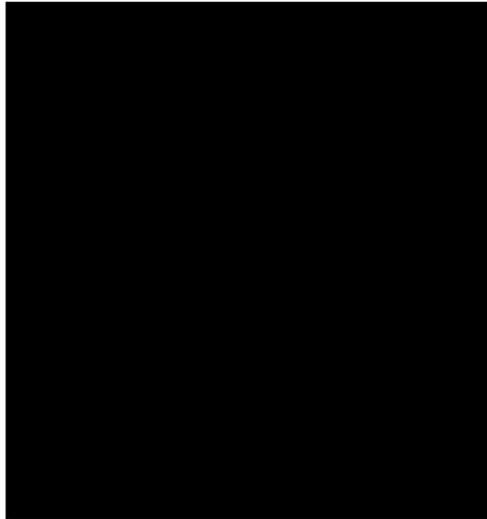


[REDACTED] SURVEY FOR THE KOHLER COMPANY PROPERTY IN
SHEBOYGAN COUNTY WISCONSIN



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INTRODUCTION

The Kohler Company requested a [REDACTED] survey be conducted on their property located along Lake Michigan in Sheboygan County, Wisconsin. Tetra Tech Inc. is providing environmental consulting services for the proposed golf course and has requested [REDACTED] Services, LLC conduct the surveys. [REDACTED] (State Threatened Species) are found throughout Wisconsin nesting in mature stands of hardwood-conifer forests usually associated with water (Johnsgard 1990, Jacobs and Jacobs 2002, Palmer 1988). This report summarizes my findings regarding the surveys and follow up nest searches.

STUDY AREA AND METHODS

The study area is located along the western shoreline of Lake Michigan immediately north of the Kohler-Andre State Park and south of the city of Sheboygan in Sheboygan County, Wisconsin (Fig 1). On April 9, 2014 broadcast call surveys were performed at 12 locations evenly spaced throughout the project site (Fig. 2). Three additional broadcast survey points (#R 13, R 14, R 15) were sampled on April 18 to accommodate a slight change in the project boundaries. These broadcast surveys are most effective when completed prior to May 1 and are effective in soliciting a response up to 1312 ft (400 m). Survey methods followed those described by Ryan Brady (unpublished, WDNR 2011). These broadcast surveys consisted of broadcasting a series of conspecific calls (volume of 100 db at 3.3 feet, Mosher et al. 1990) followed by periods of silence to listen for responses for a total of 10 minutes at each location during acceptable weather conditions (winds ≤ 12 mph with no precipitation). Broadcast call surveys were discontinued when [REDACTED] were detected responding to our calls to prevent further disturbance. An intensive nest search of that area ($\geq 1,312$ ft. diameter) was completed to identify active and historical nests. [REDACTED] vocalizations were broadcasted occasionally during the nest search to further aid in locating nests.

Nest searches were completed prior to tree leaf-out. This time frame ensured a higher degree of nest detection since visual inspection would be hampered by leafy vegetation obstructing the investigator's view. Spacing of transects were based on the density of vegetation and how far the investigator could visually detect [REDACTED] sized nests. Results from a pilot study revealed that a distance of 164 ft. (50 m) on each side of transect lines was an appropriate distance. Thus, transect lines were spaced 325 ft. (100 m) apart.

RESULTS AND DISCUSSION

On two occasions [REDACTED] were detected during broadcast surveys. On April 9, 2014 two [REDACTED] were observed flying over an area within #NS 1 (Fig. 2), where the male was observed performing courtship dives. On April 18, 2014 a [REDACTED] [REDACTED] was briefly heard and observed in area #NS 2. Between these two areas, area #NS 1 appears to offer a higher probability of nesting activity, given the quality of habitat and the observed [REDACTED] behavior.

Intensive searches on foot were conducted at both locations #NS 1 and #NS 2 (Fig. 2) on April 18, 2014. These searches failed to find any active or historical nests near or within the project area. Additionally, we did not hear any [REDACTED] vocalizations, an event that regularly occurs at the nest between the adults during food transfers (per. obs.). Given the size of the [REDACTED] breeding home range of approximately 300 acres (Jacobs and Jacobs 2002) an active nest could be located north of the project boundary.

CONCLUSIONS

[REDACTED] were detected at two locations during the broadcast surveys. Intensive nest searches at these locations failed to identify any active or historical nests. [REDACTED] [REDACTED] are likely nesting within 0.5 mile of the project site but were not found nesting on the project property at this time.

Other [REDACTED]

Three other [REDACTED] species were detected on the project area (Fig 2). These species are not currently listed on state or federal Endangered/Threatened Species lists.

April 9, 2014: Barred Owl (*Strix varia*), Cooper's Hawk (*Accipiter cooperii*)

April 18, 2014: Red-tailed Hawk (*Buteo jamaicensis*), Cooper's Hawk (*Accipiter cooperii*)

LITERATURE CITED

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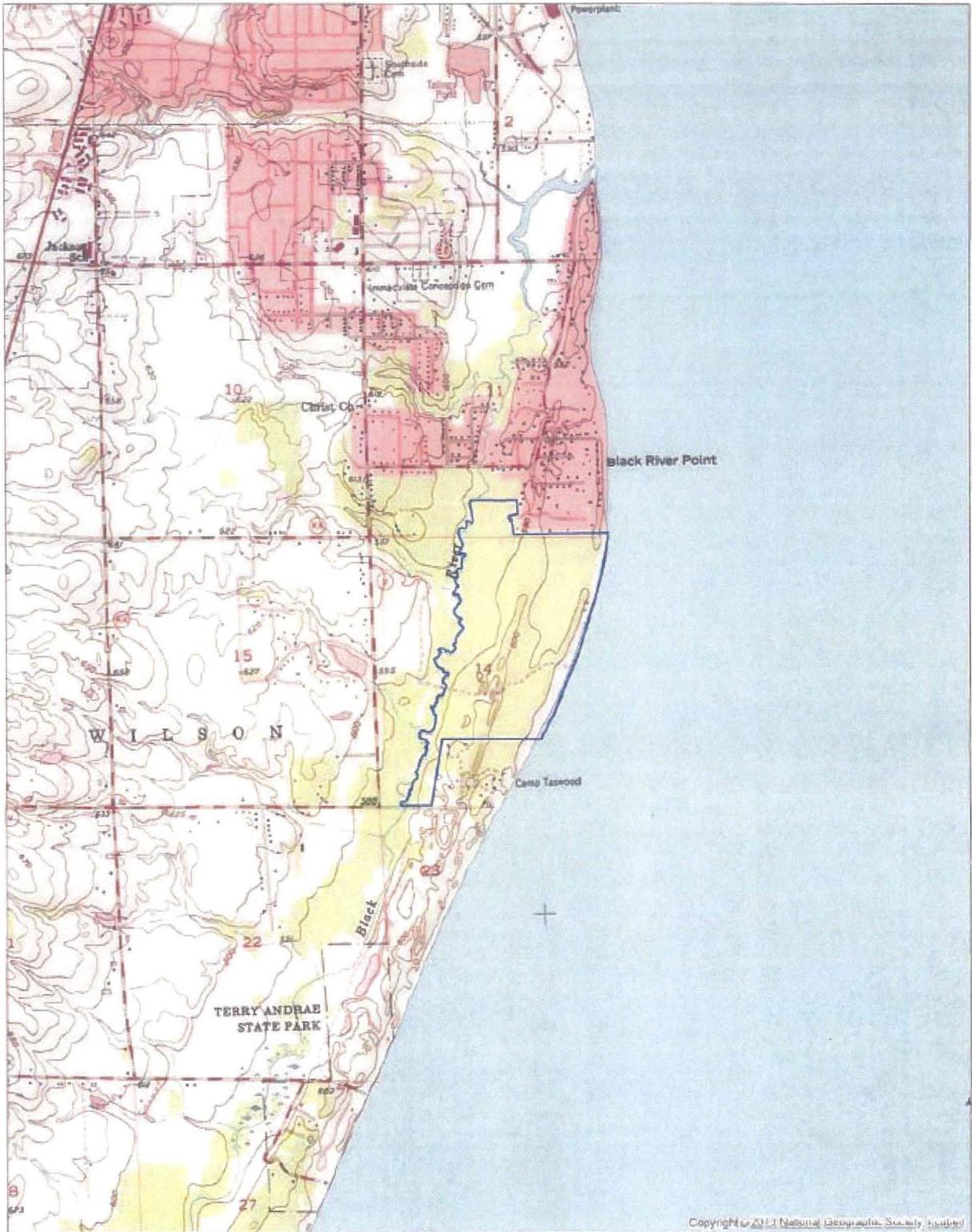


Figure 1. Project area located along the Lake Michigan shoreline in Sheboygan County, Wisconsin

One figure page was redacted since it contained information on species tracked by Wisconsin's Natural Heritage Inventory (NHI) program. This information is considered sensitive and is not subject to Wisconsin's Open Records Law (per s. 23.27, Wis. Stats.)