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To: Jon Guntow  
Stantec Consulting Services Inc.

From: Melissa Curran  
Stantec Consulting Services Inc.

File: 2015 Botanical Surveys, Kohler Golf Course Project - State Property Entrance Road, Town of Wilson, Sheboygan County, Wisconsin  
Project No.: 193703078

Date: October 28, 2015

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**Reference: 2015 Botanical Surveys, Kohler Golf Course Project – State Property Entrance Road Town of Wilson, Sheboygan County, Wisconsin**

## **INTRODUCTION**

In support of the proposed Kohler Golf Course Project (Project), Stantec Consulting Services Inc. (Stantec) conducted botanical surveys of an additional area of State-owned property south of the original Project limits which is being considered for the entrance road and maintenance facility locations for the Project. This memorandum presents the objectives, methods, and results of the 2015 botanical survey effort.

## **PROJECT DESCRIPTION**

The State-owned parcel is located within Kohler-Andrae State Park and is adjacent to the south limits of the Kohler parcel (Figure 1). The Black River is located along the west limits of the Project Area.

## **METHODS**

Prior to conducting field assessments, Stantec obtained and reviewed pertinent mapping available for the Project Area including: recent aerial photography; United States Department of Agriculture (USDA) Soil Survey information; Wisconsin Department of Natural Resources (WDNR) Wisconsin Wetland Inventory (WWI) maps; and site specific wetland delineation mapping. Stantec used additional information on the potential for threatened and endangered species, species of concern and unique or threatened plant communities that may occur within the Project Area from the Bureau of Natural Heritage Conservation Endangered Resources Review (ERR Log # 14-617) completed on September 2, 2014. Rare species information presented in this review was used to focus search efforts on rare plant species with documented occurrences in the vicinity of the Project Area. The potential for additional rare plant occurrences within the Project Area was assessed using local and regional floras, herbarium records, distribution maps, published reports, existing site species lists, and a careful evaluation of habitat types onsite and of the rare species known to occur in those habitats.

The 2015 botanical survey consisted of the following tasks:

1. A pedestrian meander survey to map the extent of plant communities;
2. June survey to map spring-emerging rare plant species;
3. August survey to map [REDACTED] and other fall-emerging species.

In addition to those species identified in the ERR, all other rare plants (USFWS-listed or Wisconsin-listed) encountered during the meander survey were documented. Rare plants surveys were mapped using

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a Trimble GPS capable of submeter accuracy. Locations where one to several individuals of a rare species were observed within the space of 5 meters or less, were represented by a single GPS point tagged with the number of individuals. Locations where rare species occurred in populations of greater extent, the perimeter of the population was mapped and an estimate of the number of individuals was recorded.

Surveys of the Project Area were conducted on June 3-4, 2015 by Stantec botanists Melissa Curran and Joshua Sulman, with assistance from Environmental Technician Matt Knickelbine. A targeted rare plant survey was also completed by Joshua Sulman on August 27, 2015. Field assessments were completed during optimal field survey periods for potential rare species.

## RESULTS

The Project Area consists of flat to rolling terrain on [REDACTED]. The northeast portion of the Project Area consists of [REDACTED] including pine plantation consisting of white pine (*Pinus strobus*) and red pine (*P. resinosa*). The northwest portion consists of [REDACTED] of white pine and sugar maple (*Acer saccharum*) which transitions west to a [REDACTED] on a gentle slope where American Beech (*Fagus grandifolia*) predominates. The Black River floodplain, is classified as a [REDACTED] of green ash (*Fraxinus pennsylvanica*). The central portion of the Project Area is characterized by a stabilized, flat to rolling [REDACTED] interspersed with [REDACTED] depressions. Representative photographs are provided in Attachment A.

The following rare or sensitive plant species were observed during the 2015 survey: [REDACTED] (Wisconsin Endangered), [REDACTED] (Wisconsin Threatened), [REDACTED] (Wisconsin Threatened) and one group of sensitive [REDACTED]. Figure 1 shows the location of rare plants mapped during the 2015 survey effort.

[REDACTED] has limited distribution in the southern portion of the Project Area. Approximately 20 individuals were observed along the edge of common juniper shrubs. Additional species of [REDACTED] were also observed within the Project Area. Preliminary identifications suggested [REDACTED] (Wisconsin Endangered), which is known to occur in the vicinity of the Project Area. However, after review by several botanical experts, it has been suggested that up to three different species of [REDACTED] may occur within point features identified as "Sensitive [REDACTED] Species" on Figure 1. These include: [REDACTED] (Wisconsin Special Concern) and [REDACTED] (not State-listed). This group of species is known for its highly variable characteristics and positive identification for some species can only be achieved through DNA analysis. Current development plans on State-owned property shows the Project will not impact [REDACTED] locations.

[REDACTED] was the most widely distributed rare plant observed. This species is a dominant [REDACTED] over extensive portions of the [REDACTED] community and occurs periodically within openings in the adjacent [REDACTED] and pine plantation within the southern portion of the Project Area. This species is also common throughout Kohler-Andrae State Park.

[REDACTED] has limited distribution, observed in two small areas and nearby point occurrences within the southcentral portion of the Project Area. Current development plans on State-owned property shows the Project will not impact [REDACTED].



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## CONCLUSION

On June 3-4 and August 27, 2015, Stantec staff conducted botanical surveys of the State of Wisconsin property for the proposed entrance road to the Kohler Golf Course Project. Meander surveys of the Project Area were utilized to map plant communities and rare plant species occurrences. The following four species of rare or sensitive plants were documented and mapped on State-owned property: [REDACTED] (Wisconsin Endangered), [REDACTED] (Wisconsin Threatened), [REDACTED] (Wisconsin Threatened) and one group of sensitive [REDACTED]. The Project may result in minor impacts to [REDACTED] which is common within suitable habitat throughout the State-owned parcel.

If you have any questions, or require any additional information, please call us at (920) 592-8400.

Sincerely,

**STANTEC CONSULTING SERVICES INC.**

A handwritten signature in black ink that reads 'Melissa Curran'.

Melissa Curran  
Environmental Scientist / Botanist  
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Attachments: Figure 1 – 2015 Rare Plant Locations  
Attachment A – Photo Log

**One figure and three pages of photos were redacted since they 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.)**