

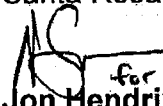


State of California
Department of Fish and Wildlife

Memorandum

Date: July 31, 2015

To: **Ms. Leslie Markham, Deputy Chief, Forest Practice**
California Northern Region 1 Headquarters
Department of Forestry and Fire Protection
135 Ridgway Avenue
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From:  **Jon Hendrix, Senior Environmental Scientist**
Timber Harvest Program, Northern Region
California Department of Fish and Wildlife
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Subject: Great Blue Heron Consultation **15-R1-CTP-18-GBHE** for "Gautreaux" Timber Harvesting Plan **1-15-014DEL**, Del Norte County

The California Department of Fish and Wildlife (CDFW) has reviewed the subject Timber Harvesting Plan (THP) for potential impacts to nesting great blue herons (*Ardea herodias*) resulting from proposed THP operations. An active great blue heron rookery (a colony of breeding birds) exists within the boundaries of the 13.3 acre subject THP. This consultation is being conducted pursuant to Title 14, California Code of Regulations (14 CCR) Section 919.3 that requires consultation with CDFW for species listed by the Board of Forestry and Fire Protection (Board) as sensitive. The great blue heron is listed by the Board as sensitive.

THP area

The THP is located approximately two miles northwest of the community of Smith River, 1.3 miles east of the Pacific Ocean and the mouth of the Smith River, and approximately 6 miles north of the Lake Earl Wildlife Area. It is located within Section 21, Township 18 North, Range 1 West (Humboldt Base and Meridian), Del Norte County, California. The THP covers 13.3 acres and proposes 12 acres of clearcut silviculture and 1.3 acres of no harvesting within the Watercourse and Lake Protection Zone (WLPZ). Ground-based yarding methods are proposed.

According to the THP, existing timber stands are approximately 80 years old. Stands are Sitka spruce dominated, with a small component of Douglas-fir, western hemlock and grand fir. Hardwood species found in the THP area include red alder, tan oak, and big leaf maple.

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Life history

Great blue herons typically breed in colonies, in trees close to lakes or other wetlands. In California, adults generally return to the colony site after winter from December to March. Usually colonies include only great blue herons though sometimes they nest alongside other species of herons. The size of these colonies may be large, ranging between 5–500 nests per colony. Rookeries are usually relatively close, usually within 4 to 5 km (2.5 to 3.1 mi), to ideal feeding spots (Short and Cooper 1985). Great blue herons build a bulky stick nest. Nests are usually around 50 cm (20 in) across when first constructed, but can grow to more than 120 cm (47 in) in width and 90 cm (35 in) deep with repeated use and additional construction (Andrie 1988).

Courtship to egg laying can occur from early January to mid-March in California (Brandman 1976). In Marin and Humboldt Counties most fledglings left nests in June and July, but some left as late as September (Pratt 1970, Ives 1972). Herons in some colonies are apt to depart from colony sites with little provocation during early stages in the nesting cycle (Vos et al. 1985, Butler 1995, Vennesland 2010). Herons may be inhibited from displaying to each other by high winds and low temperatures (Palmer 1962).

Nests are often reused for many years; maintained throughout the nesting period with twigs gathered near the nest (Pratt 1970) primarily by the male (mostly when eggs are laid and hatched) and placed primarily by the female (Brandman 1976). Herons may build a new nest if an early attempt fails (Pratt 1970).

Pre-harvest inspection

Prior to the pre-harvest inspection (PHI), CDFW reviewed public comment for the proposed THP indicating the presence of a great blue heron rookery on the property. A previous THP (1-92-236 DEL) had revealed the presence of a heron rookery within the THP area; however, the proposed THP did not disclose the rookery or observations of great blue heron activity. This site was also not found in the California Natural Diversity Database (CNDDDB).

THP Section III, page 38, great blue heron, states, "*Sightings have been reported to the Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle. No Sightings have occurred in the BAA.*" The THP also states, "*...due to the proximity of foraging habitat, the timber stands along the edge of the agricultural area could be considered suitable nesting habitat.*"

Early in the morning, on the day of the PHI (March 17, 2015), CDFW Environmental Scientist Monty Larson, observed the THP's timber stands from Highway 101, approximately one-quarter of a mile southsouthwest of the THP. From 0704 - 0845 hours, CDFW observed 12 great blue herons fly into, and 4 fly out of, the Sitka spruce trees in the southern portion of the THP. Birds within the stand were easily observed preening and sitting approximately mid-

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canopy on branches of several trees visible from Highway 101.

During the PHI, the landowner showed the inspection team pictures of great blue herons roosting in trees on his property. The landowner stated he frequently observed herons flying onto and off of his property. The inspection team walked through the area where CDFW observed herons earlier in the day. The team observed white wash on vegetation and at least nine nest structures (Figure 1) present in at least four trees. Several of the nests were occupied by great blue herons, though the birds were not vocalizing while the inspection team was close to the nests.

After the PHI, on June 21st, CDFW received an assessment of the rookery conducted by the landowner's consulting wildlife biologist Frank Galea. In the report, Mr. Galea states "*Six small to average sized spruce contained numerous nests, some older and abandoned and at least two which were occupied and active. During the visit one blue heron pair was observed nest building...*" Mr. Galea also observed, "*The six trees comprising the heronry were within a grouping 58 feet wide (east to west) and 76 feet deep (north to south). The grouping was located 205 feet east of the southeast property corner and 56 feet in the stand, measured from the edge of Oceanview Drive.*"

July 14, 2015 field visit

On July 14, 2015, CDFW conducted a site specific heron consultation field review. CDFW Senior Environmental Scientist Susan Sniado, was accompanied by CDFW Environmental Scientists Simona Altman and Mr. Larson, Department of Forestry and Fire Protection (CalFire) Inspectors Heather Brent and Ray Wedel, landowner Mark Gautreaux, and Mr. Galea.

During the field visit, two juvenile herons were observed actively moving on the branches between nests. The juveniles were not observed flying; however, they were fully feathered and it is anticipated, based on their behavior and plummage, that fledging would occur within two weeks. Given the time of the year and the condition of the juveniles, other juveniles from this site may have already fledged.

CDFW observed nine nest structures within six Sitka spruce trees (approximately 20 to 30 inches in diameter). The nests are in the upper third of the trees and nest placement is variable. Some nests occur against the bole of the tree and others extend out on branches. Based on the condition of the nests and without surveys throughout the breeding season during the last two years, DFW assumes all nine nest structures have been active during that time. CDFW agrees with Mr. Galea's description that the six trees comprising the rookery were within a grouping 58 feet wide (east to west) and 76 feet deep (north to south).

Resources at risk

The occurrence of this heron rookery represents an important biological resource within Del

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Norte County including the Smith River estuary and the Lake Earl Wildlife Area. There are no other great blue heron rookeries identified in CNDDDB within Del Norte County.

This active rookery could be impacted by the subject THP through habitat modification of the rookery stand or its surroundings, disturbance of nesting adults or chicks, or both. Habitat modification (harvest of trees or reducing the size or changing the configuration of the nest stand) could directly impact nesting birds by reducing the number and quality of nest trees. A great blue heron rookery on the Eel River in the vicinity of the town of Rio Dell was not reoccupied after clearcut timber harvest occurred within approximately 100 feet of the nest tree. Such harvest may have exposed the heron nests to strong afternoon winds and rendered the site unsuitable. (Jay Harris pers. comm. July 31, 2015)

Recommendations for avoiding adverse impacts

Habitat retention

In the great blue heron assessment submitted by consulting biologist Frank Galea to CDFW on June 21, 2015, Mr. Galea writes "*The Applicant proposes to protect the heronry by establishing a "no-cut" buffer around the six trees. A buffer of 100 feet would be flagged around the entire grouping of six trees, and no trees would be cut within this boundary and no trees would be felled into it, in order to protect the nest trees and the screening trees which would also be retained... As the herons have chosen a nest location with only 50 feet of a buffer for screening from the elements or from traffic noise, a one hundred foot buffer around the heronry would suffice to maintain the site as a nest site. As inclement weather originates from the south, there would be no loss in weather-buffering screening. Retention of screen trees within 100 feet of the heronry would protect the site visually and from the elements.*"

While the rookery is approximately 50 feet from Ocean View Drive near the southern boundary of the THP, the majority of the THP surrounds the rookery directly upslope to the north. The rookery trees and THP area are predominantly Sitka spruce. Tree rooting in spruce is generally shallow and trees remaining post-harvest are more susceptible to blowdown than other species. Timber harvesting adjacent to the rookery has the potential to affect nesting habitat through collateral blowdown or changes in microclimate due to wind or temperature effects. To preserve the existing rookery stand structure, and buffer the rookery from adverse changes in microclimate and wind, CDFW recommends, no harvesting within 200 feet of the rookery, and within 200-300 feet of the rookery, a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, shall be retained post-harvest.

Seasonal restrictions

Courtship, nesting and fledging behavior of the great blue heron nominally occur during the period of February 1 to July 15 (Zeiner et al 1990), but based on our observations of the birds during the July 14 field visit, fledging could occur as late as August 1 or later. To avoid

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adverse impacts on the great blue heron from noise generated disturbance, CDFW recommends seasonal restrictions on timber operations within a "seasonal buffer zone" adjacent to the rookery. The period when seasonal restrictions should be applied extends from February 1 to August 1 unless surveys confirm nesting has failed or young have fledged earlier. CDFW recommends a 0.25-mile disturbance buffer around the rookery during this critical period.

Protection Measures

The following protection measures are provided to reduce potential adverse effects to the active great blue heron rookery to a level of less than significant. Please ensure protection measures 1 through 3 are incorporated as enforceable conditions into the subject THP, Section II Item 32.

1. A year-round habitat retention buffer shall be established within 300 feet of the great blue heron rookery (Figure 2). The buffer shall be measured from the outer extent of the rookery as defined by the location of the nests. No harvesting shall occur within 200 feet of the rookery, and within 200-300 feet, harvesting can occur as long as a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, is retained.
2. A 0.25 mile temporal disturbance buffer shall be established around the rookery during the critical period, February 1 to August 1. No timber operations shall be permitted within the disturbance buffer during the critical period, unless surveys confirm nesting has failed or the young have fledged earlier than August 1 and written concurrence is received from CDFW.
3. During the life of the THP the landowner shall agree to allow CDFW staff on the property to monitor the success of the protection measures and the status of the nest sites. Such access shall only occur with a minimum 48-hour notice.

If you have any questions regarding this consultation please call CDFW Staff Environmental Scientist Susan Sniado (707) 441-3970. Thank you for assisting CDFW in our mission to conserve California's fish and wildlife resources.

References

Andrle, R. F. 1988. The atlas of breeding birds in New York State. Cornell Univ. Press, Ithaca, New York

Brandman, M. 1976. A quantitative analysis of the annual cycle of behavior in the Great Blue Heron (*Ardea herodias*). Phd Thesis. Univ. Calif. Los Angeles.

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Butler, R. W. 1995. The patient predator: foraging and population ecology of the Great Blue Heron *Ardea herodias* in British Columbia. Canadian Wildlife Service Occasional Paper 86:1-44.

Ives, J. H. 1972. Common egret and great blue heron nest study, Indian Island, Humboldt County, California. Calif. Dep. Fish and Game, Sacramento. Wildl. Manage. Branch adm. Rep. No. 72-9. 41pp.

Palmer, R. S. 1962. Handbook of North American birds. Vol. 1. Yale Univ. Press, New Haven, CT.

Pratt, H. M. 1970. Breeding biology of great blue herons and common egrets in central California. Condor 72:407-416.

Short, Henry L. and Cooper, Robert J. (1985). Habitat suitability index models Great blue heron. Biological report 82(10.99). Washington, DC : Western Energy and Land Use Team, Division of Biological Services, Research and Development, Fish and Wildlife Service

Vennesland, R. G. 2010. Risk perception of nesting Great Blue Herons: experimental evidence of habituation. Canadian Journal of Zoology-Revue Canadienne De Zoologie 88(1):81-89.

Vos, D. K., D. A. Ryder, and W. D. Graul. 1985. Response of breeding Great Blue Herons to human disturbances in northcentral Colorado. Colonial Waterbirds 8:13-22.

Zeiner, D.C., W.F. Laudenslayer, K.E. Mayer, and M. White, eds. 1990. California's Wildlife: Volume II - Birds. California Department of Fish and Game. Sacramento, California.

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Figure 1. Photo of the canopy of trees containing a great blue heron rookery within Timber Harvesting Plan 1-15-014 DEL (at least six nests are visible in this photo).

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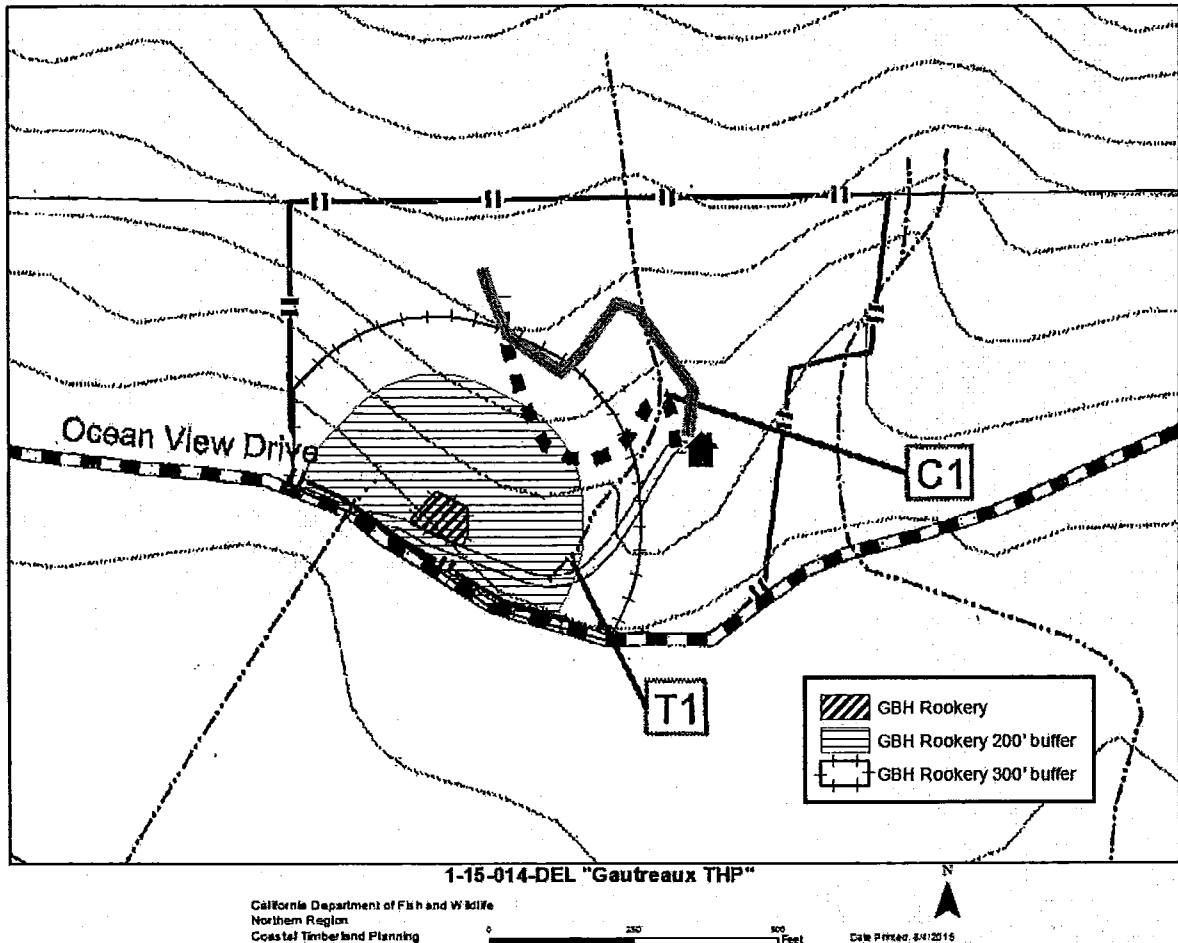


Figure 2. Approximate location of a great blue heron rookery discovered during the PHI for Timber Harvesting Plan 1-15-014 DEL and the approximate extent of a 200 foot and 300 foot habitat retention buffer. The habitat retention buffer shall include no harvesting within 200 feet of the rookery, and within 200-300 feet, harvesting can occur as long as a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, is retained.

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