well recognized" (*Mass. v. EPA*, 127 S. Ct. 1438, 1455 (2007)). Consistent with this opinion, this Supplemental Draft EIS recognizes the effects that climate change is having—including on the Covered Species, to the extent this relationship is understood—and analyzes the proposed action's potential cumulative contribution to it.

Similarly, the commenter cites DOI Order No. 3226, which was superseded by Order No. 3289, as noted above, for the premise that DOI agencies must consider climate change effects when undertaking long-range planning exercises. Although this order applies to DOI-managed lands and the quoted statement does not refer to private activities on private lands, the EIS thoroughly considers the climate change effects of all alternatives.

Finally, in *CBD v. NHTSA* (508, F.3d 508 (2007)), the court concluded that the environmental assessment prepared by NHTSA was inadequate because of NHTSA's failure to justify its cursory conclusion that a proposed fuel efficiency standard would not have any significant climate change effects and, therefore, an EIS was not required. Although *CBD v. NHTSA* does speak to the need for EISs to include an analysis of the climate change effects of a proposed Federal action, it does not need to include a discussion of the effects of climate change on the general environment. Consistent with *CBD v. NHTSA*, as discussed above, the EIS discusses the potential climate change effects of the proposed action and compares these potential effects against a baseline that assumes only negligible existing emissions, and to those of the No Action Alternative.

The following sub-sections address potential climate change effects on ecosystem processes; biodiversity; specific biota, including amphibians, butterflies, alpine species, and plants; diseases and vectors; and wildlife habitat connectivity.

### 13.2.8.1 Climate Change Effects on Ecosystem Processes

The commenter cited the United States Global Change Research Program (USGCRP)(2009) to support the statement that climate change has affected a range of ecosystem processes, leading to shifts in species ranges and timing of migration. According to the commenter, threats to species and their ecosystems include fire, insect pests, disease pathogens, and invasive weed species. The commenter also asserts that arid southwest desert and dryland areas—such as the Covered Lands—are likely to become hotter and drier, feeding a cycle of invasive species, drought, and wildfire.

Revisions to this Supplemental Draft EIS include additional information about the effects that climate change has already had and is predicted to have on biological resources, including its potential to increase risks such as drought/fire, insect pests, disease pathogens, and invasive species.

USGCRP (2009) synthesizes a variety of scientific assessments and recently published research on climate change, and projects future climate change based on these analyses. The commenter is correct that USGCRP (2009) finds that climate change has affected various ecosystems and is likely to continue to do so in the future. Although this Supplemental Draft EIS relies on other sources to

describe the potential effects of climate change on biological resources, these sources are generally consistent with USGCRP (2009). In addition, it should be noted that, USGCRP (2009, pp. 8, 10, 21, 25, 68) recognizes significant uncertainty with respect to future effects of climate change.

As discussed above, revisions presented in this Supplemental Draft EIS include an analysis of how each alternative would be affected by and address potential effects of climate change on the relevant biological resources.

### 13.2.8.2 Climate Change Threats to Biodiversity

Commenters suggested that climate change poses a major threat to biodiversity and cite various sources to support assertions regarding the role of climate change in the extinction of species and loss of biodiversity.

The commenters are correct that climate change poses a risk to species. As discussed in this Supplemental Draft EIS, and expanded upon in Appendix C, Climate Change Effects and the TU MSHCP, of this Supplemental Draft EIS, although some of the Covered Species demonstrate characteristics that increase their relative vulnerability to climate change, the precise way in which climate change will affect Covered Species is not well-understood and cannot be quantified, nor can the relationship of such potential effects to potential effects from the proposed action. The EIS recognizes that climate change is an important challenge with respect to biodiversity and analyzes how each alternative would respond to it in revisions presented in Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS. While all the alternatives would preserve, to varying degrees, the majority of the Covered Lands in open space, the Proposed TU MSHCP Alternative addresses 27 Covered Species and, incorporates additional protections for changed circumstances to address climate change effects, as well as adaptive management terms for multiple species. Thus, the Proposed TU MSHCP Alternative meets the management prescription identified by Halpin (1997) to address climate changes. Similar features are included in the Condor Only HCP Alternative, although this alternative would not include management of other Covered Species to respond to climate change. The CCH Avoidance MSHCP Alternative, like the Proposed TU MSHCP Alternative would meet all of the Halpin (1997) management prescriptions. In contrast, the Kern County General Plan Buildout Alternative may not provide redundant reserves, effective buffers, habitat connectivity, or a holistic adaptive management regime.

These commenters cite many sources to support the general idea that climate change poses substantial threats to species. As discussed above, this Supplemental Draft EIS recognizes this threat and includes additional information to address this topic. In addition, while most of these sources do discuss threats to biological resources posed by climate change, they do not relate specifically to California, the Covered Lands, or the Covered Species. In addition, many of these sources recognize the uncertainty of the relationship between climate change and biological resources. For example, the commenters cite the International Union for Conservation of Nature (IUCN) (2009) and Mayhew et al. (2007) for the proposition that climate change is a leading threat to California's and the world's biological diversity, including with respect to extinction. IUCN (2009), which is a comprehensive information source on the global conservation status of the world's plant and animal species, does suggest that climate change will play an important role in species extinction in the 21st century (International Union for Conservation of Nature (IUCN 2009, p. 77). However, the report also notes that some species are more susceptible to the effects of climate change than others due to their life history and their ecological, behavioral, physiological, and genetic traits (IUCN 2009, p. 78). In addition, IUCN (2009) recognizes other threats to species that will likely contribute to extinction, such as habitat destruction, competition from invasive species, predation, and human use as food and medicine. With the exception of noting that California has a particular concentration of threatened conifer species, IUCN (2009) does not include any specific analyses regarding California, the Covered Lands, or Covered Species.

Mayhew et al. (2007) analyzed fossil records to determine whether a link exists between global biodiversity, defined as the richness of families and genera, and low-latitude sea surface temperatures. According to Mayhew et al. (2007), their results are the first clear evidence that global climate change may explain substantial variation in the fossil record, and that the climate record may help estimate future effects on biodiversity; their findings "may have implications for extinction and biodiversity change under future climate warming" (Mayhew et al. 2007, p. 47). However, Mayhew et al. (2007) also qualify their data and its applicability for estimating future effects of climate change on biodiversity, and indicate that a clear cause-and-effect relationship has not been established. In addition, the authors state that their data cannot be used to predict changes over short time scales (i.e., the next 90 years), and that even at the scale of geologic periods, the data become variable as the periods are analyzed individually, and statistically significant relationships are not discernible. The paper does not say that climate change will become one of the major drivers of extinction in the 21st century, nor does it relate specifically to California, the Covered Lands, or Covered Species.

The commenter cites Thomas et al. (2004) and IPCC (2007) for predictions of percentage of species that would go extinct under different climate change scenarios. The authors conclude that, under high-, medium- and low-emissions scenarios, 35%, 24%, and 18%, respectively, of the world's species would be committed to extinction by 2050. However, the authors themselves highlight the uncertainties associated with their research: "Many unknowns remain in projecting extinctions, and the values provided here should not be taken as precise predictions. Analyses need to be repeated for larger samples of regions and taxa, and the selection of climate change scenarios need to be standardized" (Thomas et al. 2004, p. 147). Moreover, this analysis does not distinguish between extinctions arising from habitat destruction versus climatic unsuitability, and was limited to regions in Mexico, Queensland, South Africa, Europe, Australia, Amazonia, Brazil, and South Africa—none of which directly apply to the Covered Lands. The commenter accurately cites IPCC (2007) for the projection that 20 to 30% of plant and animal species have an increased risk of extinction due to climate change. However, these projections do not specifically relate to or provide species-specific information about any Covered Species. The commenter also states that the Service has recognized that climate change poses an ongoing threat to wildlife that can lead to extinction and cites three *Federal Register* (FR) notices regarding the listing of species under the ESA. Two of the listings—71 FR 26852 and 74 FR 1937—are for National Marine Fisheries Service's (NMFS) final rules on species listing, the first for elkhorn and staghorn corals, and the second for black abalone. These listings do not relate to the Covered Lands or the Covered Species. The third listing, 73 FR 28212, constitutes a Service listing that draws a link between risk to species and climate change. However, this listing is for the polar bear. As with the coral and abalone listings discussed above, no connection exists between the polar bear and the Covered Lands or potential effects from the proposed action. In addition, in conjunction with issuing the polar bear listing, DOI also issued a rule under Section 4(d) of the ESA providing that incidental take of polar bears resulting from activities outside their current range—including climate change—is not prohibited; this rule was finalized on December 16, 2008 (73 FR 76249). The current Secretary of the Interior, Ken Salazar, declined to rescind this rule, stating: "It is currently not possible to directly link the emission of greenhouse gases from a specific power plant, etc., to effects on specific bears or bear populations. This direct "connect the dots" standard is required under the ESA and court rulings. Therefore, the Service's policy guidance to its field staff is not to require such consultation. Pending further review and analysis, DOI does not believe that a project-by-project ESA review of proposed actions that have the potential to increase GHG emissions, regardless of where they occur or how much they contribute to global GHG emissions, is the appropriate tool for addressing climate change impacts. A comprehensive approach is needed in order to protect the polar bear and other species that are impacted by climate change" (U.S. Fish and Wildlife Service 2009).

The commenter cites Parmesan and Galbraith (2004) and Walther et al. (2005) to support their assertions that scientists predict three categories of impacts from climate change:

- earlier timing of spring events,
- extension of species range poleward/upward in elevation, and
- decline in species adapted to cold weather/increase in those adapted to warm weather.

This Supplemental Draft EIS recognizes the potential for climate change to have these effects, and cites to the finding of these authors. However, none of these studies suggest any connection between the species they analyze and those that may be present on the Covered Lands.

### 13.2.8.3 Climate Change Effects on Amphibians

According to one commenter, some of the species most susceptible to climate change include amphibians, such as the Tehachapi slender salamander, yellow-blotched salamander, and western spadefoot toad. These comments cite IUCN (2008) and IUCN (2009) to support this assertion, and note that a recent study linked extinction of amphibian species in tropical highland forests in Central and South America to climate change as a result of creating ideal conditions for growth of chytrid fungus, a disease that kills frogs. According to these comments, the golden toad, which is endemic to the same tropical mountain forests, was also driven to extinction from climate change. The comments assert that amphibian extinctions from Monteverde represent one of the largest vertebrate extinction events of the last 100 years and are a harbinger of the effects climate change will have on species around the world.

The commenter is correct that the Tehachapi slender salamander, and amphibians in general, have several characteristics of species likely to be sensitive to climate change. This Supplemental Draft EIS includes additional information regarding the effects of climate change on the Tehachapi slender salamander and other amphibian species (Section 4.9, Climate Change and Greenhouse Gases, and Section 5.2 of Appendix C, Climate Change Effects and the TU MSHCP, of this Supplemental Draft EIS).

With respect to the sources cited by the commenter, IUCN (2008, p. 4) is a short article that suggests up to 52% of amphibians are susceptible to climate change. However, the article states that the greatest climate change susceptibility occurs in Mesoamerica, northwestern South America, southern Brazil and its neighboring countries, and a large expanse from east to central to southern Africa (International Union for Conservation of Nature 2008, p. 8). All of these areas are geographically distinct from the Covered Lands. Similarly, though IUCN (2009, p. 80) suggests that up to 52% of amphibians may be susceptible to climate change, it identifies the same areas as IUCN (2008) as the most likely to see climate change effects occur with respect to amphibians. In addition, IUCN (2009, p. 23) states that habitat loss and degradation, and pollution—not climate change—are the most common threats to amphibians.

The commenter cites a study of harlequin frog—a species endemic to the American tropics — extinctions conducted in Central and South America (Costa Rica, in particular), and an article that discusses the results of this study, as well as some other research on amphibian extinctions (Pounds et al. 2006, Eilperin 2006). However, this research is limited to Central and South America, which present extremely different climates than is present on the Covered Lands.

The commenter suggests that these reports apply to amphibians that may be affected by the proposed action, such as the Tehachapi slender salamander, the yellow-blotched salamander, and the western spadefoot toad. However, neither of these reports discuss potential effects of climate change on these species, or any other amphibians that are Covered Species.[3]

[3] It should be noted that, with respect to the Tehachapi slender salamander, the Service has recognized that models do not currently exist that permit prediction of how climate change will affect the Tehachapi slender salamander's range. In its Notice of 90-Day Petition Finding and Initiation of Status Review, the Service stated: “We believe that climate change models that are currently available are not yet capable of making meaningful predictions of climate

### 13.2.8.4 Climate Change Effects on Butterflies

A commenter addressed the potential effects of climate change on butterflies. The commenter stated that checkerspot butterflies, including the Edith checkerspot, Quino checkerspot, Bay checkerspot, and Taylor checkerspot, are clear examples of species severely affected by climate change. The commenter cited Parmesan and Galbraith (2004), for the proposition that as a result of climate change, the host plant for the Edith's checkerspot butterfly develops earlier in the spring, resulting in the hatching of caterpillars on plants that have completed their lifecycle and dried up. The commenter stated that more populations have been lost in the southern portion of their range than in the northern portion, resulting in a net shift of range northward and upward in elevation. The commenter noted that these same changes have affected the other checkerspot species. Finally, the commenter cited Krajick (2004) and suggested that climate change affects butterfly species in other ways as well, including as a result of the northward expansion of the tree line, which can impede dispersal, fragment habitat, and increase mortality as a result of butterfly collisions with the trees.

Although butterflies are not among the Covered Species, this Supplemental Draft EIS has been revised with additional information regarding the effects of climate change on insects, which includes butterflies (Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS). As discussed in that section, none of these butterflies are Covered Species, nor are the Covered Lands within their range or within an area covered by these studies.

### 13.2.8.5 Climate Change Effects on Alpine Species

Some comments raised particular questions regarding the ability of alpine species to adapt to climate change effects. In particular, these comments discussed climate change effects on the pika and on alpine plants. The comments cited Krajick (2004), and stated that alpine species like the pika are unable to shift their ranges as warming temperatures and advancing tree lines, competitors, and predators affect their mountain habitat; and alpine plants, which have little ability to shift their range, may be at the most risk from climate change. Comments also cited Beever et al. (2003) and Grayson (2005) for further discussion regarding the decline of the American pika. One commenter noted that American pika populations at 7 of 25 localities in the Great Basin have disappeared in recent years, and cited studies indicating that the average elevation of surviving populations of pika have increased.

Although pika is not a Covered Species, this Supplemental Draft EIS has been revised with additional information regarding the effects of climate change on mammals generally (Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS). As discussed in that section, the Covered Lands do not represent an alpine environment, nor is a pika a Covered Species. The studies cited by the commenter relate to vulnerability of alpine ecosystems in Spain, Greece, Australia, and New Zealand (Krajick 2004), and the Great Basin (Beever et al. 2003; Grayson 2005), which are geographically distinct from the Covered Lands.

### 13.2.8.6 Climate Change Effects on Plants

Several comments also related to climate change effects on plants. A commenter referenced a study discussed by Morse et al. (1995) of 15,148 North American vascular plants that found 7 to 11% of

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change for specific, local areas such as the range of the Tehachapi slender salamander. We do not have models to predict how the climate in the range of the Tehachapi slender salamander will change, and we do not know how any change may alter the range of the species … we do not have information on past and future weather patterns within the specific range of the species to conclude that the species may be threatened by climate change" (74 FR 18340).

species could be entirely out of their climate envelopes with a 3°C warming, the lower limit of the temperature increase predicted by the IPCC. According to the commenter, at the upper bound of predicted climate change, this percentage could be 25%–40%. The commenter stated that, in contrast, about 90 plant species are believed to have become extinct in North America in the last 200 years.

Although Morse et al. (1995) did not address any of the Covered Species, this Supplemental Draft EIS recognizes that climate change may affect various vegetation communities in a variety of ways, including as a result of changes in the length of the growing season, tolerances to temperature regimes, changes in precipitation, and more frequent and intense wildfires (Section 4.9, Climate Change and Greenhouse Gases, and Appendix C, Climate Change Effects and the TU MSHCP, of this Supplemental Draft EIS).

### 13.2.8.7 Climate Change Effects on Disease and Vectors

One commenter suggested that climate change can alter conditions for diseases and their vectors in a way that allows the incidence of species disease to increase and spread. The commenter cites Harvell et al. (2002) to support their statement that climate change will exacerbate plant disease by altering the biological processes of the pathogen, host, or disease-spreading organism. The commenter states that the most severe and least predictable disease outbreaks will likely occur when climate change alters host and pathogen geographic ranges. The commenter further cites Harvell et al. (2002) to support its assertion that climate change will influence wildlife disease by affecting free-living, intermediate, or vector stages of pathogens. According to the commenter, many vector-transmitted diseases are currently climate-limited; human diseases (e.g., malaria, Lyme disease, tick-borne encephalitis, yellow fever, plague, dengue fever) have expanded ranges into higher latitudes as temperatures warm.

In response to comments, additional information has been added to this Supplemental Draft EIS, Section 4.9, Climate Change and Greenhouse Gases, and Appendix C, Climate Change Effects and the TU MSHCP, of this Supplemental Draft EIS, regarding the effects of climate change on the spread of vectors. As discussed in the appendix, climate change could result in the increased introduction of invasive species, including diseases and parasites, which could in turn affect public health and/or species.

Although Harvell et al. (2002, p. 2,158) do predict that climate change will result in increased disease abundance and distribution, the paper also discusses other factors that can affect the range and abundance of plant disease. In addition, Harvell et al. (2002, pp. 2,161) state that some wildlife vectors perform better in cooler conditions, and discuss other factors that may affect the range and abundance of disease, including increases in drug-resistant strains, pollution, and changes in land use and vegetation. Nevertheless, the commenter is correct that climate change may increase the spread of diseases and their vectors, which is recognized in this Supplemental Draft EIS.

### 13.2.8.8 Importance of Wildlife Linkages

According to one commenter, climate change will elevate the importance of wildlife linkages to connect species populations or provide for migratory corridors for species affected by climate change. The commenter cites Servheen et al. (2007), Halpin (1997), and South Coast Wildlands (2006) for the premise that a key function of wildlife corridors is to buffer the negative effect of climate change on wildlife through facilitating migration and genetic flow. The commenter notes that Tejon Ranch is part of a landscape connection that is integral to the interconnectedness of California's biographic regions and their wildlife, and asserts that the importance of wildlife connection or linkage must be analyzed in the context of its elevated importance to provide for wildlife migration due to climate change.

The Service agrees that, if climate change places strains on species, the movement ability offered by wildlife linkages may become increasingly important. The commenter is correct that the Tehachapi Mountains represent an important habitat linkage, which is discussed in Section 3.1.5, Wildlife Habitat Linkages and Corridors, in Volume I of this Supplemental Draft EIS. In addition, Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS has been updated to include a specific analysis of each alternative and its ability to meet the Halpin (1997) recommendation for designing reserves that include linkages for species that address climate change effects.

## 13.2.9 Climate Change Effects on Air Quality

One commenter raised questions regarding the adequacy of the Draft EIS's discussion of climate change effects on air quality.

The commenter is correct that climate change may result in increased air quality problems. For example, climate change may result in warmer temperatures that could increase the potential for ozone formation. This in turn could increase the risk of respiratory problems associated with deteriorating air quality.

Additional information regarding the potential effects of climate change on air quality has been presented in Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS. As indicated in the revisions, higher temperatures resulting from climate change may facilitate air pollution formation—in particular ground-level ozone—and result in increased wildfires, or cause heat-related public health effects. However, although some studies indicate a relationship between air quality and climate change, the precise details of this relationship are unclear, and no tools exist to link a particular action's air quality effects to a rise in global temperature.

## 13.2.10 Climate Change Effects on Water Resources

A commenter raised questions about the potential for climate change to interact with effects from the proposed action on water resources.

The commenter is correct that climate change is expected to have an effect on water resources in California. In response to comments, and to supplement the discussion of the affected environment, Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS presents additional information regarding the potential effects of climate change on water resources. As this information demonstrates, the precise extent to which climate change effects on water resources would affect the Covered Lands cannot be predicted with certainty.

Approval of the TU MSHCP and implementation of the habitat conservation plan would not itself substantially affect water supply. Additionally, the TU MSHCP would include a number of provisions to ensure flexibility of its species-protection requirements in light of potential effects on water from climate change, including a required response and imposition of preventive measures to be taken should climate change create new risks to Covered Species, as a result of increased drought (Section 8, Changed Circumstances and Plan Implementation, in the TU MSHCP). These requirements would be incorporated into any incidental take permit (ITP) issued by the Service.

## 13.2.11 Climate Change Analysis Required by Endangered Species Act

One commenter asserted that the Draft EIS and Draft TU MSHCP failed to account for the ESA's required analysis of conservation and recovery of endangered species through the ESA Section 10 process, and cites *Nat'l Wildlife Fed'n v. NMFS*, 481 F.3d 1224 ( 9th Cir. 2007) for support. The commenter further cites *NRDC v. Kempthorne*, 506 F.Supp.2d 322 (E.D. Cal. 2007) and *Pac. Coast Fed'n of Fishermen's Ass'n v. Gutierrez*, 606 F.Supp.2d 1122 (E.D. Cal. 2008) as support for its assertion that courts have repeatedly ruled that an agency's failure to address the effects of climate change in analyzing effects to threatened and endangered species violates the ESA. According to the commenter, the risks that climate change poses to ecosystems covered by the TU MSHCP and the environment in general must be fully analyzed and accounted for in the EIS.

With respect to the *National Wildlife Federation* case and the ESA Section 7 standard related to survival and recovery, please see Master Response 8, Regulatory Considerations. With respect to the other two cases, *NRDC* and *Pac. Coast Fed'n of Fishermen's Ass'n*, these companion ESA Section 7 cases relate to aquatic species where the agency failed to consider how climate change could affect river hydrology and water supply (506 F.Supp.2d at 367–370; 606 F.Supp.2d at 1183–84). In both cases, the courts determined that the ESA Section 7 biological opinions completely failed to mention climate change, making it impossible to determine whether the agencies simply ignored the data presented, or considered it and then appropriately dismissed it because it was too speculative (506 F.Supp.2d at 369; 606 F.Supp.2d at 1,184). The *NRDC* court also emphasized that the Biological Opinion included no assurances that appropriate measures would be put in place if climate change created negative effects on water supply (506 F.Supp.2d at 370).

As discussed above, additional information related to climate change effects on the Covered Species is presented in Section 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS in responses to comments on the Draft EIS. Although the cases cited in the comment are specific to ESA Section 7 compliance and not to ESA Section 10 or NEPA compliance, the cases presented by commenters were considered in these revisions. The EIS and TU MSHCP account for these potential effects, and include provisions to protect Covered Species from potential adverse effects resulting from climate change on the Covered Lands. As mentioned above, the Proposed TU MSHCP Alternative, in particular, would require the preservation of the vast majority of the Covered Lands, includes changed circumstances provisions to address climate change effects, and incorporates an adaptive management regime for the 27 Covered Species.

**Table MR14-1. Comments Addressed in Master Response 14**

| Comment | Commenter |
|---|---|
| I73-6a | Balbona, G. |
| I1658-1c | Willer, Benjamin |
| O4-301 | Center for Biological Diversity (Keats, Adam) |
| O4-302 | Center for Biological Diversity (Keats, Adam) |
| O4-303 | Center for Biological Diversity (Keats, Adam) |
| O4-304 | Center for Biological Diversity (Keats, Adam) |
| O4-305 | Center for Biological Diversity (Keats, Adam) |
| O4-306 | Center for Biological Diversity (Keats, Adam) |
| O4-307 | Center for Biological Diversity (Keats, Adam) |
| O4-308 | Center for Biological Diversity (Keats, Adam) |
| O4-309 | Center for Biological Diversity (Keats, Adam) |
| O4-310 | Center for Biological Diversity (Keats, Adam) |
| O4-311 | Center for Biological Diversity (Keats, Adam) |
| O4-312 | Center for Biological Diversity (Keats, Adam) |
| O4-313 | Center for Biological Diversity (Keats, Adam) |
| O4-314 | Center for Biological Diversity (Keats, Adam) |
| O4-315 | Center for Biological Diversity (Keats, Adam) |
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| O4-323 | Center for Biological Diversity (Keats, Adam) |
| O4-324 | Center for Biological Diversity (Keats, Adam) |
| O4-325 | Center for Biological Diversity (Keats, Adam) |
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| O4-329 | Center for Biological Diversity (Keats, Adam) |
| O4-330 | Center for Biological Diversity (Keats, Adam) |
| O4-331 | Center for Biological Diversity (Keats, Adam) |
| O4-419 | Center for Biological Diversity (Keats, Adam) |
| O4-420 | Center for Biological Diversity (Keats, Adam) |
| O4-421 | Center for Biological Diversity (Keats, Adam) |

| Comment | Commenter |
|---|---|
| O4-422 | Center for Biological Diversity (Keats, Adam) |
| O4-423 | Center for Biological Diversity (Keats, Adam) |
| O4-425 | Center for Biological Diversity (Keats, Adam) |
| O4-426 | Center for Biological Diversity (Keats, Adam) |
| O4-427 | Center for Biological Diversity (Keats, Adam) |
| O4-428 | Center for Biological Diversity (Keats, Adam) |
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| O4-430 | Center for Biological Diversity (Keats, Adam) |
| O4-431 | Center for Biological Diversity (Keats, Adam) |
| O4-432 | Center for Biological Diversity (Keats, Adam) |
| O4-433 | Center for Biological Diversity (Keats, Adam) |
| O4-434 | Center for Biological Diversity (Keats, Adam) |

# 14.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP related to cultural resources. Table MR14-1 provides a list of the commenters and a reference to the individual comments, as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- Native American resources that will be destroyed by development have been forgotten and should be recognized or considered. The cultural resources sections of the Draft EIS are critically flawed in that they neither identify nor protect Chumash, Kitanemuk, and Yowlumne Native American settlements, sacred sites, and burial grounds, in violation of the National Historic Preservation Act (NHPA). Finally, the Kawaiisu tribe has been kept from being listed on the National Registry of Native Americans because of Tejon Ranchcorp (TRC), and TRC has refused tribal representatives access to the cultural sites on the ranch. (Response provided in Section 14.2.1, Adequacy of the Cultural Resources Identification and Analysis Process.)
- The entirety of the Covered Lands should have been surveyed; more extensive cultural resource surveys should have been reviewed to identify cultural resources on the ranch, including a 2004 archaeological survey of the TMV Project site; and in compliance with the NHPA, the U.S. Fish and Wildlife Service (Service) should have made a good faith effort to collect information, through contact with Native American tribes or relevant agencies. (Response provided in Section 14.2.1, Adequacy of the Cultural Resources Identification and Analysis Process and Section 14.2.2, Compliance with National Historic Preservation Act.)
- The Draft EIS wrongly assumes that compliance with state, local, and Federal law in the future is adequate mitigation; rather, additional measures, such as an agreement between the Service and the State Historic Preservation Office (SHPO), must be taken to mitigate effects on cultural resources. (Response provided in Section 14.2.3, State Historic Preservation Office Agreement and Mitigation Requirements.)
- Commenters identified specific cultural resources that should have been considered and addressed in the Draft EIS and suggest specific information sources that Service should review. (Response provided in Section 14.2.4, Specific Cultural Resources Sites and Information Sources.)

# 14.2 Responses to Substantive Comments

## 14.2.1 Adequacy of the Cultural Resources Identification and Analysis Process

Comments suggested that the Draft EIS cultural resources analysis is flawed in that it did not sufficiently describe or seek information related to cultural resources, that the entirety of the Covered Lands should be surveyed for cultural resources, that analysis based on ground disturbance is inadequate, and that what is unknown cannot be protected. One commenter stated that the cultural resources section of the TU MSHCP fails to reference the relevant tribes, that TRC has denied the Kawaiisu tribe listing on the National Registry of Native Americans, and that TRC has historically blocked access to the property by most likely descendants or for research in the vicinity of Castac Lake. Another comment states that the cultural resources section in the Tejon Mountain Village Environmental Impact Report (TMV EIR) (Kern County 2009) is also flawed, and that it is not an adequate solution to use that analysis.

Section 3.5, Cultural Resources, in Volume I of this Supplemental Draft EIS provides a revised discussion of the cultural resources setting that includes additional information regarding the ethnography (tribal background, including relevant information on the tribes noted in the comments) and the history (early European settlement) of the Covered Lands. Additionally, the Draft EIS was revised to include cultural resource survey information for all known Disturbance Areas, including both the TMV Planning Area and the Lebec/Existing Headquarters Area, as discussed in Section 3.5.2, Results of the Records Search, Field Surveys, and Native American Consultation, in Volume I of this Supplemental Draft EIS. The rest of the Covered Lands—116,523 acres under the Proposed TU MSHCP Alternative—would remain in open space and be subject to the Ranchwide Agreement requirement to protect conservation values, which include cultural resources. In addition, a mitigation measure has been added in this Supplemental Draft EIS, which requires preactivity surveys in open space areas and development of avoidance and minimization measures at the time such disturbance is proposed (Section 4.5.3.2, Mitigation Measures, in Volume I of this Supplemental Draft EIS).

Given the size of the Covered Lands and the extensive portion that would be left largely undisturbed if the proposed action is implemented, surveying the entire Covered Lands for cultural resources would not be reasonable and is not required by the National Environmental Policy Act (NEPA) (*Nat'l Indian Youth Council v. Andrus*, 501 F. Supp. 649, 672-673 (1980)[upholding an environmental impact statement [EIS] that contained a description of the nature and type of cultural resources that would be expected to be found on the approximately 40,000-acre leasehold, but did not include surveys of the entire leasehold; the EIS also described ongoing controls such as site-specific surveys, inventorying, mitigation, and clearance prior to any particular ground-disturbing activity]). Thus, it would not be reasonable or useful under NEPA to require further surveys where lands would be conserved, where future actions would be defined at the project approval level, or where future actions are uncertain.

Additionally, as mentioned above, to protect cultural resources, the EIS includes mitigation requiring that activities in the Covered Lands be evaluated consistent with Federal, state, and local requirements at the time that development or other ground disturbance is proposed (Section 4.5.3.2, Mitigation Measures, in Volume I of this Supplemental Draft EIS). Under the NHPA or the California Environmental Quality Act (CEQA), site-specific minimization measures would be identified at that time, including preconstruction surveys, resource evaluation, consultation with the SHPO and Native American Tribes, as applicable, and application of avoidance and minimization measures on a case-by-case basis to ensure that potential effects are addressed. As mentioned above, this Supplemental Draft EIS also requires pre-ground-disturbance surveys in open space as

further mitigation for potential effects associated with Plan-Wide Activities. The Service recognizes the concern stated by one commenter that measures provided for in the EIS would not protect unknown cultural resources. However, the Service believes the mitigation measures described in Section 4.5.3.2, Mitigation Measures, in Volume I of this Supplemental Draft EIS requiring compliance with Federal, state, and local cultural resource protection laws as well as pre-ground-disturbance surveys for open space areas would adequately allow for the identification, avoidance, and mitigation, as necessary, of effects on cultural resources. Review of the TMV EIR (Kern County 2009) supports the finding that the mitigation measure is sufficient with respect to development. For example, for the TMV Project, Kern County required identification of all potential cultural resources that could be effected by the project and applied 44 mitigation measures, resulting in requirements to preserve in-place known resources through avoidance or capping (for one site, Phase III data recovery may be necessary) and staking and monitoring during grubbing and topsoil grading. In the event of the inadvertent discovery of resources, there are provisions to stop work and follow the steps and procedures specified in California Health and Safety Code Section 7050.5. California Public Resources Code Section 5097.98 in the event of accidental discovery of human remains. (Appendix J, Specific and Community Plan Mitigation Monitoring and Reporting Program).

With respect to the comment that the TU MSHCP contains no reference to the relevant tribes, the Service notes that the Federal Endangered Species Act (ESA) does not require a habitat conservation plan (HCP) to include a discussion of cultural resources; therefore, cultural resources are not described in the TU MSHCP. The required contents of an HCP are set forth in 50 Code of Federal Regulations (CFR) 17.22 and discussed in Master Response 8, Regulatory Considerations. However, cultural resources, including Native American Resources, are discussed in this Supplemental Draft EIS, as required under NEPA.

Comments also stated that TRC has historically blocked access to the property by most likely descendants or for research in the vicinity of Castac Lake. Another comment alleged it is TRC's fault that the Kawaiisu Indians are not listed on the National Registry of Native Americans. These comments do not pertain to the sufficiency of the Draft EIS, and the Service has no authority over actions by TRC that may or may not have occurred in the past.

One commenter stated that the cultural resources section in the TMV EIR is flawed, and that it is not an adequate solution to the shortfalls of the Draft EIS to use that analysis. As discussed in Master Response 10, TMV Project and EIR, and Development-Related Effects Analysis, the adequacy of the TMV EIR is not before the Service. The Draft EIS contains an independent analysis of effects on cultural resources. The EIS has been revised to clarify that cultural resources surveys completed for the TMV Project, as well as subsequent surveys completed by the applicant relevant to the Lebec/Existing Headquarters Area. These surveys are representative of the best available information documenting known cultural resources within that area. The Draft EIS has also been revised to clearly indicate that areas outside this area have not previously been surveyed.

## 14.2.2 Compliance with National Historic Preservation Act

One commenter stated that the Draft EIS must be revised to comply with the NHPA. This commenter also describes the requirements under the NHPA.

The Service agrees that approval of the TU MSHCP and issuance of an incidental take permit (ITP) is an undertaking requiring completion of Section 106 consultation pursuant to the NHPA prior to issuance of an ITP. The commenter correctly references the regulations at 40 CFR 800 *et seq*., which contain the requirements under Section 106 of the NHPA. The requirements of the NHPA are separate from NEPA. The NHPA does not require that Section 106 consultation be completed prior to preparation of an EIS (36 CFR 800.1(c)). Here, NHPA consultation must be completed prior to the

issuance of the ITP (the Federal undertaking). Completing the NEPA process does not constitute final agency approval of the TU MSHCP.

The Draft EIS has been updated to provide the most current information about the status of consultation activities pursuant to Section 106 of the NHPA. As described in Section 3.5.2, Results of the Records Search, Field Surveys, and Native American Consultation, in Volume I of this Supplemental Draft EIS, cultural resources surveys have been completed, and consultation with the Native American Heritage Commission and the SHPO is underway. To this end, the Service provided the SHPO with the cultural resources surveys that have been completed for the TMV Planning Area and Lebec / Existing Headquarters Area. One commenter also stated that the cultural resources analysis in the TMV EIR would not satisfy the NHPA because the TMV Project was not presented in that document as a Federal undertaking. The commenter is correct. As noted above, compliance with the NHPA is a separate process completed by a Federal agency for a Federal undertaking.

The Service has independently reviewed the cultural resource surveys completed in support of the TMV EIR. The Service has also reviewed additional surveys conducted by the applicant for the Lebec/Existing Headquarters Area, as well as an area considered for use as a potential communication tower site, and determined those surveys to represent the most current characterization of known cultural resources in the TMV Planning Area and Lebec/Existing Headquarters Area. As mentioned above, the Service has submitted these surveys and initiated consultation pursuant to the NHPA with the SHPO.

## 14.2.3 State Historic Preservation Office Agreement and Mitigation Requirements

One commenter suggested that the Service must enter into an agreement with the SHPO to adequately mitigate the effects of the TU MSHCP and ITP on cultural resources. In addition, a commenter suggested the Draft EIS wrongly assumes that compliance with state, local, and Federal law in the future is adequate mitigation.

As discussed above, the Service has entered into consultation with the SHPO with respect to potential effects on cultural resources and this process is ongoing. The commenter is correct in stating that the Service and the SHPO would enter into an agreement to mitigate adverse effects on cultural resources, should any be identified through this process.

The potential effects associated of the proposed action are considered to be indirect effects, in that they are related to future development that may be facilitated by issuance of an ITP by the Service. The required mitigation of these effects is largely dependent on approvals and permits required by other Federal, local, and state authorities pursuant to their project-specific approval process.

As clarified in Section 4.5, Cultural Resources, in Volume I of this Supplemental Draft EIS, mitigation would include compliance with applicable Federal, state, and local regulations. For example, Kern County's approval of the TMV Project includes extensive site analysis and mitigation to protect against any potential cultural resources effects. Thorough site surveys were required and 44 mitigation measures were developed to reduce the effects of the TMV Project on cultural resources (Appendix J, Specific and Community Plan Mitigation Monitoring and Reporting Program). As stated above, the CEQA process does not replace the consultation requirement for the Service under NHPA, nor does it undermine or contradict the mitigation measures in the EIS. Additionally, the revised mitigation measures require that all cultural resources eligible for the NRHP as identified in the Cultural Resources Reports (W&S Consultants 2004, 2005, and 2006; ASM Affiliates 2010) be protected in place, or if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary.

This Supplemental Draft EIS has also been revised to provide adequate protection of cultural resources from effects of future ground disturbance associated with Plan-Wide Activities. Specifically, the Draft EIS has been revised to require preactivity surveys for Plan-Wide Activities that cause ground disturbance in areas that have not been previously surveyed. The mitigation measure calls for site surveys and development of specific measures consistent with Federal and state requirements at the time such disturbance is proposed (Section 4.5.3.2, Mitigation Measures, in Volume I of this Supplemental Draft EIS).

For additional information regarding the adequacy of compliance with existing laws for mitigation under NEPA, see Master Response 8, Regulatory Considerations.

## 14.2.4 Specific Cultural Resources Sites and Information Sources

Commenters identified specific cultural resources that should have been considered and addressed in the Draft EIS. Figure 14-1 has been provided to show the location of the resources identified in the comments. (Note that the figure depicts only selected cultural resource sites in relation to the Covered Lands; the exact locations of many of the cultural resources on the Covered Lands remain confidential per state law.)

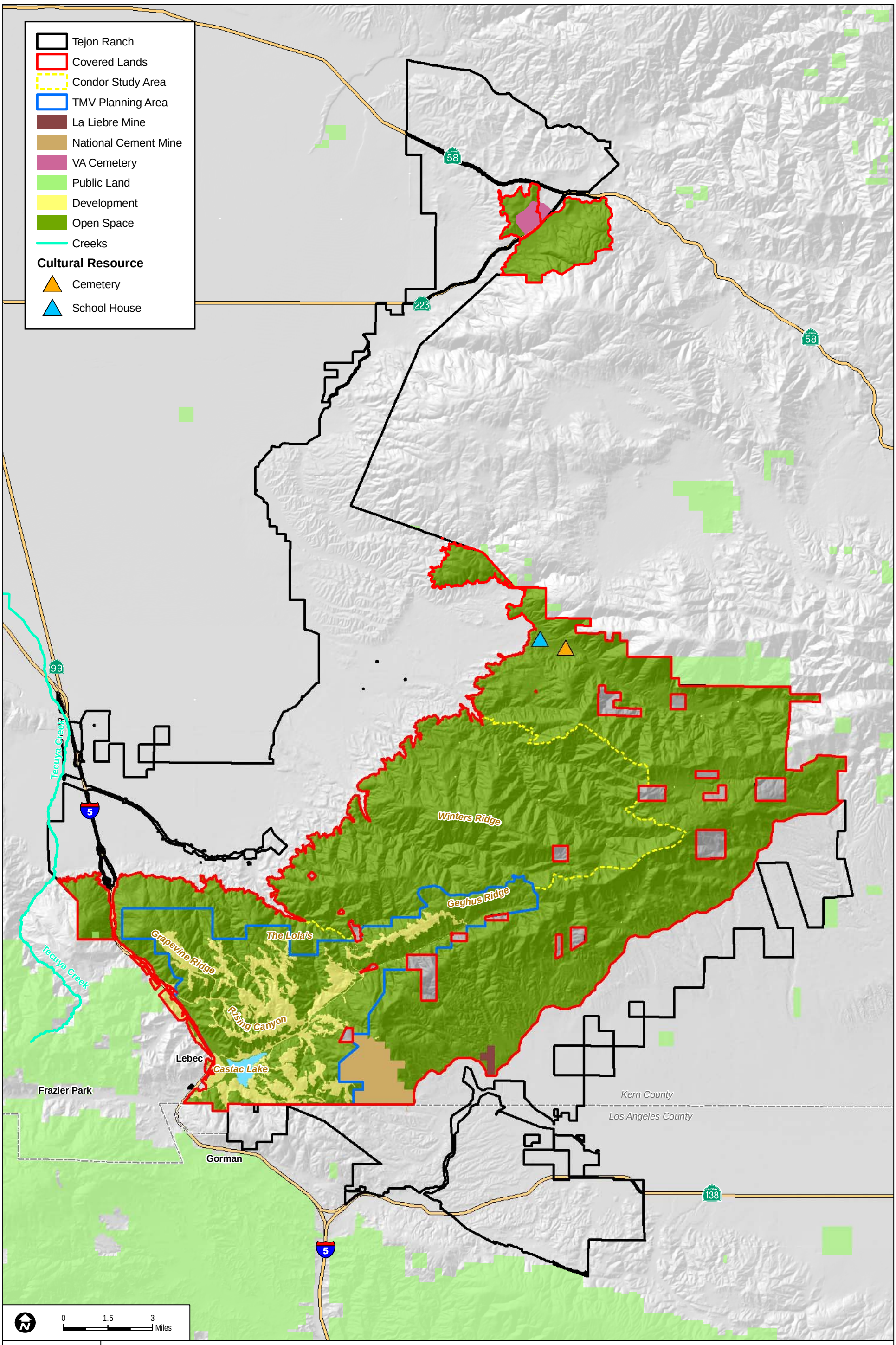
### 14.2.4.1 School House

Commenters identified an Indian schoolhouse located in Tejon Canyon as a cultural resource that should have been addressed in the Draft EIS . As shown in Figure 14-1, the schoolhouse is located in area that would be preserved as open space and subject to Plan-Wide Activities under the proposed action. As noted in the revisions to Section 4.5, Cultural Resources, in Volume I of this Supplemental Draft EIS, Plan-Wide Activities would be limited to 200 acres under the TU MSHCP and would largely consist of activities with low potential to affect cultural resources. Furthermore, Plan-Wide Activities would be subject to best management practices (BMPs) and use restrictions required pursuant to the Ranchwide Agreement (as currently set forth in the Interim Ranchwide Management Plan (RWMP)), which would require preservation of existing conservation values, including cultural resources. Additionally, mitigation measure has been added to this Supplemental Draft EIS to require preconstruction surveys for areas subject to ground disturbance in previously unsurveyed areas. Plan-Wide Activities would also be subject to applicable Federal, state, and local regulations. It is anticipated that prior to issuance of any required permits, the local jurisdiction would require demonstration that potential effects on cultural resources would be avoided or minimized.

As noted above in Section 14.2.1, Adequacy of the Cultural Resources Identification and Analysis Process, detailed surveys of the entire Covered Lands for cultural resources would not be reasonable or useful under NEPA. Surveys would not be required where lands would be conserved, where future actions would be defined at the project approval level, or where future actions are uncertain.

### 14.2.4.2 Kashtiq Village at Castac Lake

Comments identified a Kashtiq village that was believed to be located at the edge of Castac Lake, and described tribes that lived in the area. Commenters stated that a new engineered lake at Tejon Ranch exceeds the original boundaries and that the village is now under water. Commenters also stated that because an established and well-known settlement would certainly have a sacred burial ground associated with it, the Kashtiq village would require specific protection measures.




SOURCE: California Resource Agency 2011
TRC 2007

**FIGURE 14-1**
**Cultural Resources**

Section 3.5, Cultural Resources, in Volume I of this Supplemental Draft EIS has been revised to indicate that the Kashtiq village has been identified as a site potentially eligible for listing under the National Register of Historic Places (NRHP). As in indicated in Section 4.5, Cultural Resources, of this Supplemental Draft EIS, all cultural resources in the Development Areas eligible for the NRHP as identified in the Cultural Resources Reports (W&S Consultants 2004, 2005, and 2006; ASM Affiliates 2010) will be protected in place, or if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary. Also as indicated in the revisions to Section 4.5, Cultural Resources, the proposed action would be subject to applicable Federal, state, and local regulations intended to protect cultural resources, including prior project approvals and SHPO consultation. With respect to this site, Kern County's approval of the TMV Project required cultural resource surveys to be completed and the survey and subsequent evaluation determined the site of the Kashtiq village is not currently under water as referenced in the comment. It was further determined no burial site was associated with the village. Rather, it was determined the site of Kashtiq was previously capped and preserved in place under Lake Drive. Per Kern County's approval of the TMV Project, archaeological and/or Native American monitors must be present during any work on the site, including but not limited to staking, grubbing, or topsoil grading within 100 meters of the preserved site to ensure the cap is not disturbed. As noted above, the Service is undergoing consultation with the SHPO, which will also entail review of the effects of the proposed action on this and other resources potentially eligible for protection under the NHPA.

### 14.2.4.3 Other Burial Sites

Commenters identified other burial sites, including known locations at Tejon Creek and Paso Creek and a cemetery 0.5 mile east of Castac Lake that should be addressed in the Draft EIS. The cemetery is identified in Figure 14-1.

Because all areas of Paso Creek in the Covered Lands are located in the Condor Study Area, the cemetery identified by commenters as Huerta de Arriba on Paso Creek would be located within area protected as open space. Similarly, the cemetery on Tejon Creek identified in the comment would also be located in a conservation area. As noted above, Plan-Wide Activities would be limited to 200 acres under the TU MSHCP and would largely consist of activities with low potential to affect cultural resources. Plan-Wide Activities would be subject to the provisions of the BMPs and use restrictions required in the Ranchwide Agreement (as currently set forth in the Interim RWMP), which would require preservation of existing conservation values, including cultural resources. Additionally, a mitigation measure has been added to this Supplemental Draft EIS to require preconstruction surveys for areas subject to ground disturbance in previously unsurveyed areas. Plan-Wide Activities would also be subject to applicable Federal, state, and local regulations. It is anticipated that prior to issuance of the required permits, the local jurisdiction would require demonstration that potential effects on cultural resources would be avoided or minimized. Similarly, while it is not anticipated that additional measures would be required by SHPO, prior to issuance of the ITP, the results of the SHPO consultation will be included.

With respect to the burial site 0.5 mile east of Castac Lake, as indicated in the revisions to Section 4.5, Cultural Resources, in Volume I of this Supplemental Draft EIS, the site is identified in the Phase I Report (W&S Consultants 2004). The survey identified a burial 3 meters below modern ground surface in a canyon tributary to Castac Valley, 1 mile northeast of Castac Lake. As required in this Supplemental Draft EIS, all cultural resources eligible for the NRHP as identified in the Cultural Resources Reports will be protected in place, or if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary. Also noted in this Supplemental Draft EIS, the proposed action would be subject to applicable Federal, state, and local regulations intended to protect cultural resources, including prior project approvals. Specifically, Kern County's approval of the TMV Project required passive preservation in place for this resource because it is outside the Development Envelope (Kern County 2009, Mitigation Measure 4.5-21, Appendix J).

### 14.2.4.4 Unmarked Settlements

Comments on the Draft EIS identified the potential for unmarked Native American settlements that occur in the Covered Lands to be adversely affected by the proposed action. One commenter discussed a historical account of the relocation of Indians off the Tejon Ranch and the creation of new settlements, based on *Saga of Rancho el Tejon* by Frank Latta published in 2006. Another comment discussed the historical efforts of General Beale to force relocation of residents of outlying Indian villages to the Sebastian Indian Reservation, including relocation from a settlement in Tacuya Canyon, and states that this relocation effort left many native settlements abandoned and unmarked, based on Bonnie Kane's *View From the Ridge Route* chronicles (self-published, May 1924). Additionally, a commenter referenced *Fort Tejon, El Tejon Rancho, and the Tejon Indians* by Mae Saunders (self-published, May 1925) as another source of information about unmarked settlements in Tejon/Tunas Creek. Commenters also describe and attach depositions and maps created as part of the 1922 Tejon Ranch Supreme Court cases, which one commenter states should be used to identify the location of many of the old settlements, including settlements at Arroyos de las Tunas, Pastoria, Encinas, and Almos. Thus, comments assert that Native Americans were settled in nearly every canyon on the western side of Tejon Ranch leading to present-day Highway 99 and that there is ample evidence of numerous Chumash, Kitanemuk, and Yowlumne settlements and sacred sites in the Covered Lands that require identification, analysis, and preservation by the Service, including many previously undisclosed sites in the canyons above Castac Lake, the area around the Old Headquarters, and in the surrounding canyons. Additionally, the commenter asserts that any sites near Castac Lake already identified separately in the Draft EIS must be identified and preserved. Finally, the commenter claims that the Draft EIS remains in violation of NHPA until the sites are identified and protected in consultation with the SHPO and/or Advisory Council for Historic Preservation.

As indicated previously, the Service has determined that the cultural resources evaluations conducted for the TMV Planning Area and Lebec/Existing Headquarters Area to be an appropriate characterization of potential cultural resources within those areas. Information provided in the comments from Frank Latta and the 1922 depositions was examined and considered for the TMV Planning Area in the cultural resource reports (W&S Consultants 2004, 6-18, and 2005, 8-13, 16-18, 29-31). Both the Tejon/Tunas Creek and Tecuya Canyon settlements are identified in the cultural resources reports (W&S Consultants 2004, 6, 11).

The discussion of Native American use of the Covered Lands has been updated in Section 3.5, Cultural Resources, in Volume I of this Supplemental Draft EIS. Additionally, the potential locations of the settlements specifically identified in the comments are discussed below. This Supplemental Draft EIS has been revised to clarify how these and other resources would be addressed and protected through implementation of the proposed action.

- **Tejon/Tunas Creek.** Las Tunas Creek is located entirely in the Condor Study Area and would be subject to the provisions of the Ranchwide Agreement that requires preservation of conservation values. Per the revised Supplemental Draft EIS mitigation measure, this area would also be subject to preconstruction surveys prior to ground disturbance.
- **Alamos and Encinas.** These settlements were not identified by name in the cultural resources reports. However, as indicated previously, mitigation and existing BMPs would require surveys for areas where ground disturbance would occur and subsequent mitigation to be developed as appropriate per applicable regulations.
- **Tecuya Creek**. Tecuya Creek, east of Interstate 5 (I-5), is not in the Covered Lands.

With respect to the information provided in the comment regarding settlements and sacred sites in canyons above Castac Lake, the area around Old Headquarters, and in the surrounding canyons,

additional information regarding the environmental setting can be found in the cultural resources reports for the TMV Planning Area and the Lebec/Existing Headquarters Area .

Finally, with respect to the comment that the EIS remains in violation of NHPA until the sites are identified and protected in consultation with the SHPO, as noted previously, the NHPA process is separate from NEPA.

### 14.2.4.5 The California Condor as a Cultural Resource

A commenter asserted that the California condor, although it does not meet the definition of a historic *place,* should nevertheless be listed as a cultural *object* and protected accordingly because it is the most important cultural resource to the Chumash, Kitanemuk, and Yowlumne tribes. The commenter asserted that the applicant's goal in seeking an ITP is to sanction loss of the condor, and states that, as a sacred cultural resource, the condor must be preserved and protected.

Animals do not meet the definition of an *object* under the NRHP standards. The NRHP lists "any prehistoric or historic district, site, building, structure, or object" that meets the criteria for historic designation (16 United States Code [U.S.C.] 470W(5)). An *object* is a "material thing of functional, aesthetic, cultural, historical or scientific value that may be, by nature or design, moveable yet related to a specific setting or environment" (36 CFR 60.3(j)).

The NRHP guidelines further explain that the term is:

> used to distinguish from buildings and structures those *constructions* that are primarily artistic in nature or are relatively small in scale and simply constructed. Although it may be, by nature or design, movable, an object is associated with a specific setting or environment. Small objects not designed for a specific location are normally not eligible. Such works include transportable sculpture, furniture, and other decorative arts that, unlike a fixed outdoor sculpture, do not possess association with a specific place. Objects should be in a settling appropriate to their significant historic use, roles, or character. Objects relocated to a museum are inappropriate for listing in the National Register (emphasis added).
>
> Source: U.S. Department of Interior, National Park Service 2002.

The Service recognizes the condor's sacred standing among Native American tribes, but acknowledges that is insufficient to provide for its consideration for listing in the NRHP. While the Advisory Council on Historic Preservation guidelines on consulting with Indian tribes provide that "plant and animal communities" must be considered when evaluating the potential effects of an undertaking, it is nevertheless the "place" or the "community" that potentially qualifies for listing in the NRHP, not the animal itself (see the Advisory Council on Historic Preservation's (2008) *Consultation with Indian Tribes in the Section 106 Review Process: A Handbook*). Just as the people who inhabit a potential historic district are not eligible for listing in the NRHP, neither are condors that inhabit a particular natural landscape that may be eligible for listing in the NRHP. The NRHP is limited to inanimate objects with fixed geographical locations and discernable histories and precise physical descriptions.

Consideration of the potential effects of the California condor related to the Proposed TU MSHCP Alternative is specifically addressed in the TU MSHCP and discussed in detail in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS. Pursuant to the Service's authority under the ESA, full consideration would be given to minimizing potential effects on the California condor prior to issuing the ITP for the proposed action. For additional discussion of measures intended to minimize, avoid, and mitigate effects on the California condor, please refer to Master Responses 1A–1I, California Condor.

**Table MR15-1. Comments Addressed in Master Response 15**

| Comment | Commenter |
|---|---|
| G2-2 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| O4-7 | Center for Biological Diversity (Keats, Adam) |
| O4-27 | Center for Biological Diversity (Keats, Adam) |
| O4-28 | Center for Biological Diversity (Keats, Adam) |
| O4-29 | Center for Biological Diversity (Keats, Adam) |
| O4-30 | Center for Biological Diversity (Keats, Adam) |
| O4-31 | Center for Biological Diversity (Keats, Adam) |
| O4-32 | Center for Biological Diversity (Keats, Adam) |
| O4-33 | Center for Biological Diversity (Keats, Adam) |
| O4-34 | Center for Biological Diversity (Keats, Adam) |
| O4-49 | Center for Biological Diversity (Keats, Adam) |
| O4-50 | Center for Biological Diversity (Keats, Adam) |
| O4-51 | Center for Biological Diversity (Keats, Adam) |
| O4-52 | Center for Biological Diversity (Keats, Adam) |
| O4-53 | Center for Biological Diversity (Keats, Adam) |
| 04-55 | Center for Biological Diversity (Keats, Adam) |
| O4-65A | Center for Biological Diversity (Keats, Adam) |
| O4-68 | Center for Biological Diversity (Keats, Adam) |
| O4-69 | Center for Biological Diversity (Keats, Adam) |
| O4-70 | Center for Biological Diversity (Keats, Adam) |
| O4-71 | Center for Biological Diversity (Keats, Adam) |
| O4-71A | Center for Biological Diversity (Keats, Adam) |
| O4-72 | Center for Biological Diversity (Keats, Adam) |
| O4-126A | Center for Biological Diversity (Keats, Adam) |
| O4-131 | Center for Biological Diversity (Keats, Adam) |
| O4-138 | Center for Biological Diversity (Keats, Adam) |
| O4-146 | Center for Biological Diversity (Keats, Adam) |
| O4-177 | Center for Biological Diversity (Keats, Adam) |
| O4-180 | Center for Biological Diversity (Keats, Adam) |
| O4-191 | Center for Biological Diversity (Keats, Adam) |
| O4-205 | Center for Biological Diversity (Keats, Adam) |
| O4-208 | Center for Biological Diversity (Keats, Adam) |
| O4-240 | Center for Biological Diversity (Keats, Adam) |
| O4-244 | Center for Biological Diversity (Keats, Adam) |
| 04-260A | Center for Biological Diversity (Keats, Adam) |
| O10-6 | TriCounty Watchdogs (de Leeuw, Jan) |

| Comment | Commenter |
|---|---|
| I527-1 | Fry, Kenneth B. |
| I627-21 | Hamber, Robert |
| I1210-3 | Pinard, John W. |
| I1301-7 | Risebrough, Bob |
| I1658-1b | Willer, Benjamin |

# 15.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP that were related to the availability of management plans and the public disclosure of documents prior to permit issuance. Table MR15-1 provides a list of the commenters and a reference to the individual comment, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

Comments on the availability of management plans for public review include the following:

- Many of the mitigation measures in the TU MSHCP identify management plans that need to be developed. Because these plans would affect biological resources, they need to be included for public review and determination of consistency with the TU MSHCP. Similarly, reliance on future management plans that have not been developed and that are not available for public review makes it impossible to identify whether effects on various species would be adequately avoided, minimized, and mitigated. (Response provided in Section 15.2.1, Availability of Management Plans for Public Review.)
- Management plans to be submitted to the Service after the permit has been issued may have environmental effects of their own, and without being able to review them in advance of the permit, there is no basis for the finding that the applicant minimized and mitigated effects to the maximum extent practicable. (Response provided in Section 15.2.2, Identification of Effects from Management Plans.)
- A fire management plan needs to be developed, and the fuel management plan, which is part of the Ranchwide Agreement, is too myopic to cover all fire issues. (Response provided in Section 15.2.3, Development of a Fire Management Plan.)
- A weed management plan needs to be developed and provided for public review, as exotic invasive plants are a threat. (Response provided in Section 15.2.4, Development of Weed Management Plan.)

Comments on the disclosure of documents for public review include the following:

- The Service has not met its obligations to disclose documents as provided for in the Federal Endangered Species Act (ESA) and National Environmental Policy Act (NEPA), and withholding documents under the Protective Order is inconsistent with those statutes. (Responses specific provided in Section 15.2.5.1, Disclosure Requirements under ESA and NEPA.)
- A 1999 Memorandum of Agreement (MOA) disclosed in response to a Freedom of Information Act (FOIA) request should have been disclosed with the incidental take permit (ITP) application, and is predecisional, as it protects the Tejon Ranchcorp (TRC) development goals over conservation of the species. (Responses specific provided in Section 15.2.5.1, Disclosure Requirements under ESA and NEPA.)

- The Protective Order prevented the public from obtaining important California condor data that contradict the conclusions in the TU MSHCP. (Responses specific provided in Section 15.2.5.1, Disclosure Requirements under ESA and NEPA.)

# 15.2 Responses to Substantive Comments

## 15.2.1 Availability of Management Plans for Public Review

One commenter stated that the Draft TU MSHCP identifies management plans that need to be developed, and that those management plans, including a grazing management plan, integrated pest management plan (IPMP), European starling management plan, and public access plan, need to be included for public review. The commenter further stated that unless and until the management plans are made available for public review, there is no basis for the required findings under NEPA and ESA.

The commenter is correct that Section 4.4, California Condor - Avoidance, Minimization, and Mitigation Measures, and Section 7.2, Other Covered Species - Avoidance, Minimization, and Mitigation Measures, in the TU MSHCP, require that a grazing management plan, IPMP, and public access plan be developed, and that a European starling management plan be developed *if* determined necessary due to effects on purple martin. The initial grazing management and pest management plans approved by the Tejon Ranch Conservancy and by Kern County (as part of the certified TMV EIR), as well as the public access plan adopted by the Tejon Ranch Conservancy, are attached to the revised TU MSHCP as part of the Interim Ranchwide Management Plan (RWMP) (Tejon Ranch Company 2009) (Appendix F of the TU MSHCP). These plans have been reviewed and considered in the effects analysis presented in Chapter 4, Environmental Consequences, in Volume I of this Supplemental Draft EIS. For the lands managed by the Tejon Ranch Conservancy (i.e., Established Open Space and Existing Conservation Easement Areas), the Interim RWMP identifies the current best management practices (BMPs) for the existing ranch uses, consistent with the stewardship standard required by the Ranchwide Agreement, and establishes a process and timeline—including the identification of information needs—to further develop a comprehensive management plan. It is a first step toward implementing a comprehensive RWMP that would be reviewed and approved by the Service to ensure that it is consistent with the TU MSHCP, ESA, and any applicable conservation easement restrictions. As part of the TMV Project, Kern County also made the grazing management plan and pest management plan applicable to the TMV Planning Area Open Space (Kern County 2009). In addition, on September 18, 2009, as part of the Interim RWMP, the Tejon Ranch Conservancy approved the initial Public Access Plan, which continues to allow docent-led tours only on existing roads and trails and sets a process by which broader public access activities would be reviewed and approved. These plans are incorporated into the revised TU MSHCP. If the Service issues an ITP for the TU MSHCP Covered Activities, the management plans would be revised as necessary to conform to the ITP and the final TU MSHCP, and would be reviewed and approved by the Service as set forth in the Implementing Agreement Sections 5.1.1(d) and 5.2.4.

The Service disagrees with the comment that NEPA requires that the management plans that would implement the TU MSHCP be completed at the time of project approval and included in the EIS. With respect to mitigation generally, NEPA requires a "reasonably complete discussion of possible mitigation measures," demonstrating that the agency took a "hard look" at possible mitigating measures (*Robertson v. Methow Valley Citizens Council et al.*, 490 U.S. 332, 352 [1989]). A "perfunctory description" or a "mere listing" of mitigating measures is insufficient (*Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 473 [9th Cir. 2000]). However, a mitigation plan "need not be legally enforceable, funded or even in final form to comply with NEPA's procedural

requirements." (*National Parks Conservation Ass'n. v. U.S. Dept. of Transportation*, 222 F.3d 677, 681 [9th Cir. 2000]). The EIS meets the standards outlined above. Tables 2-3 and 2-4 in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS list avoidance, minimization, and mitigation measures and a number of species-specific objectives designed to lessen effects on California condors and other Covered Species under the Proposed TU MSHCP Alternative. Detailed biological goals and objectives and avoidance, minimization and mitigation measures that address potential effects on the Covered Species are also set forth in the Section 4, California Condor, and Section 7, Other Covered Species, of the TU MSHCP. All future management plans and revisions to the current management plans would be required to adhere to the biological goals, objectives, and measures in the final TU MSHCP and undergo review and approval by the Service. The existing management plans attached to the TU MSHCP, combined with the detailed requirements contained in the TU MSHCP for future management plans and revisions to current plans, provides ample information to the public and to the Service for review of the TU MSHCP.

## 15.2.2 Identification of Effects from Management Plans

One commenter stated that each of the management plans has the potential to have environmental effects of their own, including potential effects on biological resources proposed for conservation under the TU MSHCP. The commenter stated that the failure to identify or analyze effects from the omitted management plans themselves makes it impossible to evaluate the adequacy of the mitigation. The commenter also stated that because the management plans would be submitted to the Service after approval of the TU MSHCP, the harm would have already occurred through issuance of an ITP.

Under the proposed TU MSHCP, grazing and pest management would continue in accordance with existing practices. Tejon Ranch's existing grazing and ranching activities have been in place for nearly 100 years and have resulted in the existing mosaic of habitat types and species distribution on the ranch. However, to ensure continued successful operation of the grazing and ranching activities that support a healthy cattle population, while protecting the Covered Species and their habitats, the TU MSHCP requires that management plans related to those activities, including plans for the ongoing activities such as grazing, be developed, reviewed and approved by the Service. Additionally, grazing would be subject to the compliance and effectiveness monitoring and adaptive management program prescribed under the TU MSHCP, and summarized in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS, which allows adjustments over time to protect against adverse effects.

The public access plan would similarly document existing BMPs for the public's use of the Covered Lands, and would require that the selection of access points, trails, and facilities be consistent with the TU MSHCP, ESA, and any applicable conservation easement restrictions, subject to the approval by the Service.

Because the location of these facilities must be consistent with the TU MSHCP and ESA, such facilities may not result in additional effects on Covered Species or other sensitive resources without triggering additional environmental review and subsequent mitigation.

With respect to the IPMP, all such plans must meet the requirements set forth in Section 7.2.1 of the TU MSHCP, including that the plan avoid and minimize potential effects related to fertilizers, pesticides, and water quality, and provide guidelines for eradication of nonnative invasive species.

Revisions to these plans must implement the performance standards set forth in the mitigation measures, and the Services' review and approval per the terms of the Implementing Agreement would be required to ensure that management activities in the Covered Lands are carried out in accordance with take avoidance, minimization, and mitigation measures and other conservation measures for Covered Species. (Implementing Agreement, Section 5.1.1(d)). Thus, the management

plans would simply ensure that Covered Activities comply with the TU MSHCP, and are not anticipated to result in any effects independent from those already analyzed in this Supplemental Draft EIS.

With respect to the European starling plan, proposed management requirements are set forth as Objective 8-1 in Section 7.1.1.2.7, Purple Martin, of the TU MSHCP. Specifically, European starling monitoring, removal, and management methods would be implemented if determined necessary by a Service-approved biologist, based on monitoring results and the abundance of the species within 500 feet of suitable habitat for purple martin during the breeding season, or the presence of large winter flock sizes. Thus, the need for the European starling management plan would be based on the results of the monitoring program, with standards for that management plan set forth in the TU MSHCP. No new indirect or direct effects are anticipated to result from this measure.

Finally, as discussed above, the grazing and pest management plans are meant to ensure the continuation of existing practices, and to preserve (and potentially improve) existing conditions. These plans would be revised in the future per the schedule set forth in the Ranchwide Agreement (Implementing Agreement Section 5.1.1(d)), and review and approval by the Service would be required to ensure that future revisions to management plans are consistent with the TU MSHCP and ESA. Thus, no new direct or indirect adverse environmental effects are anticipated to result from implementation of the grazing or pest management plans.

## 15.2.3 Development of a Fire Management Plan

One commenter stated that a fire management plan needs to be developed, and that the fuel management plan, which is part of the Ranchwide Agreement, is too myopic to cover all fire issues. Further, the commenter stated that habitat clearance for fires can significantly degrade habitat and affect species; therefore, a thorough analysis of a fire plan and its effects on each species is required.

Fire management is addressed in both the EIS and TU MSHCP, including consideration of fire management for public safety and potential effects of fire management activities on the Covered Species. Fuel management, as the term is used in the TU MSHCP and considered in the EIS, is a Plan-Wide Activity defined in Section 2.2.1.2, Activities Considered in the Analysis, in Volume I of this Supplemental Draft EIS, and in Section 2.2.1, Plan-Wide Activities, of the TU MSHCP. As described in those sections, fuel management activities would consist primarily of grazing. They also could include maintenance of existing roads, irrigation, and vegetation clearing around existing structures (within 120 feet), and coordination with state or local agencies for mowing or other fire protection measures along fire-prone areas (e.g., highways). These practices are representative of existing conditions and fuel management practices, and are expected to continue in the future.

As discussed above, grazing is an existing activity on the ranch and the ongoing effects of grazing are reflected in baseline conditions, as described for the No Action Alternative (Section 4.0.2.1) in Chapter 4, Environmental Consequences, of this Supplemental Draft EIS. Existing grazing and fire BMPs are documented in the Interim RWMP, and summarized in this Supplemental Draft EIS. Grazing is also a Covered Activity under the TU MSHCP and is analyzed in this Supplemental Draft EIS as part of the effects analysis for the Proposed TU MSHCP Alternative. Grazing activities under the TU MSHCP would be carried out in accordance with BMPs prescribed in the RWMP to be approved by the Service, and must balance species and fire protection as outlined in the grazing management plan. The Service's review and approval of the grazing management plan and fuel management plan would ensure that no additional effects on the Covered Species due to grazing or fire management would occur beyond those analyzed in this Supplemental Draft EIS.

With respect to fuel management related to the development in the TMV Planning Area, Section 2.2.1, Plan-Wide Activities, of the revised TU MSHCP clarifies that fuel modification in the TMV Planning Area, including the 1,773 -acre fuel modification zone, would follow the Kern County Fire

Protection Plan (Dudek 2008) approved as part of the TMV Project Approvals (attached as Appendix D to Appendix B-1 of the Tejon Mountain Village Environmental Impact Report [TMV EIR]). The anticipated effects of the proposed fire management activities, including those associated with the fire protection plan, on Covered Species are considered in Section 4.1, Biological Resources, in Volume I of this Supplemental Draft EIS, and further discussed in Master Response 7, Edge Effects, Fuel Modification, and Wildlife Habitat Connectivity, in Volume II of this Supplemental Draft EIS.

## 15.2.4 Development of Weed Management Plan

One commenter stated that a weed management plan needs to be developed and provided for public review, as exotic invasive plants are a threat.

The IPMP proposed under the TU MSHCP would provide guidelines for "the eradication of non-native, invasive species," as described in Section 7.2.1, Measures to Avoid and Minimize Impacts, in the TU MSHCP. As clarified in Chapter 2, Proposed TU MSHCP and Alternatives, in Volume I of this Supplemental Draft EIS, the IPMP would also address invasive plants. Additionally, grazing is anticipated to provide weed management in open space areas. In the event that problems arise from weed competition, the annual monitoring reports prescribed under the TU MSHCP would identify significant problems or successes that may necessitate alterations to the monitoring and management programs; recommend such changes/revisions to the programs; document changes that have occurred in the prior year and describe how they were addressed; and discuss adaptive management triggers and how adaptive management was implemented. Thus, any significant problems that arise from weed competition or lack of conformance with the grazing management plan would result in recommendations for changes or revisions to BMPs and/or the grazing management plan to rectify the specific problem identified. A separate weed management plan is not necessary.

## 15.2.5 Document Disclosure and Transparency

Several commenters raised issues regarding disclosure of documents as part of the public review process. As discussed in more detail below, the Service supports full disclosure of documents relevant to its review of the TU MSHCP under ESA and NEPA. The Protective Order put into place following settlement of a lawsuit filed by TRC in 1997 was vacated on August 25, 2009. Specific comments are summarized and responded to below.

### 15.2.5.1 Disclosure Requirements under ESA and NEPA

One commenter stated that the Service has not met its obligations to disclose documents as provided for in the ESA and NEPA, and that withholding documents under the Protective Order was inconsistent with those statutes. In support of this contention, the commenter cites the ESA's requirement in Section 10(c) that "[i]nformation received by the Secretary as a part of any application shall be available to the public as a matter of public record at every stage of the proceeding" (16 United States Code [U.S.C.]1539(c)). The commenter also cites the Council on Environmental Quality's (CEQ) NEPA regulations, which state that the lead agency must "[m]ake environmental impact statements, the comments received, and any underlying documents available to the public pursuant to the provisions of FOIA (5 U.S.C. 552)" (40 Code of Federal Regulations [CFR] 1506.6(f)). Another commenter stated that "secret, backroom deals" should not have a role in the government review and approval process.

As described in more detail below, the ESA requires that documents submitted as part of an ITP application be made available to the public for review. The Service has complied with this statutory mandate. The ITP application was made available to the public, as was the Draft TU MSHCP, Draft

Implementing Agreement, and Draft EIS during the public comment period in 2009 (74 FR. 6050 [Feb. 4, 2009]). In addition, pursuant to FOIA requirements, all ITP application documents were made available to the public following the release of the Draft EIS on February 4, 2009. In general, documents requested under FOIA were released consistent with FOIA and the restrictions of the Protective Order. Since the Protective Order was vacated, the Service has released all responsive documents requested under FOIA in accordance with applicable FOIA requirements and limitations.

## 1997 Lawsuit and Protective Order

In 1997, TRC filed suit to require the Service to issue a 10(j) Rule under the ESA to continue to release California condors in southern California under the California Condor Recovery Program, similar to the 10 (j) Rule issued in 1996 for the condor release program in Arizona. Under Section 10(j) of the ESA, the Service may designate a population of a listed species as a "nonessential experimental population" and relax the statutory protections otherwise applicable to the population to encourage landowners and other third parties to support recovery actions for the species. The Service disagreed that issuance of a 10(j) Rule was required or appropriate for condors released in California. Before and after filing the lawsuit, the parties worked together to reach a mutually agreeable solution. In 1999, the parties reached a settlement agreement under which TRC agreed to work with the Service, with court oversight, to complete a habitat conservation plan (HCP) that would support issuance of an ITP. As a result of the settlement, for the past 10 years, the Service has been providing technical assistance to TRC in the development of an HCP. That effort resulted in the release of the Draft TU MSHCP, and associated Draft EIS analysis, on February 4, 2009, as well as the subsequent release of the revised TU MSHCP and this Supplemental Draft EIS.

While TRC and the Service were working toward development of an HCP, a commenter filed a FOIA request in 2002 that resulted in the release of approximately 431 pages of documents. In response to the commenter's 2002 FOIA request, and to protect the ongoing confidentiality of settlement negotiations between the Service and TRC, TRC filed and obtained a Protective Order. Specifically, the Protective Order provided:

> "That, except for any Habitat Conservation Plan and accompanying documents that are formally submitted to the U.S. Fish and Wildlife Service in an application for the issuance of an Incidental Take Permit...all documents and records created and produced *in relation to and for the purposes of settlement* of the instant action shall be treated as confidential and shall not be disclosed to any person other than the Plaintiffs and the Defendants or used in any other litigation." [Emphasis added.]

Contrary to one comment, there is nothing in the Protective Order that undermines the public process provided for in the ESA and NEPA. The Service is required to adhere to all the public comment requirements in those statutes and support its decision pursuant to NEPA and Administrative Procedures Act.

The Protective Order specifically excludes from its coverage "any Habitat Conservation Plan and accompanying documents that are formally submitted to the U.S. Fish and Wildlife Service *in an application for the issuance of an Incidental Take Permit* pursuant to Section 10 of the Endangered Species Act consistent with Section 10(c) of FESA", which applies to "[i]nformation received by the Secretary *as part of any application*" for an ITP. Consistent with ESA Section 10(c), the Service released the application as well as the Draft TU MSHCP and Draft Implementing Agreement to the commenter (U.S. Fish and Wildlife Service FOIA responses to the Center for Biodiversity's January 23, 2009, FOIA request sent April 8, 2009 and April 27, 2009). The Service has also released condor location data to the commenter on an ongoing basis in response to several FOIA requests. As noted earlier, the Protective Order was vacated in August 25, 2009. TRC and the Service have since made available for release under FOIA all documents formerly protected by the order. While these

documents are not part of the application required to be made available under the ESA, they are appropriate for release under FOIA.

As discussed further below, the Service complied with the ESA and NEPA document disclosure requirements.

## Federal Endangered Species Act

As noted above, the ESA requires that "[i]nformation received by the Secretary as a part of any application shall be available to the public as a matter of public record at every stage of the proceeding" (ESA 10(c), 16 U.S.C. 1539(c)). In *Gerber v. Norton*, the only case found that interprets Section 10(c) in this context, the Court of Appeals for the District of Columbia interpreted the statute to require disclosure of documents "received by" the Service "as part of "an ITP application" (294 F.3d 173, 179, [D.C. Cir. 2002]). Although the document in question in *Gerber* (a map) was not physically attached to the ITP application, it had been submitted to the Service as part of the application and was made part of the final HCP; as a result, it should have been made available to the public. *Id.*

Here, the Service fully complied with *Gerber* by providing the commenter with copies of all documents submitted by TRC in conjunction with its application for an ITP in response to commenter's January 23, 2009 FOIA request. All relevant maps are incorporated into the documents. Nothing in *Gerber* requires that the Service, pursuant to Section 10(c) of ESA, release correspondence between the Service and TRC that preceded the ITP application. Nonetheless, as noted above, the Service has made all relevant past communications and documents available for release under FOIA, consistent with limitations of that statute.

## National Environmental Policy Act

The CEQ NEPA regulations at 40 CFR 1506.6(f) state that the lead agency must "[m]ake environmental impact statements, the comments received, and any underlying documents available to the public pursuant to the provisions of the Freedom of Information Act". The Service fully supports the disclosure policy reflected in the CEQ regulations and since the Protective Order was vacated, has made available for release underlying documents relevant to the TU MSHCP application in accordance with, and subject to the limitations of, FOIA. The Service points out that the U.S. Supreme Court has held that information may not be obtained under FOIA when the agency holding the requested material has been precluded from disclosing it by a Federal district court (*GTE Sylvania, Inc. et al. v. Consumers Union of the U.S., Inc. et al.*, 445 U.S. 375, 386-87 [1980] [holding that the agency did not improperly refuse to release documents subject to a FOIA request when those documents were subject to an existing injunction preventing disclosure]). Here, the Protective Order approved by the Federal court initially prevented the Service from releasing materials associated with the settlement under FOIA.

Since the Protective Order was vacated in August 2009, the Service has made all communications and other related documents available for release, consistent with the requirements of FOIA, including those generated prior to August 2009.

## Disclosure of 1999 Memorandum of Agreement

A commenter stated that the MOA between the Service and TRC should have been disclosed with the ITP application and is predecisional, as it protects the TRC development goals over the conservation of the species.

As noted above, the MOA and all related court filings from the lawsuit filed in 1997 are and have remained available for public review as part of the court docket (U.S. Fish and Wildlife Service

1999). The formal ITP application for the TU MSHCP was submitted to the Service on October 15, 2008. The MOA is not part of the ITP application and there is no legal requirement that the MOA be submitted with the application, nor is there any requirement in statute, regulation, or guidance that requires that all documents referenced in a draft HCP be included with the application. However, the MOA was released by the Service in April 8, 2009 in response to the Center for Biological Diversity's January 23, 2009 FOIA request. The MOA is not predecisional because, as stated in the Stipulation for Stay, it merely sets forth a "negotiated framework for development of a Habitat Conservation Plan (HCP) for the Condor that would support issuance of the ITP."

The commenter also indicated that, pursuant to the MOA, the Service was "obligated" to provide take coverage for future Tejon Ranch development in exchange for TRC agreeing to stay a lawsuit brought against the Service by Tejon Ranch. The comment seems to imply that the Service agreed to issue an ITP in order to avoid a lawsuit. However, the MOA simply memorializes the results of discussions between TRC and the Service for development of an HCP for the California condor pursuant to the ESA, and includes the parameters to be included in the ITP, including, but not limited to:

- A 75-year term of the permit
- The California condor would be the only Covered Species in the HCP
- A definition of the Covered Lands
- A definition of the Covered Activities
- The HCP operating program
- Assurances under the "No Surprises" rule
- Compliance with Section 7 of the ESA.

Nothing in the MOA purports to eliminate or constrain the Service's statutory duty to evaluate the ITP application under the ESA and NEPA and to render an independent decision on the ITP application based on permit issuance criteria in ESA Section 10 and the results of its internal consultation under ESA Section 7. Thus, while the MOA acknowledges that the decision by the Service to reject the application would enable TRC to reactivate the lawsuit, the MOA did not in any manner constrain the Service's independent review of the ITP application under the ESA or NEPA. Rather the MOA expressly acknowledges that the "understandings in this MOA concerning issuance to Tejon of a Condor ITP and preparation of supporting documentation are preliminary proposals and subject to change upon further review under NEPA and ESA, which shall include an opportunity for public review and comment on the proposed HCP and EA, and compliance with all other applicable laws" (U.S. Fish and Wildlife Service 1999, p. 6 ).The assertion that the MOA predetermined issuance of an ITP is incorrect.

The Service notes that subsequent to the MOA, TRC elected to limit the requested ITP term to 50 years, to seek coverage for multiple species rather than just the California condor, and to restrict the Covered Lands to the upland portions of Tejon Ranch. In addition, the Service determined that an EIS should be prepared in connection with the ITP application. As evidenced by the above summary, the development of the TU MSHCP has been an evolving and dynamic process, and the MOA has not constrained, nor was it intended to, the Service's review of the ITP application or final permit decision.

## Disclosure of Documents Relating to the 1997 Lawsuit between TRC and the Service

Commenters questioned both TRC's and the Service's motivations in issuing the TU MSHCP. One commenter asserted that TRC has "historically bought politicians" to support TRC's profit-making

intentions. Another commenter questioned generally the intentions of "developers and investors." One commenter questioned TRC's and the Services motivations based on the 1997 lawsuit, and requested disclosure of documents related to the 1997 lawsuit. With respect to the lawsuit filed by TRC, one commenter stated that when TRC stock was purchased by real estate investment funds, TRC became hostile to the California Condor Recovery Program, and filed a suit against the Service in 1997 "attempting to halt the release of California condors near Tejon Ranch." The commenter claimed that the lawsuit was "virtually meritless," but that the Service agreed to a stipulated stay of the case, wherein the Service stated its desire to issue an ITP to TRC. The commenter asserted that TRC's filing of the lawsuit was a "hostile action" by TRC. As further evidence, the commenter summarized comments on the contents of a 1994 letter from TRC to the Service, which according to commenter, indicated that TRC would only permit limited access to the ranch for assistance to the Condor Recovery Program. The commenter further questioned the reasons behind a redacted paragraph from a 1998 memorandum discussing access to ranch lands received as part of the 2002 FOIA release, and because it appears TRC restricted access to its site in the early 1990s, the commenter questions the ability of TRC to be "trusted" to have the condors' best interests in mind. The commenter requested that all aspects of the TRC lawsuit be made public and that the TU MSHCP be revised to reflect this history of hostility by TRC.

The comments regarding TRC's political activity and motivations for pursuing an HCP represent the individual commenter's speculation and opinion and are not relevant to the adequacy of the TU MSHCP or EIS. The comments on the 1997 lawsuit similarly reflect the individual commenter's personal opinion on the merits of the lawsuit and conjecture about TRC's motivations.

The contents of the lawsuit, the relationship between the ranch and Service in implementing the Recovery Program, and whether TRC permitted unrestricted access to the ranch in the 1990s are irrelevant to the adequacy of the proposed ITP and TU MSHCP application, which must meet the requirements of the ESA and the Service's ITP permit issuance regulations at 50 CFR 13, 17.22(b) and 17.32(b). The Service does not make ITP permit decisions based on "trust"; the decision to issue a permit to TRC will be based on the evaluation of the adequacy of the TU MSHCP under the ESA and the assurances incorporated into the plan to ensure it will be fully implemented. The Service welcomes public review and comment on the adequacy of these documents.

With regard to future implementation of the TU MSHCP, the ITP, if issued, would incorporate the TU MSHCP and Implementing Agreement as permit conditions. Failure to adhere to the requirements of the permit can trigger suspension or revocation of the ITP (as set forth in the Implementing Agreement, Appendix A of the TU MSHCP), and subject the permittee to civil and criminal penalties under Section 11 of the ESA. Proper implementation of the plan would also be assured through monitoring requirements incorporated into the TU MSHCP pursuant to Section 10(a)(1)(B). As described in Section 7.3, Monitoring Measures, of the TU MSHCP, monitoring would include compliance monitoring (Section 7.3.1) and effectiveness monitoring (Section 7.3.2). Compliance monitoring would be conducted to ensure that TRC is carrying out the terms of the TU MSHCP and Implementing Agreement, including administrative tasks, such as monitoring, and quantifying effects on the Covered Species, and evaluating the status of TU MSHCP Mitigation Lands; implementing avoidance and minimization measures, preconstruction training and construction monitoring reports; and expenditure of funds on management and monitoring. Effectiveness monitoring of the Covered Species and their habitats would be conducted to determine the effectiveness of the conservation plan and management measures in achieving the biological goals and objectives of the plan, and may include updates related to vegetation communities in the Covered Lands, on-the-ground monitoring for exotic species invasions, and evaluation of whether objectives related to Plan-Wide Activities (e.g., grazing, recreation, film production) are being met.

With respect to TRC's motivation, the Draft TU MSHCP states that TRC has been involved in detailed conservation planning efforts in coordination and partnership with the Service, major

environmental organizations, and the Tejon Ranch Conservancy to develop a conservation program that allows limited development, while preserving and managing the vast majority (90%) of the ranch. No clarification to the Draft TU MSHCP or Draft EIS is necessary.

In addition to TRC's motivations, another commenter questioned the Services motivations, stating that, since 1997, TRC and the Service have been in litigation over the ITP and TU MSHCP, and over the status and protection of the California condor, and notes that the 1999 MOA between TRC and the Service requires the parties to work cooperatively to prepare appropriate documents in support of an HCP. The commenter asserts that it is impossible for the public to understand the precise relationship between the Service and TRC, and to confirm to what degree the Service can independently represent the public interest, without having access to the settlement documents from the 1997 lawsuit. Another commenter stated that "government approval authorities do not owe them [developers and investors] a profit" but should instead be representing the interests of the people.

TRC and the Service have not been in litigation over the ITP and TU MSHCP; indeed there has been no final agency action on the TU MSHCP that would trigger any such litigation. The contention that the 1999 MOA is unlawful in its agreement for the TRC and Service to work "cooperatively" in TRC's pursuit of an HCP is without merit. The ESA provides a mechanism for applicants to obtain permits from the Service that authorize take of listed species incidental to an otherwise lawful activity. While the Service must make an independent, objective decision on each permit application, the Service encourages a cooperative approach by applicants and routinely provides technical assistance to applicants during the HCP development process, as has been the case with the proposed TU MSHCP.

As noted above, issuance of an ITP is governed by an independent legal framework that includes checks and balances, including public review and an independent ESA Section 7 process, designed to ensure that the requirements of the ESA are met, independent of individual party motivations or whether the applicant earns a profit. A statement in the Stipulation for Stay setting forth TRC's decision to seek an ITP under ESA Section 10 and the Services' agreement to consider issuance of an ITP under ESA Section 10 does not indicate or imply that the Service would skip any of the required steps, or that the Service would issue an ITP if the requirements under the ESA are not met.

## Disclosure of Information Related to the California Condor

One commenter stated that the Protective Order has prevented the public from obtaining information related to the importance of Tejon Ranch to the California condor. The comment cites to four sets of documents, specifically naming "The Significance of Tejon Ranch to the Conservation of the California Condor," and states that these documents provide important California condor data that contradict the conclusions in the TU MSHCP.

The document entitled, "The Significance of Tejon Ranch to the Conservation of the California Condor," was considered in the Draft TU MSHCP and is included as a reference to that original document. A copy of this paper is included as an appendix to the commenter's letter, cited as USFWS 2002b.

With respect to the documents cited as USFWS 2009a in the commenter's letter, those references consist of the April 8, 2009, FOIA response from the Service providing the commenter with access to the Draft TU MSHCP application (and three other documents) and the April 27, 2009 FOIA response from the Service providing 41 additional documents and 10 attachments that related generally to California condors. These documents provided in USFWS 2009a do not discuss the importance of Tejon Ranch to the California condor and do not contradict the Draft TU MSHCP.

With respect to the documents cited as USFWS 2009b, those documents include a number of letters from TRC's attorneys at the time, Hewitt & McGuire, LLP, and the Service from 1994 to 1998,

regarding TRC's position that an ESA Section 10(j) Rule was warranted, the Services' position that a 10(j) rule was not appropriate and that an HCP would be a better approach, the text of the Arizona 10(j) Rule, documents regarding the 60-day notice from TRC for the Services' failure to issue a 10(j) Rule, and correspondence regarding the settlement of the 1997 lawsuit. None of these documents discuss the Service's or other California condor experts' views of the importance of Tejon Ranch to the California condor, nor do they contradict the Draft TU MSHCP or Draft EIS.

None of the documents cited as USFWS 2009c contradict the Draft TU MSHCP or Draft EIS. The Draft TU MSHCP and the Draft EIS included updated California condor information and provide for the protection of a larger area of the Tejon Ranch than considered in the late 1970s and early 1980s. The 1970s and 1980s documents referenced as USFWS 2009c include the following:

- A slope analysis from 2002, which does not contradict the slope analysis provided in the Draft TU MSHCP or this Supplemental Draft EIS.
- A monthly record of California condor movement on Tejon Ranch from 1996 to 2000, which is specifically considered as part of the geographic information system (GIS) signal data analyzed for the Draft TU MSHCP and incorporated in the revised TU MSHP.
- A paper entitled Commentary on Released California Condors in Arizona, dated 2003, which addresses the Arizona population, and concludes that the Arizona program is on schedule. Conclusions regarding threats to California condors reflect the discussion in the Draft TU MSHCP and Draft EIS and have been carried through in the revised TU MSHCP and this Supplemental Draft EIS.
- A biological ascertainment report from 1972 and related correspondence that considers whether 100,000 acres of Tejon Ranch should be purchased to support California condor recovery, and which states that "[n]ot all of the 290,000 acre Ranch is considered primary condor habitat". The area considered to be primary condor habitat is generally consistent with the areas to be proposed to be conserved under the TU MSHCP (the proposed conservation measures provided in the TU MSHCP alone would permanently preserve approximately 129,318 acres).
- A document entitled Tejon Ranch and Survival of the California Condor, dated July 1972, which states that "[s]ome development of the Ranch appears inevitable, and the condor can probably live with considerable change if it is done in certain ways and restricted to certain areas." This report reflects the type of analysis that was performed for the Draft TU MSHCP, which used data updated from 1972, and carried through in the analysis in this Supplemental Draft EIS.
- A series of correspondence in 1974 and 1975 regarding the Condor Recovery Plan draft and acquisition possibilities for portions of Tejon Ranch.
- An environmental assessment from 1979 on the same proposed acquisition of the 100,000-acre area of the Ranch.
- Various correspondence from 1980 also regarding exploring the possibility of Federal acquisition of a portion of the ranch.

The document cited as USFWS 2009d is the MOA between TRC and Service that was released to commenter (as stated in commenter's letter) and is attached to the Stipulation for Stay and is publicly available as discussed above.

With respect to the documents cited as USFWS 2009e, most of the documents are duplicative of those provided in USFWS 2009c (e.g., the 1972 biological ascertainment report is included (with pictures), as well as correspondence regarding the potential acquisition). In addition, USFWS 2009e includes correspondence between Kern County and the Service from 1979 in which the Service stated that while they were not prepared to make specific comments on any proposed development

plan for Tejon Ranch, "we can say that if the overall plan includes the basic elements required for condor preservation – in effect, a large central core area that remains relatively undeveloped and lightly utilized, with livestock and deer populations sufficient to provide condor food—then specific proposals could be evaluated on a case by case basis." The TU MSHCP and Supplemental Draft EIS reflect analysis based on a real proposal for an MSHCP and based on updated data and information. The commenter further conjectured that TRC is motivated to "keep relevant documents from public scrutiny" to avoid the possibility of disclosing any evidence of lead poisoning incidents on Tejon Ranch. As discussed above, the Protective Order has been vacated, and all relevant documents requested under FOIA have been released.

## Disclosure of Ranchwide Agreement

One commenter stated that the Ranchwide Agreement is not included in full in either the Draft TU MSHCP or Draft EIS. The commenter stated that this limits the public's ability to review the proposed TU MSHCP.

In response to comments, a copy of the Ranchwide Agreement is attached as an appendix to the TU MSHCP.

**Table MR16-1. Comments Addressed in Master Response 16**

| Comment | Commenter |
|---|---|
| G2-32 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-33 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-34 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| G2-35 | U.S. Environmental Protection Agency (Goforth, Kathleen) |
| I502-4 | Forster, Peggy |
| I502-5 | Forster, Peggy |
| I502-11 | Forster, Peggy |
| I502-12 | Forster, Peggy |
| I502-13 | Forster, Peggy |
| I502-14 | Forster, Peggy |
| I930-3 | MacKay, Linda |
| I1210-1 | Pinard, John W. |
| O4-294 | Center for Biological Diversity (Keats, Adam) |
| O4-295 | Center for Biological Diversity (Keats, Adam) |
| O4-296 | Center for Biological Diversity (Keats, Adam) |
| O4-297 | Center for Biological Diversity (Keats, Adam) |
| O4-298 | Center for Biological Diversity (Keats, Adam) |
| O4-299 | Center for Biological Diversity (Keats, Adam) |
| O4-300 | Center for Biological Diversity (Keats, Adam) |
| O8-1b | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-17 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-29 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-30 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-31 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-32 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-33 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-34 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O8-35 | Santa Clarita Organization for Planning and the Environment (Lutness, David) |
| O12-13 | TriCounty Watchdogs (de Leeuw, Jan) |
| O12-26 | TriCounty Watchdogs (de Leeuw, Jan) |

# 16.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP specific to the air quality analysis. Table MR16-1 provides a list of the commenters and a reference to the individual comment, as summarized in the following list. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The EIS employs an improper baseline and does not adequately describe the affected environment. In addition, air quality monitoring results from the Peace Valley Monitoring station in Lebec should be included in the EIS. (Response provided in Section 16.2.2, Baseline Information.)
- The region's air quality problems should be more thoroughly recognized, and an analysis of how the proposed action would comply with current and future air quality requirements should be included. (Response provided in Section 16.2.3, Regional Air Quality.)
- An analysis of potential ozone and particulate matter transport that could result from the proposed action should be conducted. (Response provided in Section 16.2.4, Ozone and Particulate Matter Transport.)
- The public health effects associated with fine particulate matter (PM) should be more thoroughly recognized and the potential effects of the proposed action should be better analyzed. (Response provided in Section 16.2.5, Analysis of Fine Particulate Matter and Health Effects.)
- A dispersion analysis is required for a thorough analysis of potential interference with attainment of national ambient air quality standards (NAAQS), and potential criteria pollutant reductions that could result from the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Indirect Source Review should not be relied upon. (Response provided in Section 16.2.6, Dispersion Analysis and Attainment of NAAQS.)
- A Federal Clean Air Act conformity analysis should be conducted. (Response provided in Section 16.2.7, Federal Clean Air Act Conformity Analysis.)
- An intermediary year analysis that accounts for both construction and operations emissions should be conducted. (Response provided in Section 16.2.8, Combined Construction and Operations Emissions Analysis.)
- Additional, specific mitigation commitments should be made. (Response provided in Section 16.2.9, Adequacy of Mitigation Measures.)
- The Draft EIS is inconsistent with the analysis in the Tejon Mountain Village Environmental Impact Report (TMV EIR) (Kern County 2009), which precludes informed decision making. (Response provided in Section 16.2.10, Consistency of Analysis Between the Draft EIS and TMV EIR.)

# 16.2 Responses to Substantive Comments

This response begins with an explanation of changes made to the air quality analysis in the Draft EIS, as reflected in this Supplemental Draft EIS, followed by responses to the substantive comments summarized above.

## 16.2.1 Air Quality Analysis Overview

Section 3.3.2, Regulatory Setting, in Volume I of this Supplemental Draft EIS provides an updated regulatory background section for the air quality analysis, which has been revised to reflect revisions to the alternatives considered in this EIS, and to incorporate the latest air emissions modeling methodology (i.e., the California Emission Estimator Model (CalEEMod), which is replacing the URBEMIS2007 model). The background section and analysis sections have also been supplemented with information from the TMV EIR (Kern County 2009), which is now available but was not available at the time the Draft EIS was prepared. In addition, this Supplemental Draft EIS includes analysis of potential air quality effects in the South Coast Air Basin (SCAB).

This Supplemental Draft EIS analyzes effects from construction and operation of each of the five alternatives and explains that air emissions from the Covered Activities would primarily result from Commercial and Residential Development facilitated by the proposed action. It also provides analysis of the minor effects associated with changes that would occur from Plan-Wide Activities, relative to Existing Ranch Uses. The emissions from each alternative are then analyzed utilizing the latest modeling methodology and compared against the relevant air district thresholds. Specifically, this Supplemental Draft EIS compares potential emissions under each alternative to the significance thresholds for the SJVAPCD, which has jurisdiction over the San Joaquin Valley Air Basin (SJVAB); the Eastern Kern Air Pollution Control District (EKAPCD) (formerly the Kern County Air Pollution Control District), which has jurisdiction over the portion of the Mojave Desert Air Basin (MDAB), where proposed Commercial and Residential Development Activities could occur under one alternative (Kern County General Plan Buildout Alternative) evaluated in this Supplement Draft EIS; and the South Coast Air Quality Management District (SCAQMD), which has jurisdiction over areas outside the Covered Lands that may be indirectly affected by motor vehicle emissions. Although these significance thresholds were developed by the air districts for use by state and local agencies in the California Environmental Quality Act (CEQA) process—rather than Federal agencies in the NEPA process—they represent the expert opinions of the relevant air districts regarding levels at which emissions of certain air pollutants would represent significant effects.[1] Additional information has been added to Section 4.3, Air Quality, in Volume 1 of this Supplemental EIS to clarify the use of these thresholds as well as the assumptions made about which air basins would be affected by the Covered Activities under the various alternatives.

With respect to construction and operations emissions, this Supplemental Draft EIS provides the results of the updated model analysis for each alternative in Section 4.3, Air Quality. This Supplemental Draft EIS also examines health effects on sensitive receptors, and, in response to comments, includes an expanded discussion of potential health effects of toxic air contaminants and an updated analysis of potential effects on sensitive receptors. For construction-related health

[1] The guidance documents that include these significance thresholds — SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (2002), EKAPCD's Guidelines for Implementation of the California Environmental Quality Act of 1970, as Amended (1999), and SCAQMD's Air Quality Significance Thresholds (2011) —are included in the record for informational purposes. Additionally included in the record are the Kern County Planning Department Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports (2006), which adopts the same significance thresholds used by the SJVAPCD and the EKAPCD, and contains additional requirements for air quality analyses prepared to comply with CEQA, when Kern County is the lead agency, as well as the Antelope Valley Air Quality Management District's (AVAQMD) California Environmental Quality Act and Federal Conformity Guidelines (2008), which could apply to a portion of the Mojave Desert Air Basin. However, the specific requirements for analysis contained in these documents with respect to CEQA should not be viewed as applicable to this particular NEPA analysis. It should be noted that any particular project that occurs on the Covered Lands would be required to comply with CEQA in accordance with the guidance from the applicable air district and local jurisdiction.

effects, this Supplemental Draft EIS explains that construction emissions associated with commercial and residential development could generate diesel particulate matter (DPM). Therefore, this Supplemental Draft EIS includes a screening level health risk assessment of the DPM construction emissions under the Proposed TU MSHCP Alternative. The analysis in the health risk assessment reflects a typical construction area and the assumptions and conclusions are applicable to the other build alternatives.

With respect to odors, this Supplemental Draft EIS clarifies the potential odor effects that could occur under the alternatives and explains that as development progresses, sensitive receptors could be exposed to odors associated with construction activities. Similarly, certain land uses associated with odor complaints could occur, such as wastewater treatment facilities, equestrian centers, commercial refuse receptacles, and restaurant uses.[2]

## 16.2.2 Baseline Information

General questions were raised about the sufficiency of the Draft EIS's discussion of the environmental baseline for air quality. Section 3.3, Air Quality, in Volume 1of this Supplemental Draft EIS describes the affected environment as it relates to air quality, including a general discussion of the regional air basins; the updated air quality regulations applicable to the Covered Lands (including Federal, state and local laws and regulations), and state and Federal air quality standards and attainment status for the SJVAB, the MDAB, and the SCAB; a description of relevant air pollutants; and ambient air quality monitoring results, which include the addition of monitoring data available as requested by one commenter, for Peace Valley Road monitoring station. Additional information has been added to this Supplemental Draft EIS regarding the regulatory setting of the proposed action, and certain information such as air quality attainment status and ambient air quality monitoring data have been updated based on additional information that has become available since publication of the Draft EIS. In addition, this Supplemental Draft EIS includes information about the SCAB, including relevant significance thresholds and attainment status.

Sections 4.3, Air Quality, and 4.9, Climate Change and Greenhouse Gases, in Volume I of this Supplemental Draft EIS have been revised to clarify that existing conditions within the Covered Lands include the ongoing Existing Ranch Uses, and that because these activities generate only incidental, insubstantial criteria pollutant and greenhouse gas (GHG) emissions, the existing condition was assumed to generate only minor emissions on the Covered Lands. It is further clarified that air emissions associated with Existing Ranch Uses do not exceed SJVAPCD thresholds and that the emissions associated with Existing Ranch Uses under the No Action would be the same compared to existing conditions. Therefore, the analysis effectively utilizes the existing condition as baseline for purposes of the alternatives analysis (Section 4.3.1.1, Methods, in Volume I of this Supplemental Draft EIS). In addition to comparing emissions of all alternatives relative to this baseline, this Supplemental Draft EIS compares potential emissions of all alternatives against the thresholds set forth by the relevant air districts. This approach complies with NEPA's requirements to succinctly describe the area affected (NEPA Guidelines 1502.15) and to compare the environmental effects of each alternative (NEPA Guidelines 1502.14, 1502.16).

[2] Although the SJVAPCD's CEQA guidance does include a suggested methodology for determining whether a project poses the potential of creating objectionable odors, its recommended approach assumes knowledge about the potential distances between odor sources and receptors (SJVAPCD 2002, p. 26-27). This level of information about potential development on the Covered Lands is not available for all the proposed Commercial and Residential Development Activities associated with the alternatives, and is not appropriate for a NEPA review of the indirect effects of the proposed action at a programmatic level. Analysis consistent with the SJVAPCD's CEQA guidance would be conducted, as appropriate, as part of the CEQA review performed for development projects on the Covered Lands. The TMV EIR indicates that odor impacts are not significant (Kern County 2009).

## 16.2.3 Regional Air Quality

Some comments questioned whether the Draft EIS appropriately recognized the air quality challenges faced by the region with respect to attainment of NAAQS and California ambient air quality standards (CAAQS). Comments noted that California has requested that both the SJVAB and the SCAB be reclassified to extreme for 8-hour ozone NAAQS, and that substantial emission reductions are required under the relevant air quality management plans, which are included in California's state implementation plan (SIP), and assert that these emissions reductions would be increasingly difficult to achieve as a result of regional growth. These comments also question whether the Draft EIS included indirect emissions and appropriately analyzed how the proposed action would affect the ability of the state to meet future Federal obligations associated with more stringent NAAQS promulgated in recent years and under development.

These comments correctly note that the region faces challenging air quality problems. As discussed above, this Supplemental Draft EIS recognizes the air quality problems in the region, and analyzes the potential indirect air quality effects (e.g., construction, area source, and mobile source emissions) of the proposed action. With respect to potential emissions in the SCAB, the Draft EIS relied on what was known about potential development and defaults available at the time it was prepared. This analysis resulted in grouping criteria pollutant emissions on the basis of the physical location of development. However, the TMV EIR (Kern County 2009) includes more detailed, project-specific inputs, which resulted in a different allocation of projected emissions among air basins, including potential emissions from motor vehicles within the SCAB. Because additional information about the TMV Project is now available and the potential emissions associated with that development are better understood, this Supplemental Draft EIS includes a description of the SCAB, its regional air quality challenges, and an analysis of each alternative's potential air quality effects within the SCAB.

The commenter was also correct that the Governing Board of the SJVAPCD voted to request that the U.S. Environmental Protection Agency (EPA) reclassify the SJVAB as extreme nonattainment for the 8-hour ozone NAAQS. The California Air Resources Board (CARB) approved this request in June 2007, and EPA approved the reclassification in June 2010. Similarly, California requested that the SCAB be reclassified as extreme nonattainment for the 8-hour ozone NAAQS, which was also approved by EPA in June 2010. As noted above, this Supplemental Draft EIS has been updated to reflect reclassifications that have occurred in the relevant air basins since publication of the Draft EIS. As noted in the comment, exactly what will be included in revised SIPs is not yet clear. Attempting to analyze the potential indirect effects of the proposed action on future requirements that might be included in SIPs, as suggested by the comments, would be speculative, which is discouraged by NEPA (*Presidio Golf Course v. Nat'l Park Serv.*, 155 F.3d 1153, 1162-63 (1998) ["Agencies must consider only those indirect effects that are reasonably foreseeable. They need not consider potential effects that are highly speculative or indefinite."] [internal citations omitted]).

However, this Supplemental Draft EIS does consider air quality effects with respect to existing Federal and state attainment designations. As discussed above, this Supplemental Draft EIS analyzes potential criteria pollutant emissions that could be facilitated by the proposed action and compares them to the applicable thresholds of the air districts. Exceedances of these thresholds suggest that an alternative could contribute to exceedance of NAAQS or CAAQS and therefore contribute to the basin's nonattainment of these standards. This analysis is provided in Sections 4.3.3.1, 4.3.3.2, 4.3.4.1, 4.3.4.2, 4.3.5.1, 4.3.5.2, 4.3.6.1, and 4.3.6.2, Construction Emissions and Operation Emissions, in Volume I of this Supplemental Draft EIS, relative to each alternative.

This Supplemental Draft EIS also explains that the application of mitigation measures would reduce air quality effects, although those effects may not be eliminated. This Supplemental Draft EIS, therefore, concludes that each of the build alternatives could contribute to adverse regional air

quality, including exceedance of CAAQS or NAAQS for ozone, and particulate matter less than or equal to 10 microns in diameter ($PM_{10}$) and particulate matter less than or equal to 25 microns in diameter ($PM_{25}$).

## 16.2.4 Ozone and Particulate Matter Transport

Some commenters raised particular concerns with respect to the possibility of transport of ozone and $PM_{2.5}$ resulting from the TMV Project in particular.

This Supplemental Draft EIS has been revised to explain that pollutant transport from the SJVAB and the SCAB contribute to ozone impacts in the MDAB (Section 3.3.1, Regional Air Basins, in Volume I of this Supplemental Draft EIS). Transport of $PM_{2.5}$ into the MDAB from adjacent air basins can also occur, though transport of ozone is generally considered a greater concern due to its gaseous form. Pollutant transport from the SJVAB to the MDAB occurs as a result of prevailing wind patterns, which blow pollutants from the SJVAB to the MDAB (as described in various studies (California Air Resources Board 2009, WZI 1994, Sonoma Technology 2006). However, a detailed analysis of potential ozone or transport requires project-specific details that are not available for all the development considered under the Proposed TU MSHCP or alternatives, or appropriate for a programmatic analysis. In general, a detailed analysis is beyond the scope required for an EIS analyzing potential direct and indirect effects of approval of a habitat conservation plan (HCP) and issuance of an incidental take permit (ITP).

More detailed consideration of potential pollutant transport would be appropriately considered during the project approval process for any development that would occur on the Covered Lands, as the precise nature of any potential transport would depend upon the details of the development and, in particular, the mitigation required for such development. For example, the TMV EIR (Kern County 2009) recognized that pollutant transport occurs from the SJVAB and the MDAB. However, the TMV Project applicant has entered a voluntary emissions reduction agreement (VERA) with the SJVAPCD that commits it to fully offsetting all emissions of ozone precursors and PM within the SJVAB; thus, the TMV Project, a primary development of most of the alternatives considered in this EIS, would result in no net transport of $O_3$ or PM from the SJVAB to the MDAB (Kern County 2009, pp. 4.3-5, 4.3-9, and 4.3-107).

Other development that might occur on the Covered Lands can be expected to include similar mitigation measures. In particular, the SJVAPCD's Rule 9510 requires reductions of 33.3% of a project's $NO_X$ (an ozone precursor) emissions and 50% of its $PM_{10}$ emissions for any development project within the SJVAB. Moreover, the SJVAPCD encourages project applicants to enter VERAs, as did the TMV Project applicant, to fully offset their project emissions, thereby exceeding the requirements of Rule 9510 (San Joaquin Valley Air Pollution Control District 2007, p. 3). Thus, any development that occurs on the Covered Lands within the SJVAB would have substantial obligations with respect to mitigating emissions of $NO_X$ and $PM_{10}$. These obligations would substantially reduce the potential for air pollutant transport. However, it is possible that some ozone and/or $PM_{2.5}$ transport may occur within the MDAB as a result of development under any of the alternatives in the SJVAB.

## 16.2.5 Analysis of Fine Particulate Matter and Health Effects

Some commenters raised concerns about $PM_{2.5}$ emissions that could result from the proposed action, and the associated public health effects. Commenters questioned whether the Draft EIS adequately considers public health impacts associated with $PM_{2.5}$ and stated that the EIS should reflect recent scientific data. Commenters specifically noted that $PM_{2.5}$ emissions associated with the proposed action could combine with emissions from other regional projects, thereby exacerbating regional health effects.

As recognized in this Supplemental Draft EIS, fine particulate pollution is a public health problem in the region. Section 3.3, Air Quality, in Volume I of this Supplemental Draft EIS notes that the SJVAB is in nonattainment for both the NAAQS and CAAQS for $PM_{2.5}$, and describes the health problems associated with $PM_{2.5}$. Section 3.3.3, Ambient Air Monitoring Data, describes recent monitoring data in the area, which demonstrates that certain parts of the region have repeatedly exceeded the $PM_{2.5}$ standard. Section 4.3, Air Quality, in Volume I of this Supplemental Draft EIS discusses potential $PM_{2.5}$ emissions that could occur under each alternative, and assesses the exposure of sensitive receptors to carcinogenic air emissions (i.e., DPM) during construction, concluding that health effects would be below significance levels for all alternatives.

This Supplemental Draft EIS has also been revised to clarify that compliance with applicable Federal, state, and local regulations through project-level approvals would require mitigation that would further reduce emissions of criteria pollutants, including $PM_{2.5}$ emissions, associated with proposed Commercial and Residential Development Activities. For example, dust control requirements would substantially reduce $PM_{2.5}$ emissions resulting from construction activities, and various measures intended to reduce automobile use would reduce fine PM emissions generated during operations. In addition, SJVAPCD's Rule 9510 includes strict requirements for $PM_{10}$ reduction for all development in the SJVAB, which would also result in comparable reductions of $PM_{2.5}$. (Much of the operations emissions would be related to combustion of fossil fuels, and $PM_{2.5}$ comprises most of the $PM_{10}$ in combustion exhaust.)

Thus, this Supplemental Draft EIS recognizes the public health concerns with respect to fine PM, analyzes the potential indirect $PM_{2.5}$ effects of the proposed action and alternatives, and proposes mitigation to address these potential effects.

## 16.2.6 Dispersion Analysis and Attainment of NAAQS

One commenter suggested the EIS should include additional modeling in order to determine the proposed action's potential effects on attainment of NAAQS. Specifically, the commenter believes the EIS should include a dispersion analysis and suggested that the Draft EIS inappropriately relies upon emission reductions that would be achieved through compliance with the SJVAPCD's Rule 9510, or the VERA that the TMV Project applicant has entered with the SJVAPCD. The commenter also suggested that a dispersion analysis should account for emissions that may result from other regional projects.

A pollutant dispersion analysis is not required here. Such an analysis would require detailed, project-specific data (such as specific locations of emission sources and exhaust characteristics) that are not available or appropriate for a programmatic document. In addition, most of the operations emissions would be associated with motor vehicles and dispersed area sources, such as natural gas combustion, landscape maintenance equipment, and consumer products. While a dispersion analysis was completed for the TMV Project in the TMV EIR (Kern County 2009),[3] adequate project details are not known for the other proposed Commercial and Residential Development Activities. In addition, dispersion models are not available to determine the effects of a single project's emissions of $NO_X$ and ROG on ambient ozone concentrations, as ozone formation is a regional issue that depends on many additional factors, including other regional emissions and planned air district emission reductions, and cannot be traced to the ozone precursors emitted by an individual project. Moreover, this data is not necessary to determine whether the proposed action would impede the ability of the region to attain the relevant ambient air quality standards. As described above, this Supplemental Draft EIS compares potential indirect emissions associated with each alternative

[3] The dispersion analysis in the Tejon Mountain Village EIR looked at $NO_2$, CO, $SO_2$, $PM_{2.5}$, and $PM_{10}$, and concluded that the project would not create or substantially contribute to an existing exceedance of relevant ambient air quality standards (Kern County 2009, pp. 4.3-13, 4.3-25).

against the significance thresholds of the various air districts, which represents the generally accepted approach to evaluating whether emissions would result in a substantial contribution to existing violations of the CAAQS and NAAQS.

This Supplemental Draft EIS recognizes that any development occurring on the Covered Lands would need to comply with the SJVAPCD's Rule 9510 (Section 3.3.2.3, Local Laws, Regulations, and Standards, in Volume I of this Supplemental Draft EIS). Accordingly, this Supplemental Draft EIS appropriately calculates the anticipated emissions reductions that would result from indirect source review compliance (Tables 4.3-2, 4.3-3, 4.3-10, and 4.3-13, in Section 4.3, Air Quality, in Volume I of this Supplemental Draft EIS). However, this Supplemental Draft EIS does not suggest that Indirect Source Review compliance would prevent air quality effects associated with development facilitated by the proposed action or other alternatives. Rather, this Supplemental Draft EIS acknowledges that, even with the emission reductions that would be required pursuant to Rule 9510, emissions under all of the alternatives would still exceed the SJVAPCD thresholds.

In addition, this Supplemental Draft EIS notes that the TMV Project entered into a VERA, but does not attempt to rely upon the VERA to suggest proposed Commercial and Residential Development Activities would not interfere with attainment of NAAQS.

## 16.2.7 Federal Clean Air Act Conformity Analysis

One commenter suggested that a Federal conformity analysis should be included in the EIS. As recognized by the commenter and described in Section 3.3.2.1, Federal Laws, Regulations, and Standards, in Volume I of this Supplemental Draft EIS, a conformity analysis is not required. Specifically, a conformity analysis is not required here because there are no "indirect emissions" within the meaning of the Federal general conformity regulations. According to the revised regulations (effective July 6, 2010), the term “indirect emissions” refers to those criteria pollutant or precursor emissions that

- are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place as the action,
- are reasonably foreseeable,
- the agency can practically control, and
- for which the agency has continuing program responsibility (40 Code of Federal Regulations [CFR ] 93.152).

This section clarifies that,

> For the purposes of this definition, even if a Federal licensing, rulemaking or other approving action is a required initial step for a subsequent activity that causes emissions, such initial steps do not mean that the Federal agency can practically control any resulting emissions.” The Supplemental Rule on the revised conformity regulations further explains the distinction between requirements for a Federal agency under NEPA and conformity requirements under the Clean Air Act, and notes that requiring a conformity analysis when a Federal agency does not have control over emissions, simply because an EIS is required, “would greatly expand the program beyond what EPA believes that the law intended (75 *Federal Register* [FR] 17260).

As discussed in Section 3.3.2.1, Federal Laws, Regulations, and Standards, in Volume I of this Supplemental Draft EIS, approval of the TU MSHCP by the U.S. Fish and Wildlife Service (Service) would represent an initial step for a subsequent activity that may cause emissions. However, the Service would not exercise practical control over any emissions that do ultimately result from development activities. Therefore, a conformity analysis is not required to be performed for the proposed action, either under the Clean Air Act or NEPA. In addition, completing a conformity

analysis would not add substantially new or important information to the EIS. This Supplemental Draft EIS includes a complete analysis of the potential indirect air quality effects of the proposed action and alternatives, in compliance with NEPA's mandates.

## 16.2.8 Combined Construction and Operations Emissions Analysis

Some commenters suggested that, given the long buildout period for the proposed Commercial and Residential Development Activities, the EIS should include an analysis that accounts for the overlap in construction and operations emissions.

In response to these comments, this Supplemental Draft EIS has been revised to include an evaluation of the combined construction and operations emissions that would occur at key years (Tables 4.3-7, 4.3-15, 4.3-25, and 4.3-26 in Section 4.3, Air Quality, in Volume I of this Supplemental Draft EIS). Because the project-specific details and timelines for the proposed development activities associated with the actual construction and operations overlap are unknown at this time, the specific combined emissions are only approximated.

## 16.2.9 Adequacy of Mitigation Measures

Various commenters questioned the Draft EIS's air quality mitigation commitments. Some commenters suggested that the mitigation measures included in the EIS should be more specific and clearly demonstrate how emissions would be reduced as a result of mitigation measures. Commenters also request the inclusion of specific mitigation commitments, including reduction of diesel emissions associated with construction and other activities, renewable power requirements, preferential contracting commitments, commitments to reduce emissions associated with generator use, and special precautions near sensitive receptors.

In response to comments, this Supplemental Draft EIS was revised to clarify that the Service has direct authority and jurisdiction over biological resources; however, with respect to secondary effects related to air quality from future development, other agencies have primary jurisdiction. Thus, for impacts on biological resources, the conservation measures in the TU MSHCP require certain air quality protections such as dust controls measures (TU MSHCP Section 7, Conservation Plan for Other Covered Species). Because the decision before the Service is to consider whether to approve the TU MSHCP and issue the ITP and not approval of a specific plan for development, imposition of such development measures are appropriately required by the local jurisdiction when an actual development project is proposed. This Supplemental Draft EIS explains that under the Proposed TU MSHCP Alternative and other build alternatives, any development would have to comply with applicable Federal, state and local air quality requirements. Further, the Supplemental Draft EIS describes what type of requirements this would include. Section 4.3.3.6, Mitigation Measures, and Section 4.9.3.3, Mitigation Measures, in Volume I of this Supplemental Draft EIS also describe other requirements that may be imposed by the County during local approval processes, and additional construction- and operations-related mitigation measures that would help to reduce criteria pollutant and GHG emissions, respectively, from Commercial and Residential Development Activities.

As discussed in Section 4.3.3.6, Mitigation Measures, and Section 4.9.3.3, Mitigation Measures, in Volume I of this Supplemental Draft EIS, the TMV EIR supports the Service's conclusions regarding the type of mitigation that would be imposed as part of the local commercial and residential development approval process to protect air quality and reduce GHG emissions. In fact, the EIR includes many of the mitigation commitments requested by commenters including renewable power provisions (Appendix J, Kern County 2009, Draft EIR pp. 4.3-128 to -135); recycled material

commitments (Appendix J, Kern County 2009, Draft EIR p. 4.3-181); construction equipment and bid specification requirements, including a requirement that diesel particulate filters be required on many pieces of equipment and that diesel oxidation catalysts be required on all equipment (Appendix J, Kern County 2009, Draft EIR p. 4.3-117); and various commitments to sensitive receptors that may be affected by construction activity (Appendix J, Kern County 2009, Draft EIR pp. 4.3-147 and Final EIR p. 7-15).

## 16.2.10 Consistency of Analysis Between the Draft EIS and TMV EIR

Some commenters raised questions regarding inconsistencies between the criteria pollutant emissions estimates in the Draft EIS and those in the TMV EIR, and argued that such inconsistency fails to provide a clear description of the impacts.

Since preparation of the Draft EIS, the TMV EIR has been released and certified. Additionally, a newer air emission estimation model, CalEEMod, is now available. As commenters have noted, the air analysis in the TMV EIR resulted in higher emissions estimates than were included in the Draft EIS (i.e., compare Draft EIS Table 4.3L with EIR Table 4.3-14 [construction emissions] and Draft EIS Table 4.3O with EIR Table 4.3-18 [operations emissions]). Based on review of the TMV EIR, the different construction and operations air emissions modeling results were attributed to the fact that the Draft EIS air emissions analysis used URBEMIS2007 model defaults and assumptions, such as construction equipment types and amounts, motor vehicle trip generation and distances, fuel usage, while the TMV EIR used project-specific data in the URBEMIS2007 model. For construction emissions, the Draft EIS assumed that the entire site would be graded initially, followed by building construction proceeding at a uniform rate, continuously for 20 years, while the TMV EIR used project-specific construction scheduling with major grading activity at the beginning of each development phase, as well as placing the bulk of construction in the early phases of development. The revised air emission analysis for the Supplement Draft EIS more closely simulates the construction considered in the TMV EIR, while remaining programmatic to consider the additional development provided in the various alternatives. Additionally, the revised air emission analysis uses the newest model, CalEEMod.

**Table MR17-1. Comments Addressed in Master Response 17**

| Comment | Company |
|---|---|
| O4-57 | Center for Biological Diversity (Keats, Adam) |
| O4-58 | Center for Biological Diversity (Keats, Adam) |
| O5-26 | Defenders of Wildlife (Flick, Pamela) |
| O5-27 | Defenders of Wildlife (Flick, Pamela) |

# 17.1 Summary of Substantive Comments

The following summarizes the substantive comments received on the Draft EIS and Draft TU MSHCP monitoring and adaptive management program. Table MR-17 provides a list of the commenters and a reference to the individual comments, as summarized below. The parenthetical reference after each summary bullet indicates where a response to that comment is provided.

- The TU MSHCP does not include long-term monitoring for the Covered Species, their associated habitat, or conserved resources. (Response provided in Section 17.2.1, Long-Term Monitoring.)
- The TU MSHCP should include an adaptive management program that includes thresholds, triggers, and criteria for success, as well as a means to revoke the incidental take permit (ITP) if goals and objectives are not met. (Response provided in Section 17.2.2, Measureable Criteria and Adaptive Management.)

# 17.2 Responses to Substantive Comments

## 17.2.1 Long-Term Monitoring

A comment stated that the TU MSHCP does not include long-term monitoring for the Covered Species and their associated habitats or for conserved resources.

Two types of long-term monitoring were included in the Draft TU MSHCP: compliance monitoring (Section 7.3.1, Compliance Monitoring) and effectiveness monitoring (Section 7.3.2, Effectiveness Monitoring), and are also reflected in the current draft of the TU MSHCP. Monitoring commitments are also summarized for the Proposed TU MSHCP Alternative in Section 2.2.2.4, Monitoring and Reporting, in Volume I of this Supplemental Draft EIS.

Compliance monitoring would verify whether Tejon Ranchcorp (TRC) is meeting the terms of the TU MSHCP and Implementing Agreement. Effectiveness monitoring would determine the effectiveness of the management measures in meeting the biological goals and objectives prescribed in the TU MSHCP for the Covered Species. Annual reports documenting compliance and effectiveness monitoring, as described in Sections 4.5.2 and 7.3.1 of the TU MSHCP, would be prepared, as required by Section 9 of the Implementing Agreement. For compliance monitoring, the annual report would include a summary of effects on Covered Species and their associated habitat

resulting from Covered Activities in the preceding year, the cumulative total for effects resulting from Covered Activities since issuance of the ITP, a summary of lands for which conservation easements or deed restrictions, as appropriate, have been recorded, and a description of any TU MSHCP amendments proposed or approved in the preceding year. For effectiveness monitoring, the annual report would include a description of monitoring and management activities conducted the preceding year, including, at a minimum, data collected and collection methods (e.g., who collected the data and when); data analysis and results; data synthesis with earlier data (e.g., trends analyses); identification of problems or successes to provide feedback to future monitoring and management; proposed revision to the monitoring and management program; documentation of unforeseen circumstances occurring the preceding year and how they were addressed; and a discussion of triggers for adaptive management and how they were implemented.

Effectiveness monitoring would be measured from the resource baseline to be finalized and reported in the first annual report. As described in Section 7.3, Monitoring Measures, of the TU MSHCP, while substantial baseline data exist for the Covered Lands, including vegetation mapping, soils mapping, and topographic information, and specific species occurrence data exists for the TMV Planning Area (Dudek 2007a, 2007b), for the effectiveness monitoring, additional Covered Species occurrences and site-specific information (e.g., presence/absence surveys, vegetation mapping) would be collected, as necessary, for the Open Space areas on Covered Lands outside of the TMV Planning Area. The resource baseline for open space would be described and documented in the first annual report following ITP issuance and would inform the effectiveness monitoring program. Effectiveness monitoring would, in turn, inform the adaptive management program. Generally, effectiveness monitoring provides the feedback for management activities, including experimental management, the results of which are used to modify or adapt future management based on the monitoring results. As discussed below, the effectiveness monitoring and adaptive management approaches are based on biological goals and objectives as well as thresholds and triggers for adaptive management measures.

The information contained in the TU MSHCP annual report, as required by Section 9 of the Implementing Agreement, would identify the results of the monitoring, instances of noncompliance and actions taken to rectify such noncompliance, known encounters with California condors, and other reporting requirements set forth in Sections 4.5.2 and 7.3 of the TU MSHCP, including documentation of significant problems or successes that may necessitate alterations to the monitoring and management programs, recommended revisions to the programs, changed or unforeseen circumstances that occurred in the prior year and a description of how they were addressed, and adaptive management triggers and how adaptive management was implemented.

## 17.2.2 Measureable Criteria and Adaptive Management

A comment stated that the *Habitat Conservation Planning Handbook* (HCP Handbook) (U.S. Fish and Wildlife Service 1996) and the California Environmental Quality Act (CEQA) indicate that the Service should not approve a habitat conservation plan (HCP) if the conservation strategies have a low likelihood of success, and that HCPs should include measureable criteria linked to monitoring. The comment quoted the HCP Handbook: “A key element of adaptive management is the establishment of testable hypotheses linked to the conservation strategies and their biological objectives.” Another comment stated that the adaptive management program should include identification of thresholds and triggers, which are missing from the TU MSHCP. The commenter stated that the TU MSHCP should include an adaptive management program and that, if monitoring indicates that the parameters of the TU MSHCP are not met, there should be a mechanism to revoke the ITP.

Although CEQA standards are not applicable to the TU MSHCP, the adaptive management program is designed to meet the guidance provided by the HCP Handbook. Specifically, as described in the HCP Handbook:

- An adaptive management approach allows for up-front, mutually agreed-upon changes in an HCP's operating conservation plan that may be necessary for Covered Species in light of new information. In order to be successfully implemented, adaptive management provisions must be linked to measurable biological goals and monitoring.
- Not all HCPs or all species covered in an ITP need an adaptive management strategy. However, an adaptive management strategy is essential for permits that cover species that have biological data or information gaps that incur a significant risk to that species. Possible significant data gaps that could lead to the development of an adaptive management strategy include, but are not limited to, significant biological uncertainty about significant information about the ecology of the species or its habitat (e.g., food preferences, relative importance of predators, territory size), habitat or species management techniques, or the degree of potential effects of the activity on the species covered in the ITP.

Sections 4.6 (California Condor) and Section 7.5 (Other Covered Species) of the TU MSHCP describe the proposed adaptive management strategies for the TU MSHCP. For California condor, adaptive management is based on thresholds and triggers derived from monitoring the telemetry data. Specifically, the TU MSHCP requires adaptive management to address what to do when data reveal issues related to supplemental feeding, microtrash, and possible habituation. For other Covered Species, the adaptive management program of the TU MSHCP focuses on achieving the measurable goals and objectives identified for the Covered Species in Section 7.1. As stated in Section 7.5 of the TU MSHCP, "management and adaptive management activities would be directed toward avoiding and minimizing threats to Covered Species that may result from increased human presence in proximity to conserved open space." Measures to manage these threats are also included in the species goals and objectives presented in Section 7.1 of the TU MSHCP. For example, Section 7.1 of the TU MSHCP includes the acreage of modeled habitat in Open Space for each of the species that would be managed, and these acreages provide measureable targets for long-term conservation and management of the habitat.

In terms of measuring the effectiveness of the preserved habitat for the Covered Species, it should also be noted that additional quantitative objectives may be developed for or derived from management in accordance with the various management plans for the Covered Lands, including the Ranchwide Management Plan (RWMP). Measurable goals and objectives would evolve as the monitoring and adaptive management program is developed in coordination with the RWMP.

Section 14 of the Implementing Agreement requires that the adaptive management program set forth in the TU MSHCP be implemented. As discussed in Section 7.5 of the TU MSHCP, TRC's adaptive management program would be coordinated with the Tejon Ranch Conservancy's management program for the open space. The Ranchwide Agreement requires the preparation of a management plan for the approximately 240,000 acres of ranch lands that are proposed to be conserved as part of the agreement (Tejon Ranchcorp et al. 2008). Adaptive management measures undertaken as part of the TU MSHCP would be coordinated with the management strategies and standards as they emerge for the Ranchwide Agreement. This would allow for the development of a joint adaptive management framework, and sharing of baseline information and reporting of data in an accessible, uniform database that would facilitate adaptive management efforts. Certain adaptive management activities, such as exotics control or grazing management, if carried out in Covered Lands as well as ranchwide, could increase research value and benefits for Covered Species.

Finally, as noted in Master Response 8, Regulatory Considerations, and summarized in Section 2.2.2.6, Changed Circumstances, in Volume I of this Supplemental Draft EIS, the TU MSHCP also addresses reasonably foreseeable changed circumstances resulting from climatic drought, fire/climate change, and new listings of species or designation of critical habitat not covered by the TU MSHCP. For changed circumstances resulting from drought, fire, and climate change issues, the TU MSHCP incorporates and discusses preventive measures and responses; for new species or

critical habitat designations, the TU MSHCP discusses measures to avoid incidental take or adverse modification of habitat until an amendment to the TU MSHCP can be assessed by the Service. Additionally, the adaptive management program is assured of implementation as it also has funding allocated to it (Table 9-3 in the TU MSHCP).

With regard to ITP revocation, as discussed in Master Response 8, Regulatory Considerations, provisions of an ITP are fully enforceable under the federal Endangered Species Act (ESA), which provides for permit revocation for violations of the terms of the permit (16 United States Code [U.S.C.] 1539(a) (2)(C)). Section 12.2 of the Implementing Agreement reiterates this point: "The USFWS may suspend or revoke the Permit, in whole or in part, for cause in accordance with the laws and regulations in for at the time of such suspension or revocation" (Appendix A of the TU MSHCP, p. 33). The Implementing Agreement itself also sets forth the remedies and enforcement provisions per Section 12.1, and the Service retains all rights and remedies to enforce its terms. Among other things, Section 14 of the Implementing Agreement requires the adaptive management program for both the California condor and other Covered Species incorporate the thresholds and criteria discussed above. For example, Section 14.2 of the Implementing Agreement states that "In order to meet the goals and objectives identified in Section 7 of the TU MSHCP, the adaptive management measures for Other Covered Species will be informed by the effectiveness monitoring, and implemented as set forth in the TU MSHCP." Thus, the Service would determine whether the goals and objectives are being met through effectiveness monitoring and would have the authority to suspend or revoke the ITP if the goals and objectives are not being met.

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