

**ANNUAL OSPREY REPORT
2015 Survey Year**

**submitted to
The California Department of Fish and Wildlife
by
Green Diamond Resource Company**

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Introduction

In 2006, Green Diamond Resource Company (GDRCo) and the California Department of Fish and Wildlife (DFW) developed and began implementing an ownership-wide osprey consultation protocol for timber harvest plans (THPs).

In accordance with this consultation protocol, between March 15th and August 15th, GDRCo biologists conduct searches and status checks for historic and active osprey nests occurring within 0.25 mile of ground-based operations, and 0.5 mile of helicopter-based operations expected to be active during the critical period for osprey. The critical period is March 1st to April 15th and extends to August 15th for occupied nests. Nest status need not be determined if ground-based operations within 0.25 mile of the nest or helicopter-based operations within 0.5 mile of the nest occur outside the critical period. If timber harvest operations commence between August 15th and September 1st, then a check for late-season occupancy of the nest is required. This check ensures that unfledged chicks are not present at the nest.

The ownership-wide consultation allows operations within 0.25 mile (but not within 500 feet) of occupied nests during the breeding season so long as operations occur as late in the breeding season as operationally feasible and encroach upon the 0.25 mile disturbance buffer and nest gradually. If operations are to occur within the 0.25 mile disturbance buffer during the breeding season, the nest must be monitored to determine if operations are adversely affecting the nesting osprey or their young.

This report summarizes the survey results for osprey nests covered by the consultation during 2015. An occupied nest is defined as a nest or nest tree used by an osprey pair during the current nesting season. An active nest is defined as a nest or nest tree used at least once during the three most recent nesting seasons. A tree may be considered an active nest tree even if it has lost all or a portion of its stick nest, provided that suitable substrate for rebuilding the nest remains. A historic nest is defined as a nest or nest tree used at some time in the past but is not currently occupied or active.

Summary of Results

One hundred and nine individual historic or active nests or nest trees were surveyed a total of 220 times in 2015 (Figure 1). Of the 109 nests surveyed, 22 nests were occupied, 56 were unoccupied, and 31 did not have sufficient data to determine occupancy status (Figure 2). No operations occurred during the critical period within the disturbance buffers for the 31 nests with unknown occupancy. Reproduction was confirmed at four of the 22 occupied sites (Table 1). However, surveys to confirm reproduction are only required when operations are planned within 0.25 mile of an occupied nest during the critical period. Therefore, reproductive surveys were not conducted at all occupied sites, and no inferences should be made regarding osprey productivity in 2015.

In 2015, 11 ground-based THPs with operations during the critical period occurred within 0.25 mile of 42 historic or active osprey nests (Table 2). Two of these THP-associated nest sites, JAC#30 and JAC#31, were occupied, and both sites were associated with GDRCo THP 15-1401 (Cal Fire 1-15-026 HUM). The remaining THP-associated nest sites were determined to be unoccupied (Figure 2). No helicopter-based THP operations occurred within 0.5 mile of a historic or active osprey nest during

the 2015 critical period. Refer to Table 2 for a complete summary of the status of the 2015 osprey nests and THP associations and Map 1 for the location of the nests and THP unit boundaries.

In 2015, operations occurred within 0.25 mile (but not within 500 feet) of one occupied osprey nest, JAC #31, during the breeding season. This nest site occurred within 0.25 mile of units A, B and C for THP 15-1401 (1-15-026HUM) in the Jacoby Creek watershed. Prior to commencement of any operations within the 0.25 mile disturbance buffer, GDRCo developed a monitoring strategy in accordance with the property-wide consultation guidelines and obtained concurrence for the strategy from CDFW. Based on helicopter and ground surveys, the osprey pair associated with the nest had produced two well-flighted fledglings prior to commencement of operations. Also prior to operations, surveys indicated the fledglings remained away from the nest and nest area for several hours at a time and returned periodically to perch and feed.

Operations within the disturbance buffer of JAC #31 occurred as late in the breeding season as possible and encroached upon the buffer and nest gradually. As outlined in the monitoring strategy, one monitoring survey occurred each day for the first three days of operations in the disturbance buffer. Each survey began one hour prior to commencement of operations for the day and continued for a minimum of four continuous hours during timber falling. During the 3 surveys, both juvenile and adult ospreys continued to visit the nest site and nest area periodically to perch, feed and preen. Behavior and vocalizations did not change after operations began each day, and the survey results indicated that operations did not adversely affect the nesting osprey or their young (Table 3).

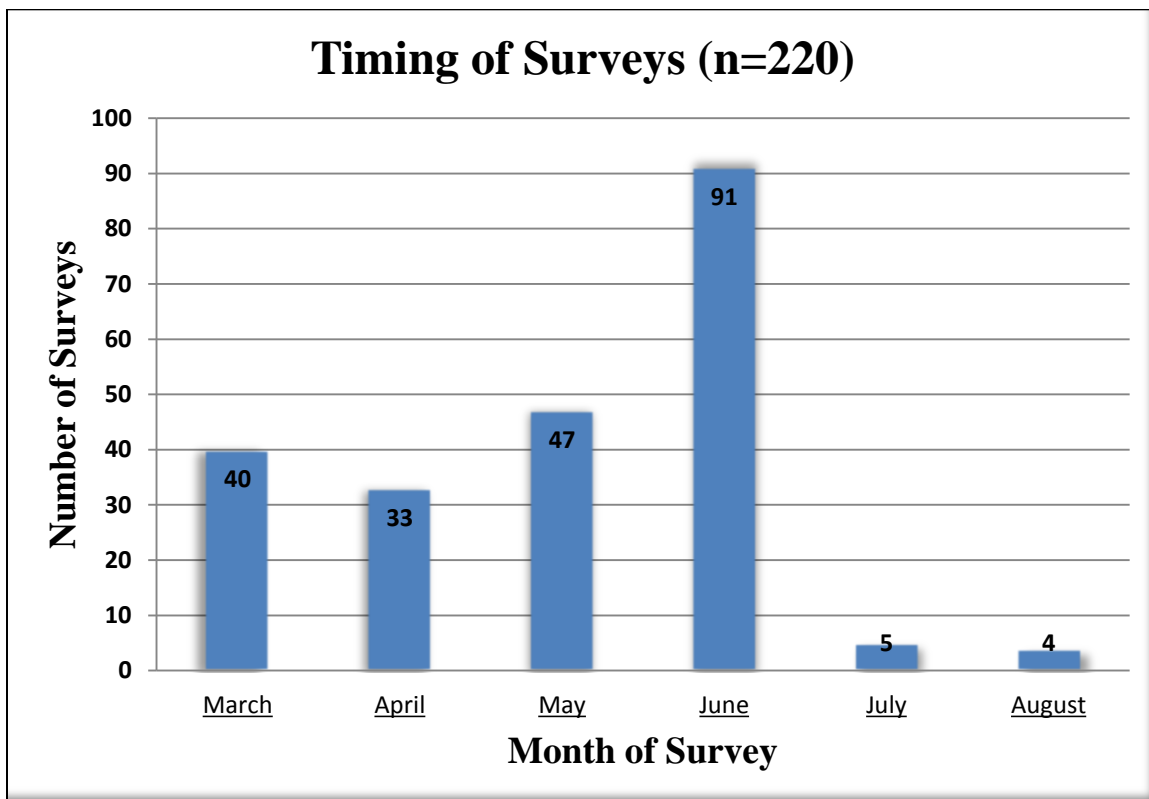


Figure 1: Timing of all 220 surveys conducted for 2015. The critical period for Osprey is March 1st to April 15th and extends to August 15th for occupied nests

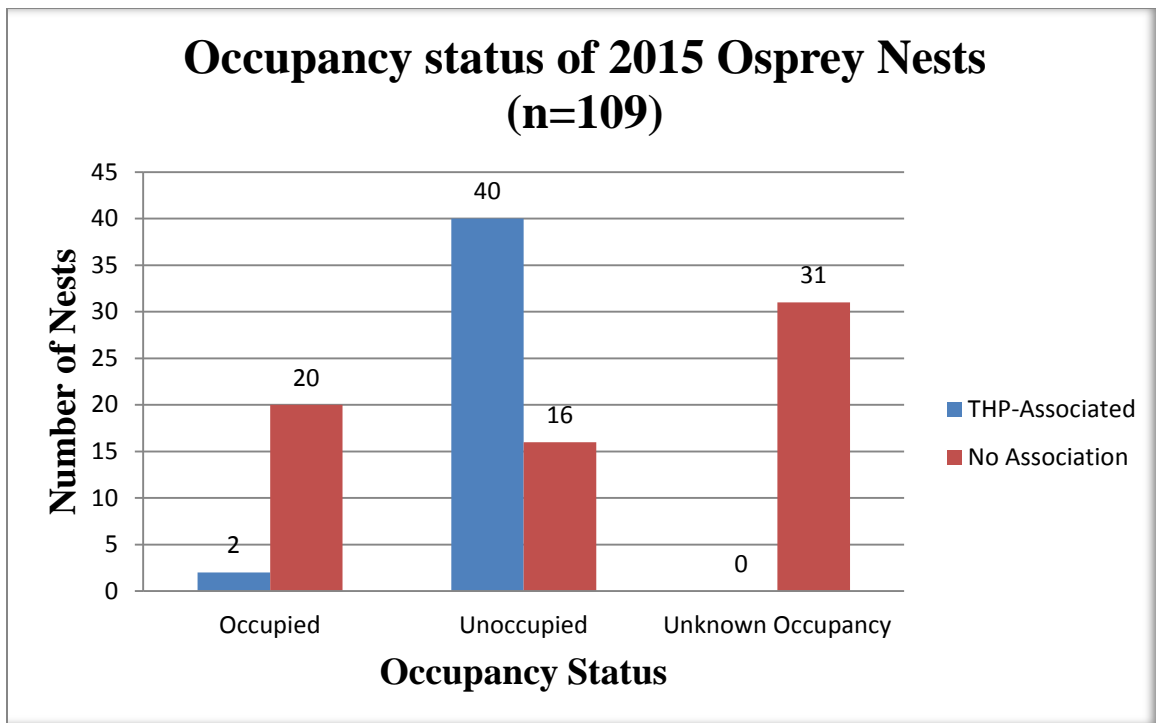


Figure 2: Occupancy status of osprey nests surveyed in 2015

Table 1. 2015 occupied sites with survey results confirming reproduction

Site Name	THP	Occupancy Status	Survey Results
Big#22	None	Occupied	8/24/2015: An adult female and one juvenile osprey were seen in nest.
Jac#30	15-1401	Occupied	5/5/2015: An adult osprey was seen in incubation posture. 7/9/2015 and 7/20/2015: An adult and two juvenile osprey were seen concurrently.
Jac#31	15-1401	Occupied	6/11/2015: An adult osprey was seen with two nestlings. 8/6/2015: An adult osprey was seen with two juveniles.
Salm#4	None	Occupied	6/1/2015: An adult female osprey was seen with two nestlings.

Table 2. 2015 summary of occupancy status and THP association by nest site

Site Name	GDRCo THP Number	Occupancy Status
Ah Pah Cr #1	None	Occupied
Ambrose #1	None	Unknown
Ambrose #2	None	Unknown
Arrowmills #1	None	Unknown
Arrowmills #2	None	Unknown
Big #1	None	Occupied
Big #10	47-1402	Unoccupied
Big #11	47-1309	Unoccupied
Big #12	None	Unknown
Big #15	None	Unoccupied
Big #16	None	Unoccupied
Big #17	47-1307, 47-1306	Unoccupied
Big #18	None	Occupied
Big #20	None	Unknown
Big #21	None	Unknown
Big #22	None	Occupied
Big #23	None	Unknown
Big #24	None	Occupied
Big #25	None	Unknown
Big #3	47-1309	Unoccupied
Big #4	47-1402	Unoccupied
Big #5	None	Unknown
Big #6	None	Unoccupied
Big #7	None	Unoccupied
Big #8	47-1305, 47-1309	Unoccupied
Big #9	47-1303	Unoccupied
Cran #1	None	Unknown
Cran #2	None	Unknown
Cran #3	None	Unoccupied
Cran #4	None	Unoccupied
Cran #7	None	Unoccupied
Cran #8	None	Occupied
Cran #9	None	Unoccupied
Dandy #2	None	Occupied
Dandy #3	None	Occupied
Jac #10	None	Unoccupied
Jac #11	15-1401	Unoccupied
Jac #12	15-1401	Unoccupied
Jac #13	15-1401	Unoccupied
Jac #14	15-1401	Unoccupied
Jac #15	15-1401	Unoccupied
Jac #16	15-1401	Unoccupied

Jac #17	15-1401	Unoccupied
Jac #18	15-1401	Unoccupied
Jac #19	None	Unoccupied
Jac #20	15-1401	Unoccupied
Jac #21	15-1401	Unoccupied
Jac #22	15-1401	Unoccupied
Jac #23	15-1401	Unoccupied
Jac #24	15-1401	Unoccupied
Jac #25	15-1401	Unoccupied
Jac #26	15-1401	Unoccupied
Jac #27	15-1401	Unoccupied
Jac #28	15-1401	Unoccupied
Jac #29	15-1401	Unoccupied
Jac #3	15-1401	Unoccupied
Jac #30	15-1401	Occupied
Jac #31	15-1401	Occupied
Jac #5	15-1401	Unoccupied
Jac #6	15-1401	Unoccupied
Jac #9	15-1401	Unoccupied
John #1	None	Unoccupied
John #6	None	Unknown
John #7	None	Unknown
KLGN #5	None	Unknown
KLGN #6	None	Unknown
KLGN #7	None	Occupied
KLGN #8	None	Occupied
KLML #1	None	Occupied
KLML #2	None	Unknown
KLML #3	None	Unoccupied
Little Surpur #2	None	Unknown
M200 #1	None	Unknown
Mad #1	22-1303	Unoccupied
Mad #2	22-1303	Unoccupied
McGarv #1	None	Occupied
McGarv #2	None	Unknown
McGarv #3	None	Occupied
McGarv #5	None	Unknown
McGarv #6	None	Unknown
McKay #12	19-1401	Unoccupied
Notchkoo #1	None	Occupied
OH #14	None	Unoccupied
OH #21	15-1401	Unoccupied
OH #22	15-1401	Unoccupied
OH #25	None	Unoccupied
OH #26	None	Unoccupied
OH #29	None	Occupied

Oma Cr #2	61-1401	Unoccupied
Oma Cr #4	61-1401	Unoccupied
Oma Cr. #6	None	Occupied
Oma South #5	None	Occupied
RdMary #1	None	Unknown
S12 #3	None	Occupied
Salm #11	14-1401	Unoccupied
Salm #12	14-1401	Unoccupied
Salm #16	14-1401	Unoccupied
Salm #24	None	Unoccupied
Salm #25	None	Unknown
Salm #3	14-1401	Unoccupied
Salm #4	None	Occupied
Salm #5	None	Unknown
Starwein Ridge #1	None	Unknown
Surp #2	None	Unknown
Surp #3	None	Unknown
Tarup #5	None	Unknown
Tectah #1	None	Occupied
Tectah #2	None	Unknown
Wilson #2	None	Unknown

Table 3. 2015 summary of nest monitoring

Site Name	Date	Duration	Observations
Jac #31	7/30/2015	05:07-10:55	No indication of disturbance. 2 juveniles perched on nest periodically. At least one adult observed in nest area. Adult delivered prey to nest. Juvenile ate prey item with no interruption during timber falling.
Jac #31	7/31/2015	05:00-10:26	No indication of disturbance. No osprey on nest at start of survey, but heard calling in the area. Calling volume and frequency did not change after falling began. 2 ospreys flew to nest after falling began. One osprey preened on nest during falling. One osprey carried a prey item from nest to the southwest of nest.
Jac #31	8/6/2015	05:00-10:06	No indication of disturbance. No osprey on nest at start of survey, but heard calling in the area. Calling volume and frequency did not change after falling began. After falling began, 2 juveniles and 1 adult flew to nest and perched on nest.