

September 15, 2022

Town of Drumheller  
Resiliency and Flood Mitigation Office  
224 Centre Street  
Drumheller, Alberta  
T0J 0Y4

**Deighen Blakely, P.Eng.**  
**Project Director**

Dear Ms. Blakely:

## **Midland Flood Mitigation Barrier - Pre-Disturbance Wildlife Sweep**

### **1 INTRODUCTION**

Klohn Crippen Berger Ltd. (KCB) is pleased to provide a summary for the above referenced pre-disturbance wildlife sweep conducted on August 31, 2022 to support the Town of Drumheller with respect to clearing vegetation for the installation of a flood mitigation barrier at the Midland area (the Project). A site plan of the Project is provided in Figure 1.

### **2 SITE DESCRIPTION**

Habitat within the Project area consisted predominantly of grasses and shrubs. The proposed berm area (Figure 1) had been previously cleared/grubbed. The areas adjacent to the project area are treed, consisting predominantly of mature trees with a thick shrubby understory in most areas. Recreational walking/biking paths run alongside both the north and south edges of the proposed project area.

### **3 FEDERAL AND PROVINCIAL REGULATIONS**

Clearing land cover during the nesting season of birds and mammals may lead to contraventions of the *Wildlife Act* of Alberta, the federal *Migratory Birds Convention Act*, and the federal *Species at Risk Act*. Under Section 36(1) of the *Wildlife Act*, a person or corporation cannot molest, disturb, or destroy a house, nest, or den of wildlife. Under Sections 5.1(1) and (2) of the *Migratory Birds Convention Act*, a person or corporation cannot deposit a substance or a combination of substances that are harmful to migratory birds. Under Section 12.1(h) a person or corporation cannot kill, capture, injure, take, or disturb migratory birds or damage, destroy, remove, or disturb nests. Finally, Section 32(1) of the *Species at Risk Act* provides protection to Endangered or Threatened aquatic and terrestrial species at risk from being killed, harmed, captured, harassed, possessed, or collected. In

addition, the Act also prohibits the destruction of the residence of a listed species. Therefore, it is the responsibility of those wanting to clear land cover during the breeding season of wildlife to ensure active nests and dens are not disturbed or destroyed during clearing activities.

During the breeding period of wildlife, nest/den searches must be conducted by qualified biologists of the proposed project area to identify important wildlife features (e.g. nests, dens and hibernacula) that must be avoided during construction (AEP 2021)<sup>1</sup>. Any occupied nests/dens found are to be identified and a setback distance, as recommended by regulators, is to be applied that will prevent the destruction or disturbance of the nest/den for a duration that improves the opportunity for the successful completion of the breeding activity.

## 4 METHODS

During the wildlife sweep, the biologist walked slowly and scanned for nests constructed in shrubs and grasses and to watch for birds exhibiting behaviors that would indicate a nearby, active nest (e.g. broken wing display; aggressive defense of an area; and or birds carrying food, nesting materials, and or fecal sacs), as well as any burrows, beddings, tracks, or other signs of the presence of small mammals and/or ungulates. Trees located adjacent to the Project area were also checked for raptor nests, as the Project work (both vegetation clearing and general construction noise) would have the possibility of disturbing birds nesting adjacent to the area to be cleared. The sunny conditions allowed for the use of the sun to backlight trees and shrubs to search for nests in the foliage. While conducting the sweep the biologist looked for signs of occupied dens including but not limited to the presence of animal, evidence of territorial displays, fresh feces, signs of digging/excavation and/or tracks (AEP 2021). The ground was continuously scanned for amphibians and snakes.

## 5 RESULTS

The area swept was clear of occupied nests on August 31, 2022. Two small mammal burrows were identified but did not appear to be established recently, nor did they appear active. It should also be noted that the area appears to be a recreational area frequented by children, with constructed forts and areas with lawn chairs.

Multiple areas over the entire extent of the Project area had deer feces present, as well as bedding areas among the grassy areas adjacent to the tree lines (Figure 2). Two juvenile mule deer (*Odocoileus hemionus*) were observed running along the tree line. A third mule deer was spotted in the forested area adjacent to the Project area, and whether it was one of the juveniles observed earlier is unknown.

Several incidental species observations were noted and can be seen in the table below.

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<sup>1</sup> Alberta Environment and Parks. 2021. Wildlife Sweep Conditions in the Master Schedule of Standards and Conditions Facts About Wildlife Sweep Conditions for Public Lands Disposition. Edmonton, AB.

**Table 5.1 Incidental Observations**

Common Name	Scientific Name	Count
American Crow	<i>Corvus brachyrhynchos</i>	2
Black-capped Chickadee	<i>Poecile atricapillus</i>	2
Canada Goose	<i>Branta canadensis</i>	14
Gray Catbird	<i>Dumetella carolinensis</i>	1
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	3
White-breasted Nuthatch	<i>Sitta carolinensis</i>	1
Yellow Warbler	<i>Dendroica petechia</i>	1
Least Chipmunk	<i>Neotamias minimus</i>	1
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	2

As requested, Figure 2 maps locations within the Project footprint with sage that may be suitable for harvest by the Calgary Zoo.

## 6 RECOMMENDATIONS

The peak of breeding activity for most birds occurs between late May and July, though early nesting species, such as owls can nest as early as mid-February. With construction occurring outside this window, it is unlikely new nests would become active, and therefore the risk is considered negligible. Deer in the area would more likely shelter in the treed areas adjacent to the Project site. Peak fawning season for mule deer occurs in early summer and has since passed. The observed juvenile deer were mature enough to leave an area of disturbance on their own. Caution should be taken when developing grassy areas suitable for bedding that no young are present. When clearing vegetation, all vegetation should be removed so that regrowth in the cleared area is minimized.

## 7 CLOSING

This report is an instrument of service of Klohn Crippen Berger (KCB). The report has been prepared for the exclusive use of the Town of Drumheller (Client) for the specific application to the Flood Mitigation Project, and it may not be relied upon by any other party without KCB's written consent.

KCB has prepared this report in a manner consistent with the level of care, skill and diligence ordinarily provided by members of the same profession for projects of a similar nature at the time and place the services were rendered. KCB makes no warranty, express or implied.

Use of or reliance upon this instrument of service by the Client is subject to the following conditions:

1. The report is to be read in full, with sections or parts of the report relied upon in the context of the whole report.
2. The observations, findings and conclusions in this report are based on observed factual data and conditions that existed at the time of the work and should not be relied upon to precisely represent conditions at any other time.
3. The report is based on information provided to KCB by the Client or by other parties on behalf of the client (Client-supplied information). KCB has not verified the correctness or accuracy of such information and makes no representations regarding its correctness or accuracy. KCB shall not be responsible to the Client for the consequences of any error or omission contained in Client-supplied information.
4. KCB should be consulted regarding the interpretation or application of the findings and recommendations in the report.
5. This report is electronically signed and sealed and its electronic form is considered the original. A printed version of the original can be relied upon as a true copy when supplied by the author or when printed from its original electronic file.

If you should have any questions, please do not hesitate to contact Jason Duxbury at (780) 733-4586.

Yours truly,

**KLOHN CRIPPEN BERGER LTD.**

*Megan Blais*

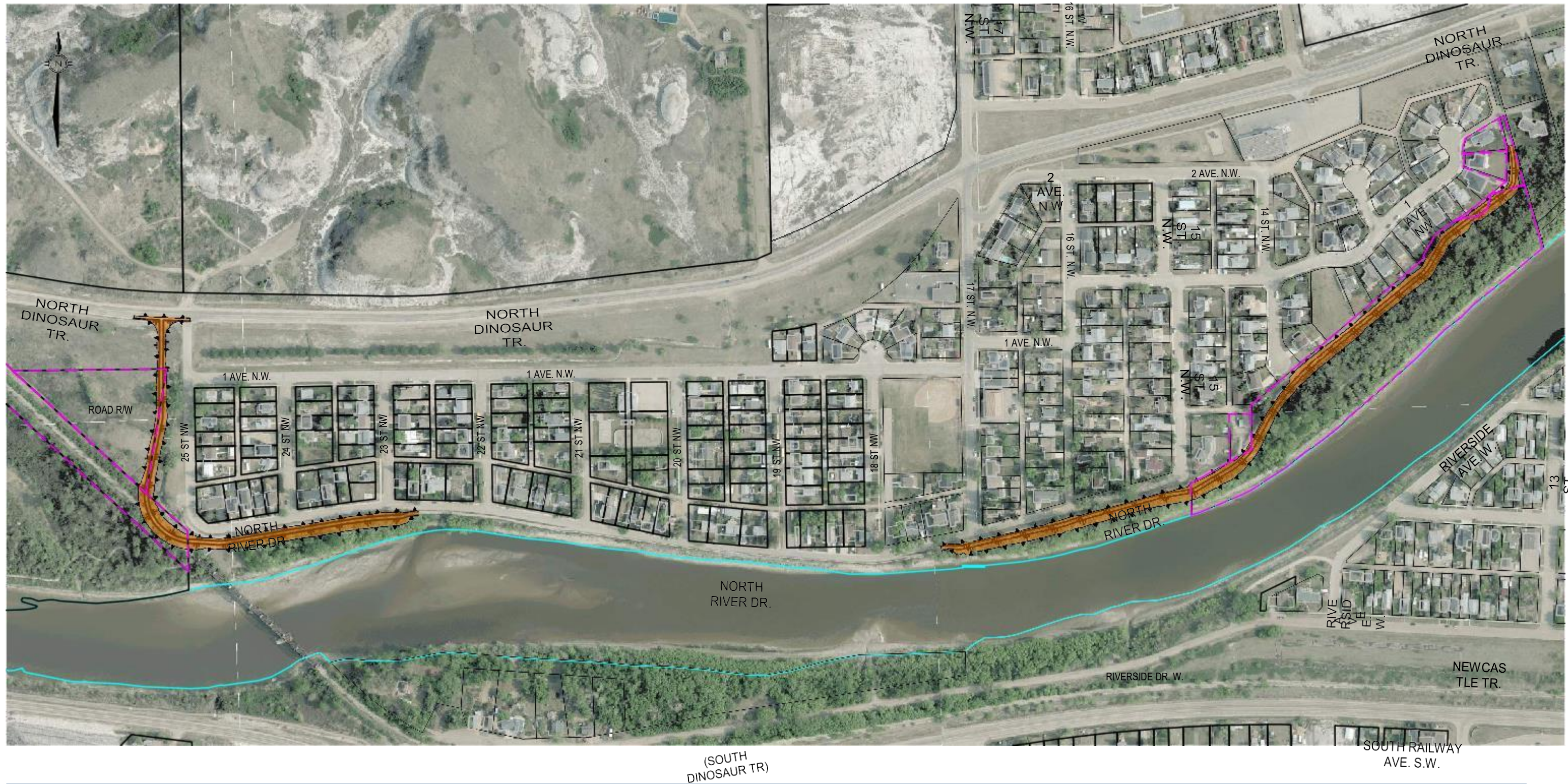
Megan Blais, B.Sc.  
Environmental Scientist



Jason Duxbury, PhD., P.Biol., R.P.Bio  
Senior Wildlife Biologist, Regulatory Approvals  
& Permitting Team Lead

### ATTACHMENTS

Figure 1 Site Plan  
Figure 2 Survey Results



**NOTES:**

1. 2019 AERIAL IMAGE (PROVIDED BY DRUMHELLER RESILIENCY AND FLOOD MITIGATION OFFICE).
2. RIVER & PER NHC (APRIL 2020).
3. PROJECT COORDINATE SYSTEM CANA83-3TM114.
4. SCALE NOTATIONS INDICATED ARE BASED ON AN ANSI B DRAWING FORMAT.

**LEGEND:**



**PLAN**

SCALE = 1:1250




Project Number:  
Date: JULY 2022  
DRUMHELLER RESILIENCY AND FLOOD MITIGATION PROGRAM  
MIDLAND FLOOD DIKE UPGRADES

**Figure 01**

File: Z:\A\CGY\Alberta\A03409A06 DRFMP Construction Services\400 Drawings\401 Working Folder\Wildlife Field Locations\Wildlife Field Locations.aprx Date: Time: Creator: : aharrison



**Legend**

-  Deer Bedding
-  Mammal Burrow
-  Sage Grass

NOTES:  
 1. HORIZONTAL DATUM: NAD83  
 2. GRID ZONE: UTM ZONE 12N  
 3. IMAGE SOURCE: MAXAR

CLIENT



PROJECT

TOWN OF DRUMHELLER FLOOD MITIGATION

TITLE

SENSITIVE WILDLIFE & VEGETATION

SCALE 1:6,500

PROJECT No. A03409A06

FIG No. 1

