

APPENDIX 6.6-4

SWAINSON'S HAWK MONITORING REPORT



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September 20, 2007

Joe Stenger
TRC Solutions
2666 Rodman Drive
Los Osos, CA 93402

Dear Mr. Stenger:

This letter report provides the results of 2007 monitoring for Swainson’s hawk (*Buteo swainsoni*) between the site of the proposed Avenal Energy power project (Kings County) and California Department of Water Resources (DWR) Arroyo Pasajero Detention Basin (Fresno County) (Figure 1). The monitoring was conducted at the request of the California Department of Fish and Game (DFG) to determine if there is evidence of Swainson’s hawk foraging or other use within the electrical transmission line corridor between the proposed power plant site and Pacific Gas and Electric Company’s (PG&E) Gates Substation (i.e., route of the 6.4 miles of new electrical transmission line proposed as part of the new power project).

The lands between the site of the proposed Avenal Energy power plant (i.e., project site) and Arroyo Pasajero Detention Basin (i.e., detention basin) were selected for monitoring given that all local records of nesting Swainson’s hawk from DFG and DWR databases are from the detention basin (Figure 2). Therefore, it was assumed that daily movement of Swainson’s hawks in the area would originate from the vicinity of nest sites within the detention basin. Monitoring was conducted for a minimum of eight hours on each of six days over a three-week period of time between July 17 and August 1, 2007. Monitoring consisted of: (1) observing the electrical transmission line corridor from several fixed vantage points while watching for Swainson’s hawks and other raptors and (2) driving public roads and farm roads within the area while searching for roosting or soaring Swainson’s hawks. All raptors found within the area were observed and followed to the extent possible to maximize the amount of location and behavior data associated with the individual(s). The collected data associated with each observed raptor included the date, time, location, and behavior of the individual(s).

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The results of monitoring for Swainson's hawk within the monitoring area are summarized in Table 1. The monitoring found no evidence of Swainson's hawk foraging or other uses within the existing electrical transmission line corridor south of the Gates Substation. Furthermore, with one exception (an immature Swainson's hawk observed sitting on a telephone pole on the south side of Jayne Avenue east of Lassen Avenue), no foraging or other uses by Swainson's hawks were documented south of Jayne Avenue. These results are not unexpected given that most of the land south of Jayne Avenue is comprised of orchards (an unsuitable foraging habitat for Swainson's hawk) while the lands north of Jayne Avenue, surrounding the City of Huron, and in the vicinity of the detention basin are comprised of field crops (typically tomatoes, cantaloupes, wheat, or onions) or non-native grassland. Consequently, Swainson's hawks would not be expected to incur the bioenergetic costs of foraging further south over unsuitable foraging habitat when extensive acreage of suitable foraging habitat is located immediately adjacent to the known nest sites.

Should you have any questions in regards to the surveys or information presented in this letter report please do not hesitate to contact me (916-638-7368).

A handwritten signature in cursive script that reads "Michael Bumgardner".

Michael Bumgardner
Bumgardner Biological Consulting

| <p align="center">Table 1 2007 Swainson's Hawk Monitoring Data for Lands near the Arroyo Pasajero Detention Basin (near the City of Huron)</p> | | |
|---|---|--|
| Date/Time | Location | Notes |
| 07-17-07 09:05 PST | immediately northwest of Gale Avenue and San Luis Canal | adult Swainson's hawk soaring and calling; flew out of sight to northwest |
| 07-17-07 09:22 PST | 0.3 miles north of the intersection of Gale Avenue and San Luis Canal | immature Swainson's hawk sitting and soaring over detention basin |
| 07-18-07 07:40 PST | 0.3 miles north of the intersection of Gale Avenue and San Luis Canal | immature Swainson's hawk sitting and soaring over detention basin; mobbed by western kingbird |
| 07-18-07 10:24 PST | 0.3 miles north of the intersection of Gale Avenue and San Luis Canal | immature Swainson's hawk sitting on canal embankment looking east (suggests that adults may be foraging over lands to east) |
| 07-23-07 08:29 PST | along Lassen Avenue 1.5 miles north of Huron | adult Swainson's hawk sitting on telephone pole east of Lassen Road; 2 nd adult Swainson's hawk sitting in low snag 100 yards east of Lassen Road; pair soared over dry grassland west of Lassen Avenue before flying out of sight to north |
| 07-23-07 08:53 PST | 0.7 miles west of Gale Avenue and San Luis Canal (approximately 150 yards south of Gale Avenue) | adult Swainson's hawk sitting in disked onion field; moved 50 feet to avoid active plowing; eventually flew to harvested tomato field north of Gale Avenue and approximately 1 mile west of Gale Avenue and San Luis Canal; soared over field until flying out of sight to north with 2 nd individual |
| 07-23-07 09:40 PST | 1.0 mile west of Gale Avenue and San Luis Canal (approximately 200 yards north of Gale Avenue) | Swainson's hawk (age unknown) joined soaring individual and soared over tomato field north of Gale Avenue until flying out of sight to north |
| 07-24-07 07:10 PST | 0.3 miles north of the intersection of Gale Avenue and San Luis Canal | immature Swainson's hawk sitting in detention basin; flushed and flew to large cottonwood on west side of basin |
| 07-24-07 07:54 PST | along Lassen Avenue 1.5 miles north of Huron | adult Swainson's hawk sitting on low snag 50 yards west of Lassen Avenue in dry grassland; flew out of sight to southeast |
| 07-24-07 08:07 PST | 1.4 miles north of Huron and 0.9 miles east of Lassen Avenue | adult Swainson's hawk sitting on telephone pole along farm road adjacent to DWR lands (same individual from 07:54 PST?); soared over dry grassland to north until flying out of sight to north |
| 07-31-07 19:57 PST | along Lassen Avenue 1.4 miles north of Huron | adult Swainson's hawk sitting on telephone pole east of Lassen Road |

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| 08-01-07 07:48 PST | 0.3 miles south of Jayne Avenue and 0.4 miles west of Lassen Avenue | adult red-tailed hawk sitting on telephone pole along farm road |
| 08-01-07 08:01 PST | immediately south of Jayne Avenue 0.6 miles east of Lassen Avenue | immature Swainson's hawk sitting on telephone pole south of Jayne Avenue overlooking tomato field to north; disturbed by harvesting operations in adjacent pepper field; flew to grove of <i>Eucalyptus</i> sp. along road at 15721 Jayne Avenue |
| 08-01-07 08:48 PST | 1.5 miles north of Huron and 0.9 miles east of Lassen Avenue | adult red-tailed hawk sitting on ground along farm road |

Figure 2

Swainson's Hawk Nests

