

Master Response 1A

California Condor Data and Habitat Use

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

Comment	Commenter
04-74	Center for Biological Diversity, Adam Keats
04-75	Center for Biological Diversity, Adam Keats
04-76	Center for Biological Diversity, Adam Keats
04-77	Center for Biological Diversity, Adam Keats
04-79	Center for Biological Diversity, Adam Keats
04-80	Center for Biological Diversity, Adam Keats
04-81	Center for Biological Diversity, Adam Keats
04-82	Center for Biological Diversity, Adam Keats
04-83	Center for Biological Diversity, Adam Keats
04-84	Center for Biological Diversity, Adam Keats
04-85	Center for Biological Diversity, Adam Keats
04-86	Center for Biological Diversity, Adam Keats
04-87	Center for Biological Diversity, Adam Keats
04-88	Center for Biological Diversity, Adam Keats
04-88A	Center for Biological Diversity, Adam Keats
04-89	Center for Biological Diversity, Adam Keats
04-90	Center for Biological Diversity, Adam Keats
04-91	Center for Biological Diversity, Adam Keats
04-93	Center for Biological Diversity, Adam Keats
04-94	Center for Biological Diversity, Adam Keats
04-124	Center for Biological Diversity, Adam Keats
04-376	Center for Biological Diversity, Adam Keats
04-378	Center for Biological Diversity, Adam Keats
04-379	Center for Biological Diversity, Adam Keats
04-380	Center for Biological Diversity, Adam Keats
04-382	Center for Biological Diversity, Adam Keats
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04-385	Center for Biological Diversity, Adam Keats
04-386	Center for Biological Diversity, Adam Keats
04-387	Center for Biological Diversity, Adam Keats
04-388	Center for Biological Diversity, Adam Keats
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04-391	Center for Biological Diversity, Adam Keats
04-392	Center for Biological Diversity, Adam Keats

Comment	Commenter
04-393	Center for Biological Diversity, Adam Keats
04-394	Center for Biological Diversity, Adam Keats
04-395	Center for Biological Diversity, Adam Keats
04-396	Center for Biological Diversity, Adam Keats
04-397	Center for Biological Diversity, Adam Keats
04-398	Center for Biological Diversity, Adam Keats
04-399	Center for Biological Diversity, Adam Keats
04-400	Center for Biological Diversity, Adam Keats
04-401	Center for Biological Diversity, Adam Keats
04-402	Center for Biological Diversity, Adam Keats
04-403	Center for Biological Diversity, Adam Keats
04-404	Center for Biological Diversity, Adam Keats
04-405	Center for Biological Diversity, Adam Keats
04-406	Center for Biological Diversity, Adam Keats
04-415	Center for Biological Diversity, Adam Keats
1293-13	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-14	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-15	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-16	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-17	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-18	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-19	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-20	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-21	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-22	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-23	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1293-58	Clendenen, David A., Janet A. Hamber, Allen Mee, Vicky J. Meretsky, Anthony Prieto, Fred C. Sibley, Dr. Noel F.R. Snyder, William D. Toone
1626-5	Hamber, Robert
1627-44	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.