RIDGE ENVIRONMENTAL PLANNING LTD

To: Scott Sutherland, Andres Ocejo and Campbell Cameron
Sweettech Engineering Consultants

Reference: Preconstruction Bird/Nest and Wildlife search – Downtown Dike

CC: Deighen Blakely – Flood Resiliency Program

Date: July 17, 2023

From: Kelsey Morin, B.A.Sc., P. Biol., QEP

The following memo details findings from the nest/bird search completed on July 12, 2023 for Sweettech Engineering Consultants (Sweettech) for the Downtown Dike as part of the Drumheller Flood Resiliency Program along the Red Deer river in the town of Drumheller, Alberta.

INTRODUCTION

On July 12, 2023, Kelsey Morin performed an intensive pre-construction survey for nesting and denning wildlife at work areas planned as part of the Downtown Dike construction project (the Project) based on information provided by Sweettech on July 5, 2023. The wildlife sweep areas included a search of suitable nesting or denning habitat within each work area, access routes and a suitable buffer. Buffers were determined based on habitat, the anticipated level of disturbance form planned activities, and the level of existing disturbance within the work areas (e.g., existing road traffic, agriculture activity). Project location areas details are shown in **Figure 1.**

Figure 1 - Project Area – sweep area shown in purple.

The nest search areas included a search of suitable nesting habitat in the work areas throughout the Project limits. The search area was determined according to the project area provided by Sweettech (**Figure 1**) and includes a 10-to-30-meter buffer as appropriate given existing disturbances, habitat types, and proposed work activities. The nest search followed Government of Alberta (i.e., Alberta Environment and Parks [AEP]) recommendations for ground-based wildlife surveys and Ridge Environmental Planning Standard Operating Procedures for bird nest searches.

The nests of most birds are protected federally under the *Migratory Birds Convention Act,* 1994 (MBCA), and provincially under the Alberta *Wildlife Act*, 2000 (AWA). To mitigate risk of incidental take (i.e., inadvertent harming, killing, disturbance or destruction of birds, nests, and eggs) for construction activities occurring within bird nesting periods, a nest search can be conducted to confirm locations of nesting birds and allow for the implementation of mitigation measures (e.g., setback buffers, timing guidelines). Recommended mitigations are primarily based on Environment and Climate Change Canada's guidance to avoid risk of incidental take of migratory birds (ECCC 2020).

Considering the different jurisdictional guidelines and legislation providing protection for bird nests, the recommended project-specific Restricted Activity Period (RAP) is from March 1 to August 31, considering:

1. The migratory bird Primary Nesting Period (PNP) for Region B4 (April 15 to August 31; ECCC 2018).
2. Provincial RAP for migratory birds (April 15 to August 15; GoA 2021).
3. Provincial RAP for raptors (March 1 to July 15; ASRD 2011; GoA 2021).

SEARCH AREA

The search area encompassed proposed work areas as provided by SweetTech plus a 10-to-30-meter buffer. All work activities are contained within the existing ROW. Buffer widths were determined in consideration of the existing types, position, and level of disturbance within the immediate area (i.e., roads/ditches, trail tracks, and adjacent private property). All areas where construction activities will take place were thoroughly inspected for wildlife concerns.

The Project area occurs within the Northern Fescue subregion of the Grasslands Natural Region of Alberta. Key Features of this region include dry southern prairies dominated by drought-tolerant grasses, shrubs and herbs. Trees are absent except along rivers or in deep coulees where subsurface water is available. (GoA 2006)

Representative photographs of all habitat types are attached.

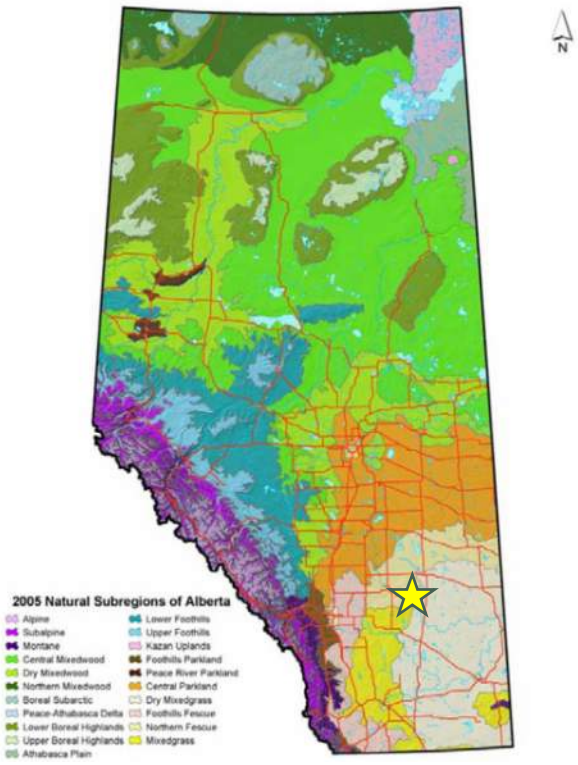


Figure 2 - Natural Subregions of Alberta (GoA 2006)

METHODS

Nest searches were conducted using a combination of passive detection techniques (observing bird behavior and listening for bird song or calls) and systematically walking the search area to observe nests and nesting behavior. A nest can be confirmed by physically observing the nest structure (often identified by a flushing bird), or by observation of breeding behavior (e.g., auditory signs [singing males, alarm calls, defense calls, screeching, begging vocalizations by nestlings]; distraction displays; nest defense behaviors [e.g., diving]; birds carrying nesting material, food or fecal sacs; observation of nestlings or fledglings; or repeated flying towards a specific location). All nests and evidence of breeding activity, as well as all bird species observed and heard during the nest search were recorded. Incidental observations of other wildlife were also recorded.

RESULTS

Weather conditions were good for conducting nest searches – overcast and misty in the morning and sun in the afternoon with the temperature ranging from 13-23°C, no wind.

Vegetation along the east end of the site, at Schumacher's Corner, consisted of cleared and mature cottonwood trees (*Populus spp.*), balsam poplar (*Populus balsamifera)* western snowberry (*Symphoricarpos occidentalis)*, narrowleaf willow (*Salix exigua),* red osier dogwood (*Cornus sericea),* sweet vernal grass (*Anthozamthum adoratum),* tansy (*Tanacetum vulgare)*, and Tatarian honeysuckle (*Lonicera tatarica*). Within Schumacher's Corner, two active House Wren *(Troglodytes aedon)* nests were identified within large shrub vegetation along the fence line of the property at 5th Street East and Riverside Drive. A 20 m buffer has been established for each nest, see **Figure 3.** Mature moose prints were observed coming onto the shoreline from the north side of the river, just upstream of Schumacher's corner, and continued west along the south bank shorline to Gordon Taylor Bridge.

A Great Blue Heron (GBHE) was observed foraging along the Red Deer River directly adjacent to Schumacher's Corner. A scan along the project area for any potential suitable nesting locations. It was difficult to confirm nests due to leaf-on trees, therefore the southern Red Deer River regional Biologist Scott Stevens was contacted with Alberta Environment and Protected Areas (AEPA) to determine whether any known nesting sites were within 1000 meters of the project site. AEPA determined that there are no known nesting sites in the area. At this time, there are no buffers are proposed for GBHE.

Vegetation along the middle section of the site, from 3rd avenue to Centennial Park, consisted primarily of reed canary grass (*Anthoxanthum odoratum),* wild rose (*Rosa acicularis*), tansy, red osier dogwood and juvenile cottonwood. A mallard nest was observed across from the Canalta lot, a 25 m buffer has been established for this nest, see **Figure 3.** Two inactive corvid nests were observed within this area.

Vegetation within Centennial Park consisted of manicured park (mowed grass and mature cottonwood trees). The area was scanned with work in mind that no downing of trees was proposed. No nests were observed within this area.

Vegetation west of Centennial Park primarily consisted of cleared and mature cottonwood trees, western snowberry (*Symphoricarpos occidentalis)*, narrowleaf willow, grasses and thistle. Two inactive cup nests were discovered, one catbird and the other unknown. Juvenile gray catbird fledglings were observed at this location; however, as the fledglings are not nest bound and are able to move, a buffer is not required at this location. A Cliff Swallow (*Petrochelidon Pyrrhonota)*

colony was observed on the underside of Gordon Taylor Bridge. The project is greater than 50 meters from the colony; therefore, a buffer has not been implemented for the berm project.

Figure 3.

Evidence of the following wildlife species were incidentally observed including vocalization, direct observation, tracks or other signs within the search area:

Table 1 - Species observed during bird sweep on July 12, 2023

COMMON NAME	SCIENTIFIC NAME	STATUS		
		AEP	COSEWIC	SARA
Red-winged blackbird	*Sturnus vulgaris*	Secure	-	-
American Robin	*Turdus migratorius*	Secure	-	-
Black-billed Magpie	*Pica hudsonia*	Secure	-	-
American Crow	*Corvus brachyrhynchos*	Secure	-	-
Clay-coloured Sparrow	*Spizella pallida*	Secure	-	-
Song Sparrow	*Spizella psserina*	Secure	-	-
House Sparrow	*Passer domesticus*	Alien/XX	-	-

COMMON NAME	SCIENTIFIC NAME	STATUS		
		AEP	COSEWIC	SARA
Vesper Sparrow	*Pooecetes gramineus*	Secure	-	-
Great Blue Heron	*Ardea Herodias*	Sensitive	Special Concern	Schedule 1 – Special Concern
Common Yellowthroat	*Geothlypis trichas*	Secure	-	-
Red-eyed Vireo	*Vireo olivaceus*	Secure	-	-
Yellow Warbler	*Dendroica petechia*	Secure	-	-
American Goldfinch	*Spinus Tristis*	Secure	-	-
House Wren	*Troglodytes aedon*	Secure	-	-
Bank Swallow	*Riparia riparia*	Sensitive	Threatened	Schedule 1 - Threatened
Cliff Swallow	*Petrochelidon Pyrrhonota*	Secure	-	-
Cedar Waxwing	*Bombycilla cedrorum*	Secure	-	-
Mallard	*Anas Platyrhynchos*	Secure	-	-
Killdeer	*Charadrius vociferus*	Secure	-	-
Gray Catbird	*Dumetella carolinensis*	Secure	-	-
Mourning Dove	*Zenaida maroura*	Secure	-	-
Eastern Kingbird	*Tyrannus tyrannus*	Sensitive	-	-
Northern Flicker	*Colaptes auratus*	Secure	-	-
Black-capped chickadee	*Poecile atricapillus*	Secure	-	-
Moose	*Alces alces*	Secure	-	-
Beaver	*Castor canadensis*	Secure	-	-

RECOMMENDATIONS

The following recommendations are provided based on the results of the nest search:

- Do not conduct work within the buffer zones for Mallard and House Wren as identified in **Figure 3.**
- Complete a follow-up assessment of the Mallard and House Wren nests on or after July 26, 2023 to determine if the nests are still active.
- Work should begin within seven days of the date of the nest search.
- Work should continue steadily until complete in order to maintain a continuous disturbance and avoid the possibility of migratory birds (or other wildlife) moving in.
- If construction activity stops for seven or more consecutive days, nest searches must be repeated.

- Minimize the attraction of wildlife by keeping the worksite tidy and free of food waste or other wildlife attractants. Store food in appropriate facilities or vehicles and secure litter, waste, and garbage in appropriate containers.

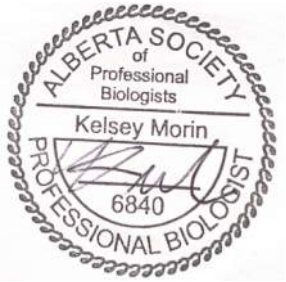
- If any other nesting (e.g., hawks, owls, migratory birds) or denning (e.g., coyotes, foxes, snakes) wildlife are observed, immediately implement a disturbance buffer of 30 m or greater and contact a Qualified Environmental Professional.

CLOSURE

All work areas are cleared for work to begin as soon as possible. Nest search information is valid for seven days from the search date. As such, construction activities should commence as soon as possible. If these activities do not commence on or before July 19, 2023 or if work is interrupted for seven consecutive days during the breeding period, a follow-up nest search should be completed.

Should you have any questions or require additional information, please do not hesitate to contact RIDGE Environmental Planning Ltd.

Prepared by:



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REFERENCES

Alberta Environment and Parks (AEP). 2017. Alberta Wild Species General Status Listing – 2015. Available at: https://open.alberta.ca/dataset/ad0cb45c-a885-4b5e-9479-52969f220663/resource/763740c0-122e-467b-a0f5-a04724a9ecb9/download/sar-2015wildspeciesgeneralstatuslist-mar2017.pdf

Alberta Sustainable Resource Development (ASRD). 2011. Recommended Land Use Guidelines for Protection of Selected Wildlife Species and Habitat within Grassland and Parkland Natural Regions of Alberta. Available at: https://open.alberta.ca/dataset/e269aad8-3664-402a-b7cb-77abe89e9617/resource/6195d2d4-9f7d-43e5-ada5-81a8210fae38/download/3054250-2011-recommended-land-use-guidelines-protection-wildlife-species-habitat.pdf

Environment and Climate Change Canada (ECCC). 2020. Avoiding Harm to Migratory Birds. Available at: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html

Environment and Climate Change Canada (ECCC). 2018. Nesting Periods. https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html

Government of Alberta (GoA). 2006. Natural Regions and Subregions of Alberta. Natural Regions Committee. Available at: https://www.albertaparks.ca/media/2942026/nrsrcomplete_may_06.pdf.

Government of Alberta (GoA). 2021. Master Schedule of Standards and Conditions. Available at: https://open.alberta.ca/dataset/133e9297-430a-4f29-b5d9-4fea3e0a30c2/resource/fe3a031f-06c0-45a1-8277-a0817760b528/download/aep-master-schedule-of-standards-and-conditions-2021.pdf

SITE PHOTOGRAPHS

Photo 1 – Riparian area within the no-clear area within Schumacher's Corner.

Photo 2 – Schumacher's Corner vegetation.

Photo 3 – Schumacher's Corner, House Wren.

Photo 4 – Riparian vegetation and habitat upstream of Schumacher's Corner.

Photo 5 – Great Blue Heron across the Red Deer River on the north bank from Schumacher's Corner.

Photo 6 – Gray Catbird within the riparian area upstream of Schumacher's Corner.

Photo 7 – Riparian vegetation downstream from Riverview Condominiums.

Photo 8 – Moose prints located along the bank from Schumacher's corner and carried on throughout the entirety of the bank to Gordon Taylor Bridge.

Photo 9 – Mallard nest location.

Photo 10 – Inactive Gray Catbird nest.