



MAPLE GROVE

BASELINE INVENTORY REPORT 2022

Stewards of the river valley corridor.

Meewasin 

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Treaty 6 Territory and Homeland of the Métis



Meewasin Valley Authority

Created in 1979, the Meewasin Valley Authority (“Meewasin”) is a non-profit organization dedicated to conserving the cultural and natural resources of the South Saskatchewan River Valley. Meewasin’s enabling statute, *The Meewasin Valley Authority Act*, established a partnership between the City of Saskatoon, the Government of Saskatchewan, and the University of Saskatchewan for the joint management of the South Saskatchewan River Basin. Meewasin’s structure reflects a commitment to the goal of having the participating parties accomplish more by working together through a single agency – Meewasin – than could be achieved individually.

Photo Front Cover: Aerial UAV photo of Maple Grove, northeast site extent. Photo captured on 06/16/2022. Photo credit: Meewasin.

Photo Back Cover: Aerial UAV photo of Maple Grove, southwest site extent. Photo captured on 06/16/2022. Photo credit: Meewasin.

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1.0 Maple Grove Site Introduction

The purpose of this document is to provide a condensed summary of the current known status of the Maple Grove site. This report will serve as a reference for future resource management and site master planning exercises.

Maple Grove is a Meewasin property situated on the west bank of the South Saskatchewan River in the Rural Municipality of Corman Park #344 (Figure 1). The site lays on the outskirts of the City of Saskatoon, located approximately one kilometer upstream from the Queen Elizabeth II Power Station. Maple Grove is a rich topographical and ecological landscape comprised of diverse upland and floodplain areas with a fluctuating eastern site boundary defined by the riverbank (Delanoy, 2000). Maple Grove is accessible at the northeastern point of the property by municipal road (Township Road 362/ Hodgson Road) and an internal system of graveled roads and trails provide access to remaining portions of the site (Figure 1).



Figure 1. Maple Grove Site Location Overview Map

1.1 Legal Property Description

The entire legal property title for Maple Grove includes two irregularly shaped partial quarter sections (Part NE 12-36-06-W3 Ext 31 and Part NW 12-36-06-W3 Ext 32) which combined make up approximately 45.2 hectares of land area (Figure 2; Table 1). The legal land parcel boundaries delineating the Maple Grove property title extend from the mainland site area across a channel of the South Saskatchewan River onto the adjacent river island, known as Yorath Island (Figure 2). Although a portion of Yorath Island is technically included within the legal land title area for the Maple Grove property, Meewasin considers the mainland Maple Grove property and Yorath Island as separate site areas. The Maple Grove site, which serves as the primary focus of this report, includes approximately 22.5 hectares of terrestrial land area contained within the Maple Grove site boundary illustrated in Figures 1 and 2.

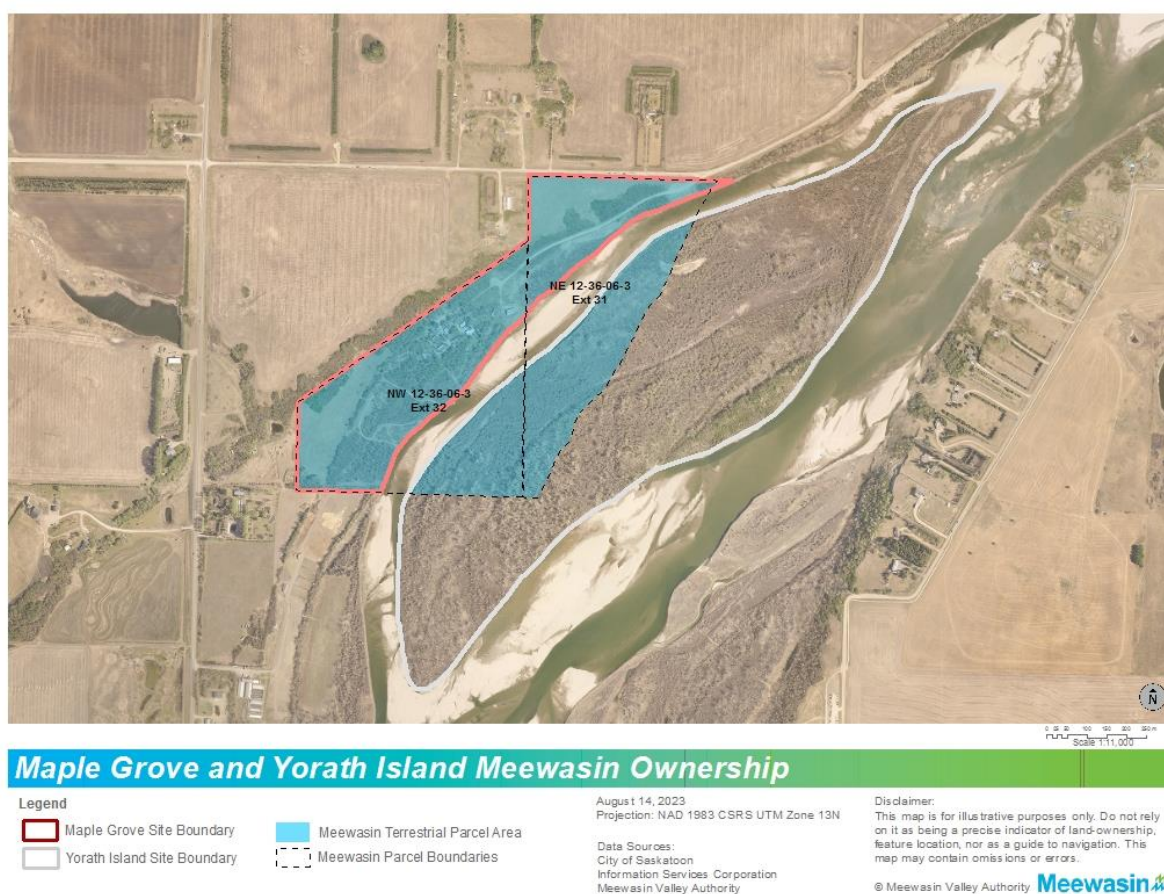


Figure 2. Maple Grove and Yorath Island Ownership Map

Table 1. Maple Grove Property Information Summary

Site Information Component	Description
Site Name	Maple Grove
Ownership	Meewasin Valley Authority
Property Location	Rural Municipality of Corman Park No. 344, Saskatchewan
Total Site Area	The Maple Grove site is approximately 22.49 hectares (~55.57 acres) in size.
Meewasin Valley Authority Act Reference	<p><i>The Meewasin Valley Authority Act</i>, SS 1979, c M-11.1.</p> <p>The Maple Grove property area falls within the lands described in Schedule A, subsections 4(e) and 4(f), of <i>The Meewasin Valley Authority Act</i>. Clause 2(q)(ii) of <i>The Meewasin Valley Authority Act</i> applies to portions of the Maple Grove property.</p>
Municipal Planning Considerations	<p>Maple Grove falls within the Saskatoon North Partnership for Growth (P4G) Planning District and Zoning Bylaw area. The following P4G municipal planning considerations apply to the site:</p> <ul style="list-style-type: none"> • Schedule 1 Zoning District: 'Agricultural District 1' (Code DAG1) (<i>P4G Zoning Bylaw</i>, 2023a, 6.3, p.93; Appendix Figure A-I 7) • Schedule B District Land Uses: Green Network Study Area (P4G, 2023b, p.80)
Legal Land Description	<p>The Maple Grove property title area is comprised of two partial quarter sections which correspond with the following legal land descriptions:</p> <ul style="list-style-type: none"> • Part NE 12-36-06-W3 Ext 31: North East Quarter of Section 12, Township 36, Range 6, West of the Third Meridian, Extension 31, Saskatchewan • Part NW 12-36-06-W3 Ext 32: North West Quarter of Section 12, Township 36, Range 6, West of the Third Meridian, Extension 32, Saskatchewan
Total Legal Property Area	<p>The total Maple Grove property title area is approximately 45.2 hectares (~111.6 acres). Parcels contained within the property title extent correspond with the following land areas:</p> <ul style="list-style-type: none"> • Part NE 12-36-06-W3 Ext 31 contains approximately 20.7 hectares (~51.2 acres) • Part NW 12-36-06-W3 Ext 32 contains approximately 24.5 hectares (~60.5 acres)

1.1.1 Legal Property Title Area

The legal property title for Maple Grove (illustrated in Figure 2) encompasses approximately 45.2 hectares of designated title area (Table 2). The total property contained within the Maple Grove land title includes the mainland Maple Grove site and spans across a channel of the South Saskatchewan River onto a portion of the adjacent Yorath Island land mass (Figure 2).

The following table details the distribution of Meewasin property title area across parcel title boundaries, river channel, and the terrestrial areas of Yorath Island and Maple Grove.

Table 2. Distribution of Meewasin Maple Grove Property Title Area

Property Title Portion	Terrestrial Area Maple Grove (ha)	Terrestrial Area Yorath Island (ha)	River Channel Area (ha)	Total Property Area (ha)
Parcel Part NE 12-36-06-3 Ext 31	6.98	9.29	4.43	20.7
Parcel Part NW 12-36-06-3 Ext 32	15.51	5.28	3.71	24.5
Total Area (ha)	22.49	14.57	8.14	45.2

The entire Maple Grove property title includes over 37 hectares of terrestrial land title area with approximately 22.49 hectares of land on the mainland Maple Grove site and 14.57 hectares of land on Yorath Island (Table 2). The remaining approximate 8.14 hectares of title land area is located in the fluctuating river channel space between the mainland and river island (Table 2).

Parcel Part NE 12-36-06-3 Ext 31 includes approximately 20.7 hectares of land title area. Land title areas contained within Extension 31 include approximately 6.98 hectares of land on the Maple Grove site area, 9.29 hectares of land on Yorath Island, and 4.43 hectares of land title area in the river channel (Table 2). Parcel Part NW 12-36-06-3 Ext 32 includes approximately 24.5 hectares of property title area including 15.51 hectares on Maple Grove, 5.28 hectares on Yorath Island, and 3.71 hectares in the river channel area (Table 2).

Yorath Island Property Title Area

Early land survey records reveal that the entire quarter section housing the Maple Grove property was historically intact on the mainland area when the region was originally surveyed in 1902 (Meewasin, 1980; Figure 3). In the century following the original land survey, meandering river channel dynamics caused portions of the mainland property to split off into the river, eventually forming a mid-channel sand bar that slowly developed into Yorath Island (Meewasin, 1980). Yorath Island gradually formed and established through processes of erosion, sedimentary deposition, and ecological succession (Figure 3; Meewasin, 1980). The natural accretion process that resulted in the formation of Yorath Island has allowed property owners of Maple Grove to retain title of the remaining quarter section contemporarily situated on a portion of Yorath Island (Meewasin, 1980).

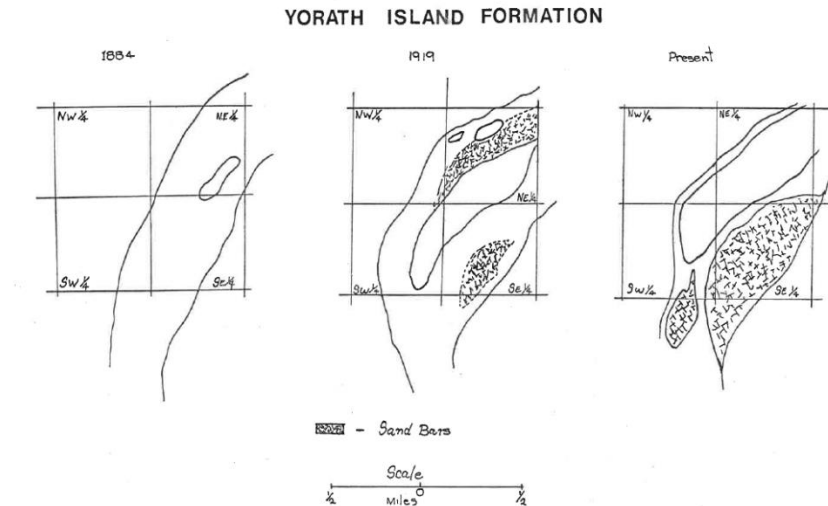


Figure 3. Yorath Island Formation Illustration. Figure retrieved from the *Yorath Island Working Paper* (Meewasin, 1980, p.5, Fig. 2.1).

Although Yorath Island is considered by Meewasin to be distinct from the Maple Grove site, the direct proximity of the island grants its inclusion within the broader Maple Grove study area of this project.

1.1.2 Municipal Planning

Saskatoon North Partnership for Growth (P4G) Planning District

The Maple Grove site falls within the Saskatoon North Partnership for Growth (P4G) Planning District area. The P4G is a strategic municipal partnership formed by the City of Saskatoon, Rural Municipality of Corman Park, City of Martensville, Town of Osler, and the City of Warman to advance a regionally coordinated approach to municipal planning, rural and urban land use, servicing, and development (P4G, 2023a). The P4G Planning District and its associated Official Community Plan, District Planning Agreement, and Zoning District Bylaw assist in the implementation of this regional vision (P4G, 2023a).

P4G Zoning District Classifications

A map of the current Schedule 1 zoning surrounding Maple Grove can be found in Appendix A-I (Figure A-I 7 retrieved from P4G District Zoning Bylaw Community Plan, 2023b, p.173).

Maple Grove is located within the P4G Planning District and Zoning Bylaw Area within the Rural Municipality of Corman Park (P4G, 2023b). Property areas at Maple Grove are subject to zoning district classifications and the associated land use regulations and requirements outlined in the *P4G Planning District Zoning Bylaw*. Areas within the Maple Grove property fall under the P4G Schedule 1 zoning district classification 'Agricultural District 1 (DAG1)' (P4G 2023b; Figure A-I 7).

Section 6.3 of the *P4G Planning District Zoning Bylaw*, states that the purpose of the DAG1 District classification is, “to accommodate extensive and intensive agricultural activities while providing for complementary, non-agricultural development” (P4G, 2023b, 6.3.1: p.93). Section 6.3 of the *P4G Planning District Zoning Bylaw* outlines a range of permitted and discretionary land uses, specific use development standards, site development regulations, and landscaping development standards associated with the DAG1 zoning district classification.

P4G Planning District Future Land Use Designations

General land use designations for the P4G Planning District are outlined in Schedule B of the P4G Official Community Plan document. According to the land use designations marked on the Schedule B District Land Use Map, the Maple Grove property falls within the Green Network Study Area (P4G, 2023b, p.80). The Green Network Study Area is a land use category that includes connected ecological areas, natural corridors, and green spaces within the P4G region (P4G, 2023a: S.17.0, p.46). According to the P4G Official Community Plan, the Green Network Study Area is intended to promote connectivity between natural areas, and support multifunctional green spaces that deliver environmental, cultural, and recreational benefits (P4G, 2023a). The Green Network Study Area is also intended to accommodate compatible agriculture, outdoor recreation, and sensitively integrated storm water management infrastructure (P4G, 2023a).

1.2 Property Securement History

Meewasin recognized the value of the Maple Grove property and its enduring relevancy within the context of the Meewasin Valley region long before the Maple Grove site entered the real estate market. Raymond Moriyama Architects and Planners initially identified the Maple Grove area in the 1978 *Conceptual Master Plan* as a potential interactive feature point within the larger system of linkages and nodes constituting the envisioned Meewasin Valley corridor (Moriyama, 1978). The Moriyama visioning team had highlighted Yorath Island and the adjacent west mainland region due to its demonstration of unique floodplain ecology and distinct meandering formational processes that define the surrounding Meewasin river valley area (Moriyama, 1978). Meewasin specifically identified Maple Grove as a ‘high priority for purchase’ internally when the Land Acquisition Policy was created in 1981 and initiated a multi-year process of exploring various options related to site securement and visioning surrounding the property (Meewasin, 2000).

Meewasin finally purchased the Maple Grove site in 1998 from previous owners, Michael and Lillian Egnatoff. The Egnatoff family had developed and maintained the Maple Grove area as an amusement park and community gathering space, then known as ‘Leisureland’. During the Leisureland-era, the site featured various recreational attractions including amusement park rides, dance hall and banquet facilities, picnicking areas, playing fields, miniature golf, and a camping area that eventually transitioned into a permanent residential trailer park with 18 trailer units (Egnatoff, 1998). Meewasin was able to purchase the Maple Grove property from Michael Egnatoff in 1998 with support from the Leisureland trailer park residents who had organized the formation of a cooperative body and negotiated a 25-year lease agreement with Meewasin (Memorandum of Agreement, 1997).

2.0 Anthropogenic Background

This section summarizes relevant known anthropogenic developments, archaeological data, and locally archived histories associated with the Maple Grove property area. Most comprehensive historical documentation possessed by Meewasin in relation to the Maple Grove property chronicles the period following Meewasin's securement of the site in 1998. This report does not claim to provide a complete rendering of the human histories, impacts, and relationships that have existed in the Maple Grove area as well as the social and cultural significance that the broader site region has held prior to and external from colonial settlement, research institutions, and property titles.

2.1 Archaeological Background

The *Meewasin Valley Archaeological Resource Management Study* (Walker et al., 1987) is the main source for all archaeological background information presented within this subsection. Meewasin commissioned the University of Saskatchewan's Department of Anthropology and Archaeology to perform this study in the late 1980s as a jurisdiction-wide effort to aggregate, identify, and provide guidelines for the protection of known archaeological resources within the Meewasin Valley area. The team of academic researchers for this study consisted of the following members: Ernest G. Walker, David L. Kelley, and Richard Gorre. The 1987 archaeological study details two separate archaeological research sites discovered within range of the Maple Grove study area. The sites located within the Maple Grove study area correspond with the following names: Glow Site II (FaNq-39) and Wettlaufer's S-33 (FaNq-3).

The Glow Site II (FaNq-39) is primarily situated on landowner A. Glow's quarter section and intersects the land designated as the Maple Grove study area. Documentation of this archaeological site is limited. This site was surveyed both in 1966 by Ian Dyck and in 1973 by Ernie Walker, recovering surface finds of ceramic materials, Oxbow points, flakes, and lithic debris.

The north tip of Yorath Island falls within the Wettlaufer's S-33 (FaNq-3) archaeological zone. Documentation of this site within the *Meewasin Valley Archaeological Resource Management Study* contains limited information regarding the associated archaeological artefacts found and details observed.

It is of note that additional and significant archaeological finds occurred in the area northeast of Yorath Island's tip and the surrounding SaskPower land and Saskatoon Landfill area, including the original Gowen Site and Gowen Two (Walker et al., 1987). The original Gowen archaeological site discovery (Gowen One) was an extensive habitation site and bison processing area uncovered at the Saskatoon Landfill in 1977 which was classified as a large Early-Side Notched Occupation and radiocarbon dated to 6000 years before present (Walker et al., 1987). Gowen One was heralded as a significant discovery in the field of archaeological research, as few of such sites had been excavated in North America at that time. Gowen Two is located just northeast of the Maple Grove Property. It was initially recorded and classified in 1980 as an Early Plains Archaic habitation site and radiocarbon dated at 6000 years before present (Walker et al., 1987).

2.2 Historic Site Management and Land Use

The Maple Grove site holds a long-standing legacy of leisure in the Saskatoon area bolstered by a historical record of community gathering and recreation that dates back to at least the early 1900s (Meewasin, 1980; Appendix Figure A-IV 11 Right). Local historical accounts surrounding the area suggest that cottagers were visiting and constructing cabins on the site as early as 1915 (Meewasin, 1980). The site is believed to have gained its name, 'Maple Grove', from early recreational visitors, in reference to the abundance of maple trees in the area (Meewasin, 1980). Evidence of the 1910s cottager era has been erased from the landscape as the original cabin structures and historic maple stands were incinerated by a wildfire that moved through the site sometime around 1915 (Meewasin, 1980).

Throughout the following century, the Maple Grove area sustained popularity as a gathering spot and sought-after location for picnicking and beach access, with heightened levels of visitation noted in the 1950s and 1960s (Meewasin, 1980; Appendix A-IV). The unique wilderness and rural character of the area provided refuge for many a site visitor while simultaneously supporting important wildlife habitat and plant communities. The location and ecological atmosphere of the site rendered the area as a favourite gathering spot for many Saskatoon locals, including members of the Saskatoon Nature Society, who frequented the site for picnicking and group outings in the 1960s (Stan Shadick, personal communication, 2021).

In the 1950s, famed local hockey players Bill Heindl and Chuck McCullough owned and operated the Maple Grove site as a summer resort destination (Saskatoon StarPhoenix, 1951; Appendix Figure A-IV 12). In an interview published by the Saskatoon StarPhoenix, Heindl was quoted jestingly commenting on the site resort endeavour, proclaiming Maple Grove as "The Poor Man's Waskesiu" (Saskatoon StarPhoenix, 1951; Figure A-IV 12). Mike Egnatoff provided additional memory of the 1950s Maple Grove era in an oral interview with Meewasin, noting his recollection of local hockey players regularly erecting party platforms on the northeast tip of the property to host jitney dances and gatherings (Egnatoff, 1998).

Michael and Lillian Egnatoff purchased the Maple Grove site in 1960 from then previous owner Fred Saitch and retained ownership of the property for approximately 35 years (Egnatoff, 1998). The Egnatoff family developed the Maple Grove site to accommodate increased recreational visitation and officially re-opened the site to visitation in the spring of 1961 (Egnatoff, 1998). At that time, the site had resumed public operations under the new name, 'Leisureland', and visitors gained access with an admission fee of 50 cents per vehicle (Egnatoff, 1998). During the Leisureland-era, increased site visitation drove the Egnatoff family to expand operations for the accommodation of larger-scale community gatherings, overnight camping, and destination entertainment amenities (Egnatoff, 1998).

In 1961, a large recreational hall was installed on the site equipped with dancing and banquet facilities to host up to 225 people (Egnatoff, 1998). Site expansion continued with the gradual introduction of additional features such as a smaller banquet hall, an 18-hole mini-golf course, a baseball diamond and recreational playing fields, a concession stand, additional picnicking areas, and a series of 36 overnight camping sites which were later converted into 18 fully-serviced mobile home trailer stalls (Egnatoff, 1998). The Egnatoff family additionally installed and operated a series of amusement park rides on-site with a public admittance fee of 10 cents per ride (Egnatoff, 1998). The rotational collection of rides included a child's airplane ride, two Ferris wheels, a roller

coaster (which was never made operational), a merry-go-round, and a train – then known as the ‘Leisureland Express’ (Appendix Figures A-II 22 & A-IV 20) – which would carry passengers across the entire site (Egnatoff, 1998). Leisureland amusement attractions were operational for public visitation for a period of approximately 20 years, ceasing around 1980 in response to decreased visitor demand and increased recreational competition in the surrounding Saskatoon area (Egnatoff, 1998; Saskatoon StarPhoenix, 1977: Figure A-IV.19). Around this time, in the nearby City of Saskatoon, the local Kinsmen Club had invested in site improvements and the installation of recreational facilities and amusement park rides at Kinsmen Park (City of Saskatoon, 2011).

In years following the decline of Leisureland operations, the site was operated predominately to accommodate residential dwellings, offering lease space for mobile homes and facility rentals. The Egnatoff family briefly explored the possibility of significantly expanding trailer court capacity on the site but the initiative fell through due to a lack of finances (Egnatoff, 1998). In 1982, the Egnatoffs constructed a 3-bedroom bungalow home on the Leisureland site, overlooking the river and Yorath Island, to serve as their personal recreational cottage (Egnatoff, 1998). In 1988, Mike Egnatoff began leasing the small banquet building to a group of Saskatoon artists (Egnatoff, 1998). The Artists’ Studio accommodated eight studio workspaces and housed a rotation of renowned Saskatoon-region artists engaged in various creative pursuits including painting, picture framing, and large-scale stone masonry and metal sculpting (Egnatoff, 1998; Figure A-IV 22).

In 1998, at the age of ninety, Michael Egnatoff sold the Maple Grove property to Meewasin, having made the decision to list the site for sale in view of his advanced age (Egnatoff, 1998). Meewasin was able to secure the site with support from Leisureland trailer court residents who had formed a cooperative body (Leisureland Community Co-Operative LTD) and negotiated a lease agreement with Meewasin over the trailer park area (Memorandum of Agreement, 1997). The lease agreement included a 25-year period of tenancy over the trailer park area (commencing on December 31, 1997 and terminating on December 31, 2022) in exchange for support towards the securement of the Maple Grove property (Lease Agreement, 1997).

2.3 Contemporary Site Management and Land Use

2.3.1 Meewasin Site Management

Following site purchase in 1998, the major remaining Leisureland-era infrastructure items on site included the Leisureland Hall, Leisureland Express Train Shed, 3-bedroom bungalow (referred to colloquially within this document as the ‘White House’), and the Artist Studio building (formerly known as the Small Banquet Hall) (Johnson Appraisals Ltd., 1996). The long-term lease agreement with the Leisureland Cooperative members guaranteed trailer court tenants a twenty-five year occupancy over the trailer park area in alignment with various negotiated terms outlined in the lease agreement (Lease Agreement, 1997). Meewasin leased the Leisureland Hall out to the Leisureland Cooperative for a few years and allocated a separate series of tenant lease agreements over the White House and the Artist Studio buildings. In alignment with the lease terms, the trailer court area and site region located south of the trailer court area have remained off-limits to the public during the active lease period.

In 2003, a grassfire moved through the southern portion of the site, travelling across the old southwest ball diamond recreational field area and into the forested floodplain region just southwest of the trailer court. The fire was contained by a ploughed firebreak, which was later used as the basis for a gravel-based recreational trails system implemented by Meewasin. The trail system is located south of the trailer court and curves through the shrub and forested floodplain areas, providing users river views at various lookout points. Since installation, Meewasin has performed minimal upkeep on the trail system (Figure A-II 10).

Over the years Meewasin has engaged in various forms of structural maintenance, decommission, and demolition on remaining Maple Grove site structures. Within this process, Meewasin has made an effort to prioritize the recycling, repurpose, and relocation of materials and artefacts present within or associated with structures that have been scheduled for decommission and demolition. Leisureland-era amusement rides and defective structures that had remained on the Maple Grove property following site acquisition were removed for repurpose and salvage when possible. Notably, the iconic 'Leisureland Express' train was sold in 2013 and relocated east of Saskatoon to its present-day location where the refurbished train continues operations under its new name, the 'OTI RR' (Figure A-II 22). The Leisureland Express Train Shed was dismantled in 2014 due to an array of structural issues and the salvageable timber units from the Shed were repurposed to form the wooden entrance signs at Beaver Creek Conservation Area (a Meewasin property located south of Saskatoon).

The Artist Studio was demolished in 2008 because of irreparable damages caused by two devastating arson incidents. Until that point, the Studio space had been leased out by Meewasin to a collective of artists, known as The Technicrude Group. During the operational studio years, the artist residence building offered affordable studio rental space on the outskirts of Saskatoon. Maple Grove provided an idyllic natural creative setting that captured the artistic imagination of many landscape painters and multidisciplinary artists (Louise Cook & Darlene Hay, personal communication, 2023). In 2008, two separate fires had affected the Artist Studio building, both occurring within a three-month period. Property damages that followed the second fire were so severe that the studio structure had to be demolished (Figure A-II 25).

Leisureland Hall was demolished in July of 2004, as the decaying condition of the structure had rendered it unsafe for continued operation. Following the demolition of the Hall structure, Meewasin formalized the original Hall parking area through the installation of a series of wooden bollards positioned to mark the lot perimeter. Various disturbances such as fires, flooding, illegal trespassing and property damage, amenity failures, and tenant-related issues have prompted site maintenance and management actions on the Maple Grove site over the years (incidents documented in section 4.5). Management and development activities initiated by Meewasin in response to such disturbance events have been minimal and targeted towards damage prevention and infrastructure preservation.

In 2008, Meewasin installed additional site structural amenities including various signage, parking bollards, fencing segments, and gates to prevent public access and vehicular trespassing into various site areas. Chain-linked fence segments were installed at two key trespass locations in the northern and southern hayfields (Figures A-II 5 & A-II 6). One stretch of fence was installed at the northeast site access area to prevent vehicle passage into the northern hayfield along the former Studio access road and the other stretch was installed on the southern hayfield to prevent all-terrain vehicle and snowmobile trespass issues that had been occurring in the through upland adjoining property. Additional chain link fencing was installed around the playground perimeter

area and a segment of snow fence was erected along the north side of the entrance road to block vehicular trespass onto the former Artist Studio building and yard area (A-II 23). Bollards were installed near the site entrance area along the adjacent hillside slope to prevent vehicles from driving into the river (Figure A-II 7). Meewasin signage and cautionary notices were also installed in key visual areas (such as the parking lot and the entrance) to indicate site occupancy and trespassing rules (Figure A-II 8).

Meewasin has applied landscape restoration and resource management actions over the years on a limited basis to restore disturbed areas and reduce the spread of noxious weeds and invasive plant species. Meewasin contracted haying to occur along the two remnant hayfield areas at Maple Grove for a period of three years during the late summer seasons of 2017, 2018, and 2019. Prior to that three-year haying period, the hayfield areas sat idle for a decade with established vegetative dominance by non-native grass species and associated invasive plants. Targeted invasive species control efforts have been relatively limited on the Maple Grove site with the exception of a robust control effort targeting European Buckthorn (*Rhamnus cathartica*) and Leafy Spurge (*Euphorbia esula*). Additional invasive vegetation surveying, patch monitoring, and treatments have occurred on the site in limited capacities. Management and development activities on the Maple Grove property in the years following site securement have been purposefully minimal in anticipation for the commencement of a formal site master plan.

2.3.2 Regional Land Uses

Present-day land use in the Maple Grove region is varied. Commercial land uses in the immediate area predominately focus on the production cereal grains, oilseed, and forage. The surrounding area also contains a number of small-scale market gardens and greenhouse production facilities (some with associated commercial storefronts and entertainment venues) yielding seasonal harvests of garden vegetables and consumable field produce, berry bushes and fruit-bearing tree orchards, beverage distillery, and enterprises producing vegetation for landscaping and aesthetics. Additional land uses in close proximity to the Maple Grove property include a number of residential acreages and a commercial dog kennel operation located on a property neighbouring the site.

There are a number of City of Saskatoon facilities and civic amenities positioned in close adjacency to the Maple Grove property. The Queen Elizabeth II Power Station is the closest neighbouring civic facility, located off the west bank of the South Saskatchewan River approximately a kilometer downstream from the site. The Regional Waste Management Centre (Saskatoon Landfill) sits just to the north of the Power Station, about a kilometer northeast of Maple Grove. Additional significant civic developments positioned further north of Maple Grove within two-kilometers of the site include the Saskatoon Civic Operations Centre and its associated civic snow dump and the Saskatoon Intermodal Terminal (CN Rail Yard). Natural recreational areas located within a similar two-kilometer vicinity to the north of Maple Grove include the Richard St. Barbe Baker Afforestation Area, the Southwest Dog Park, and Ducks Unlimited Canada's conservation property named Chappell Marsh Conservation Area. Chief Whitecap Park, Riverside Country Club, and Birchwood Heights Estates are located further south, across the river from Yorath Island.

2.4 Current Site Development Profile

The following table contains a summary of all known active structural amenities on the Maple Grove property. The information catalogued in Table 4 below is informed by detailed topographic infrastructure surveying conducted in the winter of 2019 and inventory visits conducted in the spring and early summer of 2022 with some additional information derived from historical survey data reported during the year prior to official site purchase. The table below presents a summarized description of site infrastructure features and ascribes an associated ranking based on the perceived functionality and condition of each feature. This inventory reflects the condition of features at the time of surveying. Site infrastructure photos are located in Appendix A-II.

Table 3. Maple Grove 2022 Site Amenities Inventory

Feature	Count	Description	Condition	Notes
House	1	1425 square meters (0.14 hectares), 3-bedroom bungalow built in 1983; 1131 square feet with 2 car attached garage 22 x 24 feet. Located near riverbank overlooking river and Yorath Island.	Unknown	Shown in figures A-II 16 & A-II 21. Unit is actively leased to tenants.
Mobile home units	--	Trailer / mobile home units (privately owned).	Unknown	Note: many trailer court tenants in process vacating, decommissioning, and relocating trailer units during time of survey. Figures A-II 4, A-II 18, A-II 19, A-II 20. Condition of trailer court area is in a state of change.
Site Entry Sign	1	Meewasin 'Hours of Operation' sign. 'No Dumping' notice installed additionally to sign post.	Poor	Dated signage and Meewasin information is also out-of-date. Figure A-II 15.
Chain Link Fence Segment	2	20-foot segments of chain link fencing at northeast site entrance to hayfield area. 12.5-foot gap between the segments.	Excellent	Vehicular access gate to hayfield area – preventing trespass on historic Artist Studio access road. Gap opening was lacking a preventative access chain.
Chain Link Fence Segment	1	130-foot segment on northwesterly border of southwest hayfield.	Good to Satisfactory	Fencing is partially down. Installed to prevent recreational vehicle trespass from upland adjoining property area.
Chain Link Fence Backstop	1	Chain link backstop located in southwest hayfield, previous ball field.	Excellent	No active ball diamond located in position currently. Figure A-II 11.
Recreational Paths	--	Series of gravel-based recreational paths (installed ~2003) in back southwestern portion of site, behind trailer court.	Poor	Paths require some maintenance, gravel cover is thin and invasive plants growing throughout trail network. Some slumping along river bank adjacent to trails. Figure A-II 10.

Gravel Roads	--	Network of gravel roads running from site entry through trailer court area – connecting vehicular access through to parking areas, house, and trailer court stalls.	Good	Roads are in good condition and have been maintained. Figure A-II 9.
Parking Bollards	85	Wooden bollards placed along parking areas and northeast river edge.	Good	Mostly good condition, some minor to moderate damage / missing.
North site entrance parking area	1	Gravel parking area at site entry.	N/A	Area is not formally marked for parking. Figure A-II 12.
Central (main) parking area	1	Main gravel parking area north of trailer court.	N/A	Figure A-II 12.
Culverts	3	8" diameter culverts under roadway into adjacent drainage ditches.	Unknown	Appears intact, functionality unknown.
Central Parking Area Signage	3	Signage to denote private area. Messaging includes: 'No Public Access', 'No Trespassing', 'No Through Road', and Meewasin 'Notice' for potential trailer court buyers .	Poor	Dated information, sign face faded and degraded sign posts. Figure A-II 15.
Playground Equipment	4	Playground equipment present: Monkey bars, Merry-Go-Round, Slide, Swing Set.	Poor	Playground equipment degraded and largely unsafe for use. Figures A-II 13, A-II 14.
Playground Perimeter Fencing	1	Chain Link fencing securing north, east, and west sides of playground area.	Excellent	
House Entry Road Signage	2	Signs marking entry to bungalow – messaging: 'No Trespassing' and 'No Exit'.	N/A	
Bore holes	2	White PVC stand pipe with cover.	Unknown	One borehole lacks cover cap.
Electrical Box	5		Unknown	
Fire Pit	2		N/A	Communal residential use.
Gas Box	1	SaskEnergy Natural Gas Regulator Station.	Unknown	
Mailbox	2	Canada Post Mailboxes at site entry.	Unknown	
Manhole	1		Unknown	
Power Outlet	1	Located in playground area on wooden post.	Unknown	
Power Pole	33		Unknown	
Telephone Box	1		Unknown	
Telephone Pedestal	8		Unknown	
Water Pipe	1		Unknown	
Water Valve	1	Located in playground area	Unknown	

The following figures provide a depiction of the Maple Grove site layout in reference to amenities and infrastructure features. Figure 4 provides some contemporary historical reference to property layout in the later Leisureland site era and early period following Meewasin property securement.

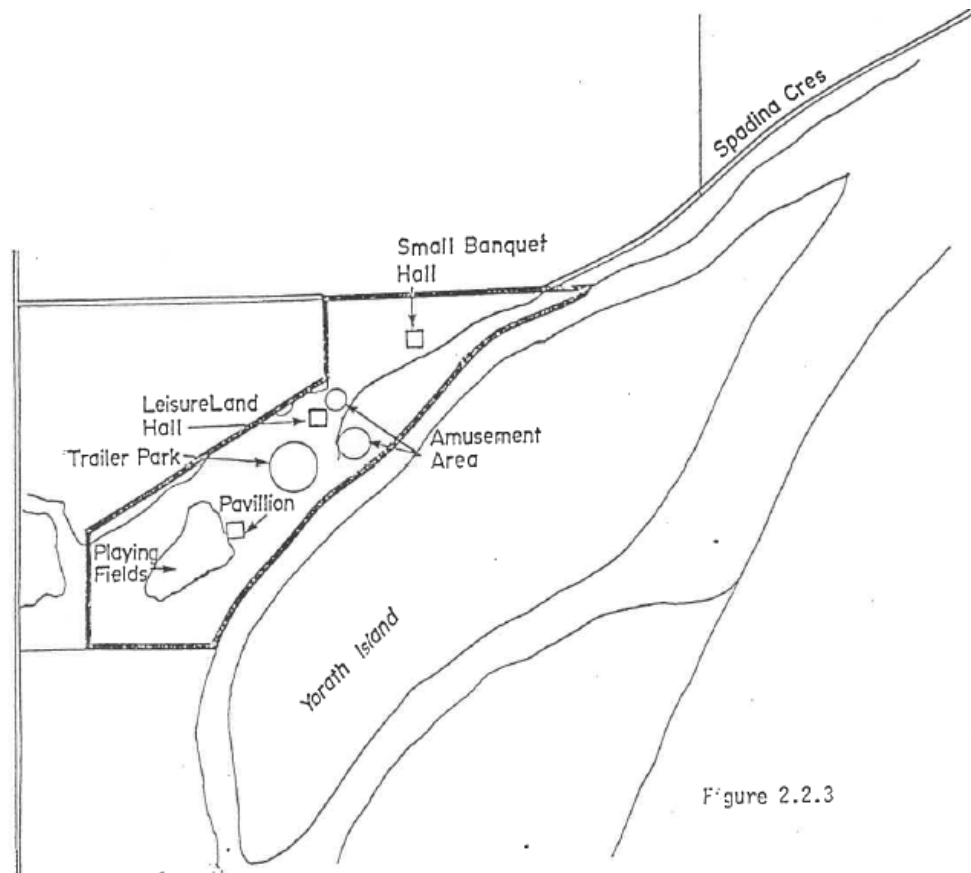


Figure 4. Illustration of Maple Grove Site in 1980. Figure retrieved from Yorath Island Working Paper (Meewasin, 1980, Fig. 2.2.3).

Figure 5 below illustrates the contemporary Maple Grove site layout illustrating the positions of various infrastructure features detailed in Table 4. Detailed topographic infrastructure and amenities surveying conducted by Meewasin in the winter of 2019 provided a spatial basis for the site features illustrated in the infrastructure map series (Figures 5, A-I 2, A-I 3, and A-I 4). Additional photos of Maple Grove depicting aerial site views and relevant contemporary and historic infrastructure items can be located in Appendix A-II. Additional site infrastructure maps providing a closer spatial illustration of site features (shown below in Figure 5) are located in Appendix A-I.



Maple Grove Infrastructure

Legend

Amenities

- Fire Pit
- Mailbox
- Playground Equipment
- Sign

Boundaries

- Bollard
- Fence
- Retaining Wall
- Buildings
- Building

Drainage

- Culvert
- Ditch
- Monitoring
- Bore Hole

Roadways/Pathways

- Edge of Asphalt
- Edge of Gravel
- Path
- Path - Crusher Dust
- Path - Mowed

Utilities

- Down Guy Anchors
- Gas Box
- Manhole
- Power Outlet
- Power Pole
- Sign

Telephone Box

- Telephone Pedestal
- Water Pipe
- Water Valve
- Electrical Box
- Sewer

Vegetation

- Tree
- Shrub Line
- Treeline
- Other
- Site Boundaries

September 7 2021

Projection: NAD 1983 CSRS UTM Zone 13N

Data Sources:

Meewasin Valley Authority

Saskatchewan Geospatial Imagery Collaborative

Disclaimer:

This map is for illustrative purposes only. Do not rely on it as being a precise indicator of land-ownership, feature location, nor as a guide to navigation. This map may contain omissions or errors.

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Figure 5. Maple Grove 2022 Infrastructure Map

3.0 Ecological Background

This section provides a brief summary of the physiological landscape, soils and sedimentary depositions, and hydrology surrounding the Maple Grove site. This information provides a basis for the vegetation cover trends and wildlife communities discussed in subsequent report sections.

3.1 Physiography

Numerous glacial advances and retreats have shaped the regional landscape surrounding Maple Grove (Christiansen, 1970). The site is located in the basin of historic Glacial Lake Saskatoon, which drained approximately 10,000 to 12,000 years ago, initiating the development of the Saskatchewan rivers watershed (Christiansen, 1970). Erosive processes prevailing within the river valley are primarily fluvial. Periods of high runoff associated with large snowfall melt or precipitation and flooding events have contributed to further topographical landscape distinction in the region (Walker et al., 1987).

The topographic region surrounding the Maple Grove site is characterized as a flat glacial plain, with elevations averaging about 500 metres above sea level (Christiansen, 1970). Elevations within the Maple Grove property range from 484 metres to 474 metres above sea level (Figure 6; Water Security Agency, 2013). The Maple Grove property can be divided into distinct upland and floodplain topographical areas (Delanoy, 2000). Higher altitudes on the Maple Grove site average around 480 to 478 metres with most predominate upland areas situated along the western site boundary and in the northeast and north-northwest corners of the site (Figure 6). The property gradually slopes in a southwest direction, towards the eastern site boundary defined by the South Saskatchewan River. The lower floodplain area altitudes range in elevations around 474 metres (Figure 6).

3.2 Soils and Sedimentation

Maple Grove is located in the Moist Mixed Grassland Ecoregion of the broader Prairie Ecozone (Thorpe, 2014). The regional climate is semiarid with moisture index values between -175 to -250 millimetres (Thorpe, 2014). The region exhibits extreme variations in temperature and averages low air water vapour content (Christiansen, 1970). The site falls in the Asquith soil association unit within the broader Dark Brown Soil Zone of Saskatchewan (Acton & Ellis, 1978). Dark Brown Chernozemic soils prevail throughout the site region due to relatively large organic matter inputs from grassland vegetation communities and slower rates of decomposition influenced by the cooler climatic trends in the region (Thorpe, 2014).

Provincial soil map data suggests that soils on the Maple Grove site developed on sandy glacio-lacustrine deposits along the northwestern upland portion of the site and alluvial floodplain deposits along the southeastern floodplain portion of the site (Figure 8). Sedimentary drift in the Maple Grove region ranges in recorded thicknesses from 20 to 522 feet (Christiansen, 1970). Till layers exposed throughout the river valley are representative of the Saskatoon and Sutherland groups (Christiansen, 1970). The Asquith Ortho Dark Brown soil association runs diagonally across the site, along the western site boundary encasing the northwestern upland site areas

(Figure 7). Asquith soil association textures are coarse to moderately coarse and include loamy sand, sandy loam, and fine sandy loam textural classes, all with less than 15 percent clay content (Acton & Ellis, 1978). Alluvium Rego Chernozemic soils are predicted for lower altitude areas in the southwestern region of the site and floodplain areas adjacent to the South Saskatchewan River (Figure 7).

The Canada Land Inventory (CLI) indicates that the Maple Grove property area falls in the Class 2 and Class 6 quality ranges of Land Capability Class Descriptions for Agriculture (Government of Canada, 2013). According to the CLI system, the Class 2 soils located in the river flood plain areas may have moderate limitations that restrict the range of crops or require moderate conservation practices (Government of Canada, 2013). Soils located above the valley escarpment at Maple Grove fall within a CLI Class 6 grouping, which is assumed to contain appropriate levels of productivity for the production perennial forage crops with improvement practices generally suggested to be unfeasible (Government of Canada, 2013).

3.3 Hydrology

Bedrock contours in the Maple Grove property region suggest that the site is located above the bridge of a tributary bedrock valley running north to the Tyner Valley Aquifer incised into the Lea Park Formation (AMEC, 2002). Water enters the greater Tyner Valley Aquifer system by vertical filtration downward through the glacial deposits to the Oldman Formation and the Tyner Valley Aquifer where flow lines refract to the horizontal plane due to difference in average permeability (Christiansen, 1970). Although the observed flow pattern is a gravitational flow system, the arrangement of the flow pattern is determined by the location of continuous and more permeable flow paths that are distinct from present surface topography (Christiansen, 1970). In the Maple Grove area, regional groundwater flow within near-surface sand and gravel is expected to flow southeast toward the South Saskatchewan River (AMEC, 2002).

The close adjacency of the South Saskatchewan River intricately informs the hydrological regime and successional landscape of the Maple Grove site. Meandering river channel dynamics and recurring processes of erosion, channel widening, and sedimentary deposition have altered the composition and profile of the site through the formation of Yorath Island and the ever-fluctuating eastern riverbank boundary. The West Swale complex, a remnant glacial channel scar supporting a diverse ecological matrix of wetlands, runs diagonally northwest to southeast through the broader northwesterly region surrounding the Maple Grove site (Figure 9). The West Swale network exits into the South Saskatchewan River at an unknown location somewhere in the southwest portion of the Maple Grove property (Figure 9).

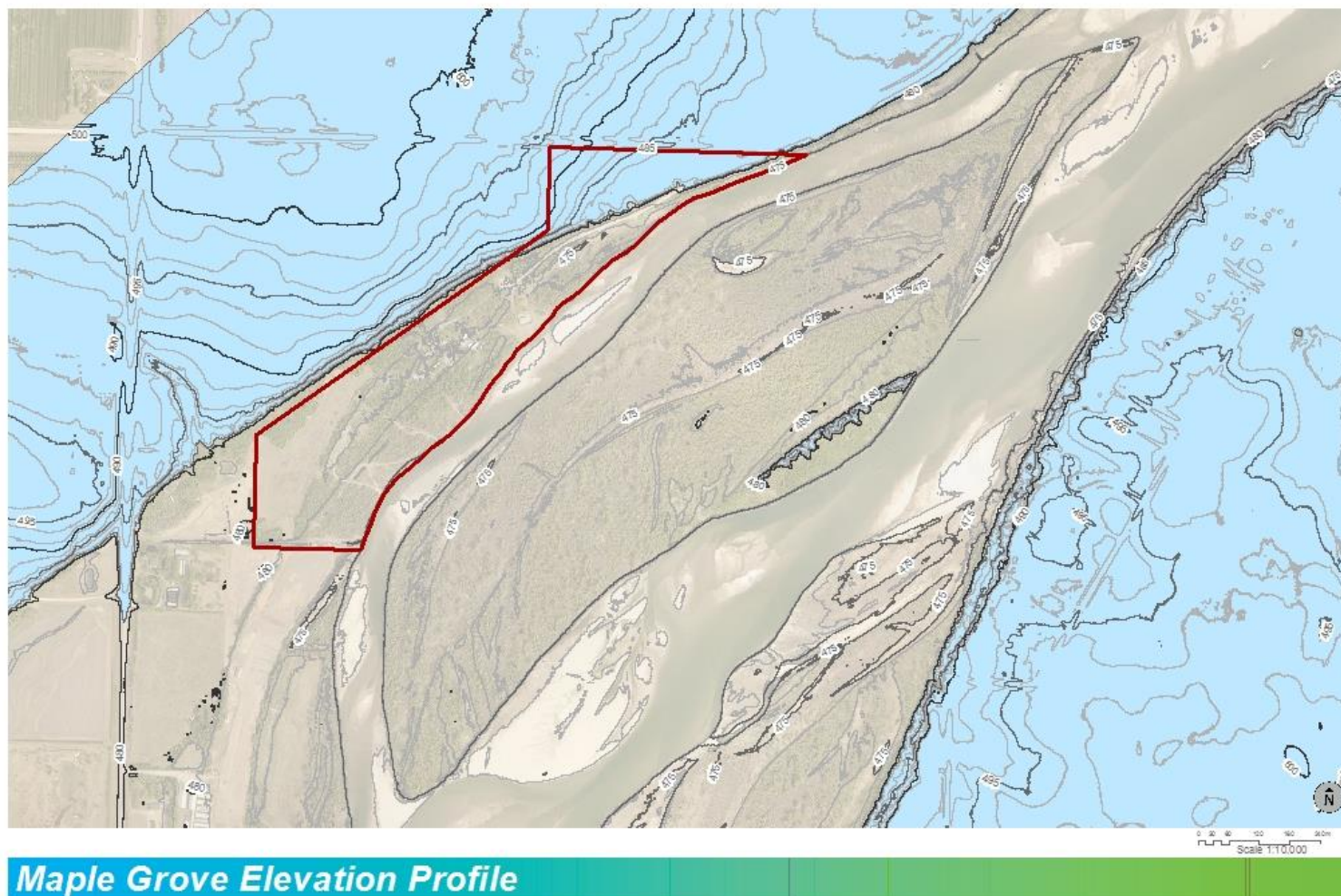


Figure 6. Maple Grove Site Elevation Profile



Maple Grove and Yorath Island Soils Profile

Legend

Type
Loam
Non-Soil
Overflow
Saline Wet Meadow
Sand, Low Dunes, High Dunes
Sandy Loam
Thin, Overflow if slope class 1, 2, 3

Name

1	Mainly Alluvium Rego Chernozemic soils
2	Mainly Asquith Orthic Dark Brown soils
3	Mainly Bradwell Orthic Dark Brown soils, with Bradwell Eluviated Dark Brown soils on lower slopes
4	Mainly a mixture of Bradwell Dark Brown Chernozemic soils on mid-to upper slopes and Bradwell saline and carbonated Dark Brown Chernozemic soils on lower slopes
5	Hillwash
6	Mainly a mixture of Meadow saline and carbonated Rego Humic Gleysol soils
7	Non-Soil
8	Mainly weakly developed Vera soils

March 23 2022

Projection: NAD 1983 CSRS UTM Zone 13N

Data Sources:

Meewasin Valley Authority
Agriculture and Agri-Food Canada
Government of Saskatchewan
Saskatchewan Geospatial Imagery Collaborative

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Figure 7. Maple Grove and Yorath Island Soils Profile

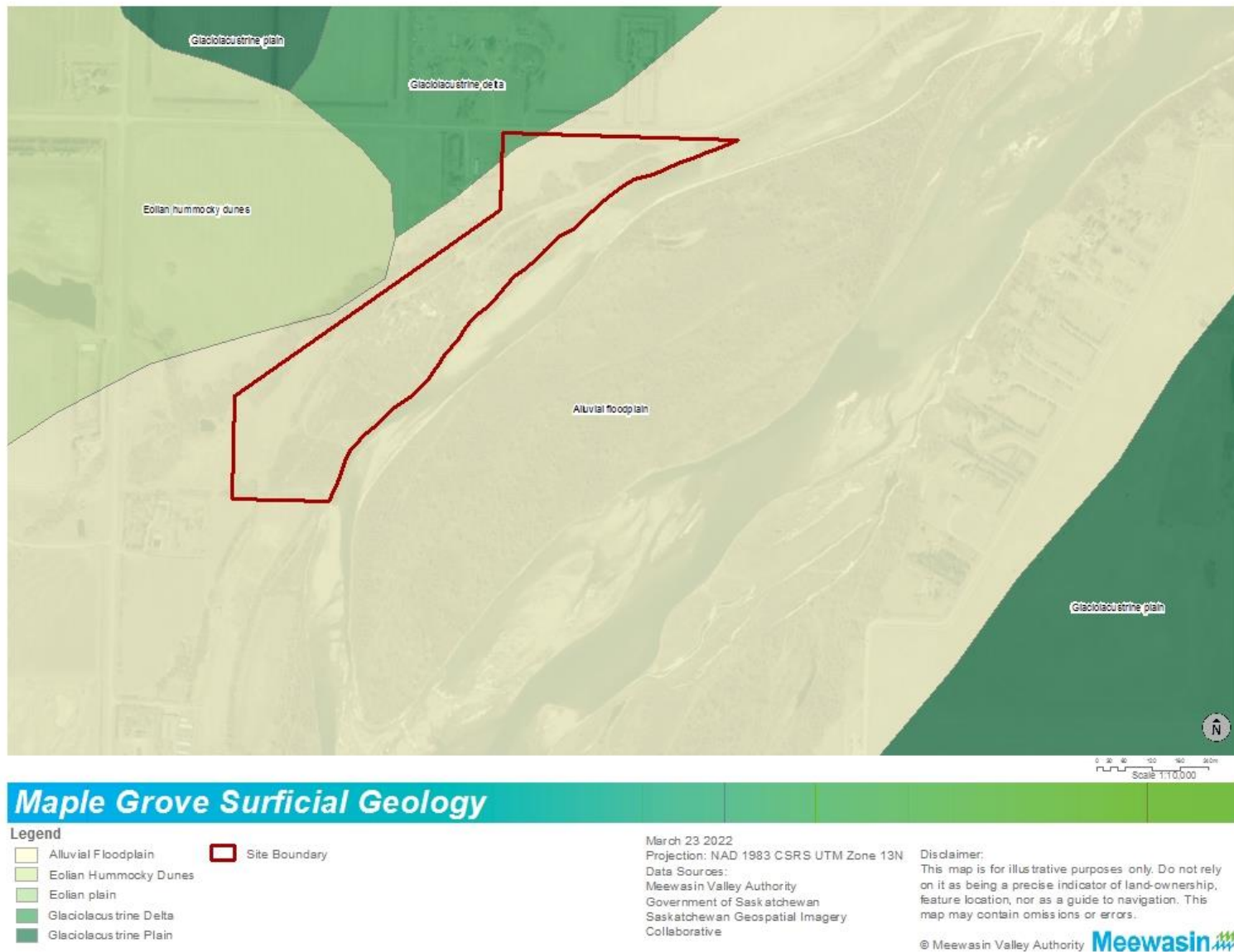


Figure 8. Maple Grove Site Surficial Geology Profile

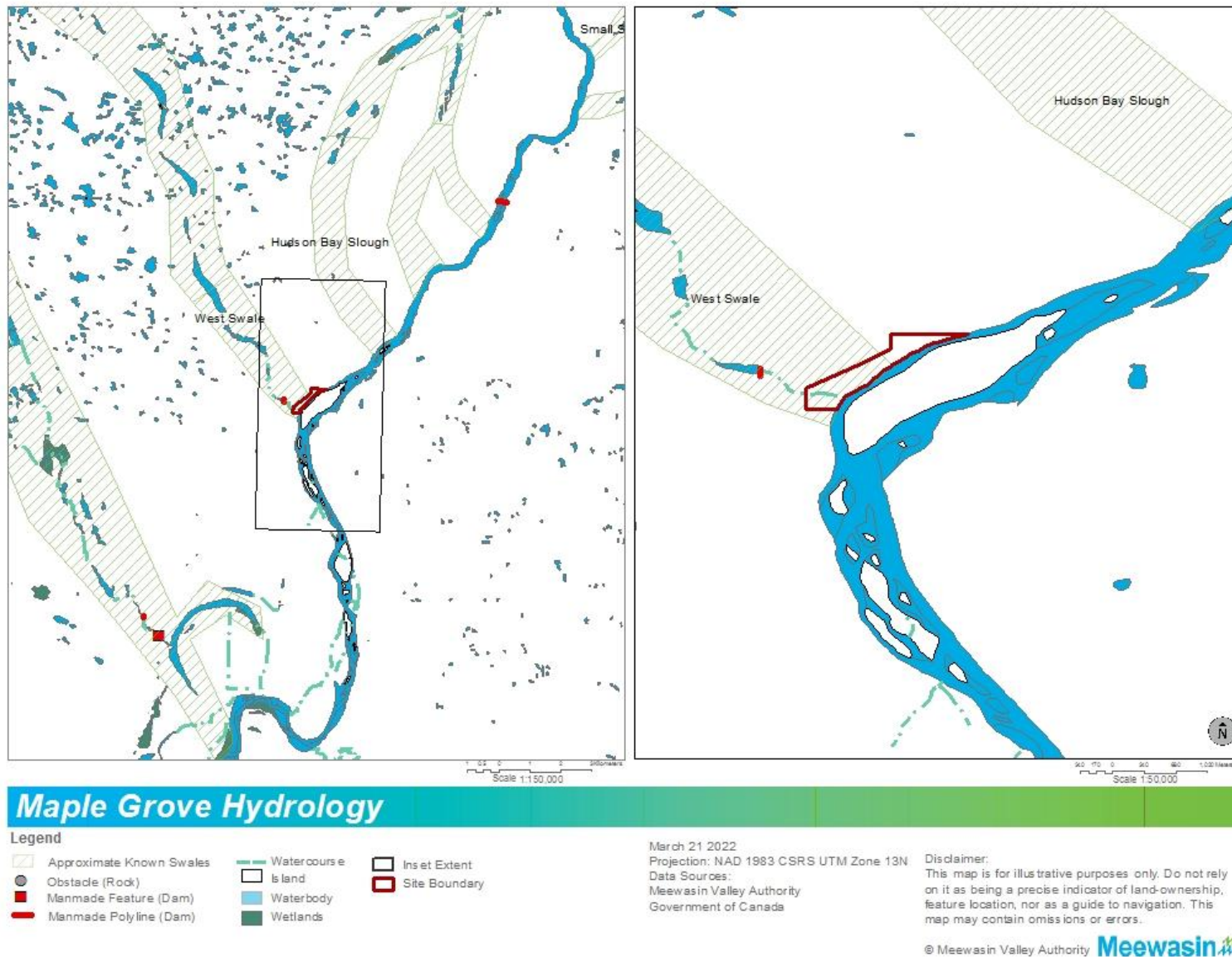


Figure 9. Maple Grove Site Hydrology Overview

4.0 Maple Grove Baseline Inventory Research

4.1 Baseline Data Collection

4.1.1 Desktop Research

Section 5.0 includes a comprehensive inventory of data sources, reports, and documents that provided relevant background information and discussion material for this report. The data reference section provides an inventory of information sources for various baseline desktop analysis activities including, but not limited to, spatial mapping, regional data aggregation and comparative trend analysis. A summary of relevant historic and contemporary survey research and field studies that were referenced and conducted externally or prior to the baseline report drafting is located in Appendix B-IV and additional Meewasin figures and historic site background materials are located in Appendix A-I and A-IV respectively.

4.1.2 Baseline Data Collection

The following table is an inventory of all survey assessment and data collection activities conducted in relation to the Maple Grove baseline inventory project. This inventory table provides informative summaries of baseline survey methods with additional detail surrounding timing and duration of survey activities, targeted survey features, and organizational leads. Baseline data collection methods will be discussed in more detail in subsequent report sections.

Me

Table 4. Maple Grove Baseline Survey Activities

Date(s)	Survey Type	Targeted Features	Methods	Duration	Lead Organization(s)	Comments/Limitations
11/12/2019 11/13/2019 11/14/ 2019	Topographic infrastructure survey	Infrastructure and structural amenities, trees, roadways, elevations, property pins, fence lines, water flow culvert inverts, vegetation edges	RTK GPS, Total Station device	3 day survey	Meewasin	Survey data and documentation uploaded to Meewasin database and used in site / spatial data mapping. Data catalogued and mapped in section 2.3. Survey conducted in winter during a period of site structural change.
7/15/2020	Ad hoc bird survey	Bird species presence & abundance	Visual & auditory observation	Unknown	Meewasin	Observations documented and uploaded to eBird database.
08/22/2020	Ad hoc bird survey	Bird species presence & abundance	Visual & auditory observation	Unknown	Saskatoon Nature Society (Stan Shadick)	Observations uploaded to eBird database.
12/2/2020	Ad hoc wildlife snow track survey	General wildlife species presence & abundance	Visual observations	1.5 hours	Meewasin	Observations documented; snow conditions not ideal for wildlife track identification.
04/23/2020	Ad hoc Owl survey	Northern Saw-whet Owl species presence	Auditory observations; bird call playback	0.5 hours	Meewasin; Saskatoon Nature Society (Stan Shadick)	One audial response observed; Shadick noted potential for breeding.
05/15/2020	Ad hoc tree cavity survey	Northern Saw-whet Owl species presence	Visual & auditory observation	1.0 hours	Meewasin; Saskatoon Nature Society (Stan Shadick)	*Follow-up to previous 04/23/2020 Saw-whet Owl survey. Surveyors returned to Maple Grove site daylight hours to detect Saw-whet Owl nesting presence. No sightings observed.
05/20/2021	Ad hoc tree cavity survey	Northern Saw-whet Owl species presence	Visual & auditory observation;	1.0 hours	Meewasin	Tree cavity survey at Maple Grove site to detect Saw-whet Owl nesting presence. No sightings observed.
05/22/2021	Ad hoc bird survey	Bird species presence & abundance	Visual & auditory observation	Unknown	Saskatoon Nature Society (Stan Shadick)	Observations uploaded to eBird database (05/25/2021).
6/2/2021	Breeding bird survey	Bird species presence & abundance	Point count method; visual & auditory observation	2.0 hours	Meewasin	Entire property length covered; point count locations taken intermittently at representative site areas (hayfields, roadway, riparian forest, riverbank, trailer court) and monitoring posts.

6/16/2021	Soil assessment; ad hoc forest vegetation inventory	Soil texture; CSSC classification; laboratory analysis of soil sample composition (including variables: pH, SOM, P, K, N, Mg, Ca); forest vegetation presence & height	In-situ CSSC soil pit classification; soil probe sample collection (15 probe sample locations along transect grid design taken at 0-6 cm and 6-12 cm depth); ad hoc vegetation survey conducted in forested areas across site	6.0 hours	University of Saskatchewan SENS Program; Meewasin	<p>Survey activities led by University of Saskatchewan graduate student Lynnae Ylioja and project advisor Dr. Vladimir Kricsfalusy, in connection to the Masters of Sustainability graduate studies program offered through the USask School of Environment and Sustainability. All available results documented from 06/10/2021 survey activities have been submitted to Meewasin in the form of a project report written by Lynnae Ylioja</p> <p>Soil pit analysis and soil probe sample collection were performed in the south hayfield area. Site vegetation inventory was conducted by Dr. Kricsfalusy, with survey effort focused on forested areas throughout the Maple Grove site. *Note collected soil probe samples went unprocessed due to COVID-related laboratory limitations.</p>
6/23/2021	Ad hoc bat survey	Ultrasonic detection, presence & abundance	Bioacoustic recording device with ultrasonic detection & interpretation technology; audial & visual observations	2.0 hours	Meewasin	Night survey conducted with readings taken at intermittent points across site. Survey team traversing along established grid roads and nature paths. Observations made using the Echo Meter Touch 2, associated bioacoustic technology and software. Species inventory documented in Appendix B-III.
7/16/2021	Shoreline survey	Invasive plant species in shoreline region; Northern Leopard Frogs; presence & abundance; GPS locations	Shoreline survey transect; visual observations noted; GPS locations recorded	3.0 hours	Meewasin	Survey crew conducted a linear transect along the shoreline from NE to SW of the property along the west bank of the South Saskatchewan River. GPS location data captured for observations.

7/20/2021	Invasive plant survey – rangeland and forest	Invasive plant species in hayfield & forested areas; Presence & abundance; GPS locations	Site divided into 50 meter grid sections; survey team traversed diagonally through each of the 50 meter grid sections to document occurrences of invasive species in rangeland and forested areas across site; GPS locations recorded	3.5 hours	Meewasin	7/20/2021 survey focused on 50 meter grid section located in hayfield / rangeland regions. The following grid sections were visited: I11, I9, I8, I7, H7, D3, C2, C1, B1, B2, A2.
7/21/2021	Invasive plant survey – rangeland and forest	Invasive plant species in hayfield & forested areas; Presence & abundance; GPS locations	Site divided into 50 meter grid sections; survey team traversed diagonally through each of the 50 meter grid sections to document occurrences of invasive species in rangeland and forested areas across site; GPS locations recorded	4.0 hours	Meewasin	07/21/2021 survey team conducted diagonal transect across the property moving SW to NE through grid sections in forested areas, using monitoring plot locations as a reference point. The following grid section / plot locations were visited: A1, A2, A3, B2, B3, C3, C4, D3, D4, D5, E5, E6, F6, G7, G8, H8, H9. Permanent plot #s: 1, 2, 3, 5.
7/28/2021	Invasive plant survey – rangeland and forest	Invasive plant species in hayfield & forested areas; Presence & abundance; GPS locations	Site divided into 50 meter grid sections; survey team traversed diagonally through each of the 50 meter grid sections to document occurrences of invasive species in rangeland and forested areas across site; GPS locations recorded.	2.5 hours	Meewasin	07/28/2021 survey team continued diagonal forested area transect across the property moving SW to NE through grid sections in forested areas. The following grid sections / plot locations were observed: I12, H10, H9, F7, G8, G6, F4, E3, D2, A1. Permanent Plot #: 4.

8/18/2021	Ad hoc bat survey	Ultrasonic detection, presence & abundance	Bioacoustic recording device with ultrasonic detection & interpretation technology; aural & visual observations	3.0 hours	Meewasin	Night surveys conducted with readings taken at intermittent points across site. Survey team traversing along established grid roads and nature paths. Observations made using the Echo Meter Touch 2, associated bioacoustic technology and software. Inventory found in Appendix B-III.
9/8/2021	Warbler Hike (ad hoc bird survey)	Bird species presence & abundance	Visual & auditory observation	3.5 hours	Saskatoon Nature Society (Stan Shadick); Meewasin	Saskatoon Nature Society members hike – focus on warbler bird species. Observations uploaded to Ebird
9/28/2021	Riparian health assessment / shoreline survey	Vegetative composition; presence & abundance	Riparian Health Assessment (form) – linear transect along west bank shoreline; GPS locations taken	5.5 hours	Meewasin	Riparian health assessment conducted along west bank shoreline of mainland Maple Grove property. Survey team traversed from NE to SW along shoreline. Data sheets found in Appendix B-II.
9/29/2021	Forest health assessment / forest vegetation survey	Vegetative composition; presence & abundance	Forest health assessments (forms) – conducted at forested permanent plot locations; GPS points taken	5.5 hours	Meewasin	Forest health assessments conducted at each permanent plot location within forested regions on Maple Grove Site. Survey team moving in transect diagonally from SW to NE along monitoring post route. 5 assessments conducted at each of 5 perm plots (#1-5). Data sheets found in Appendix B-II.
10/04/2020	Ad hoc bat survey	Ultrasonic detection, presence & abundance	Bioacoustic recording device with ultrasonic detection & interpretation technology; aural & visual observations	2.0 hours	Meewasin	Night surveys conducted with readings taken at intermittent points across site. Survey team traversing along established grid roads and nature paths. Observations made using the Echo Meter Touch 2, associated bioacoustic technology and software. Inventory found in Appendix B-II.
11/6/2021	Rangeland health assessment / rangeland vegetation survey	Vegetative composition; presence & abundance	Rangeland health assessments (form) - transects & quadrats; GPS points taken	4.5 hours	Meewasin	Rangeland health assessment process conducted in hayfield areas (two hayfields) on Maple Grove property. Survey team travelled along diagonal transects in hayfield areas - conducting a total of 5 rangeland assessment quadrats at each hayfield location (10 total). Data sheets found in Appendix B-II.

4.2 Baseline Monitoring and Assessment Methods

4.2.1 Permanent Post Monitoring Design

The figure below illustrates the monitoring design established across the Maple Grove site during the spring of 2020 through the installation of a series of five permanent monitoring posts. Each of five permanent plot locations represent the centroid point of a 100-metre radius area. These locations have been physically marked on the landscape with a numbered wooden fence post that will serve as the repeat location for ongoing site monitoring activities such as the positioning of passive monitoring devices, ecological assessments, and surveys. Installation and monitoring at permanent plot number three, which is intended to be positioned within the trailer court area, was postponed during the baseline inventory process with respect for the privacy of trailer court residents (Figure 10).

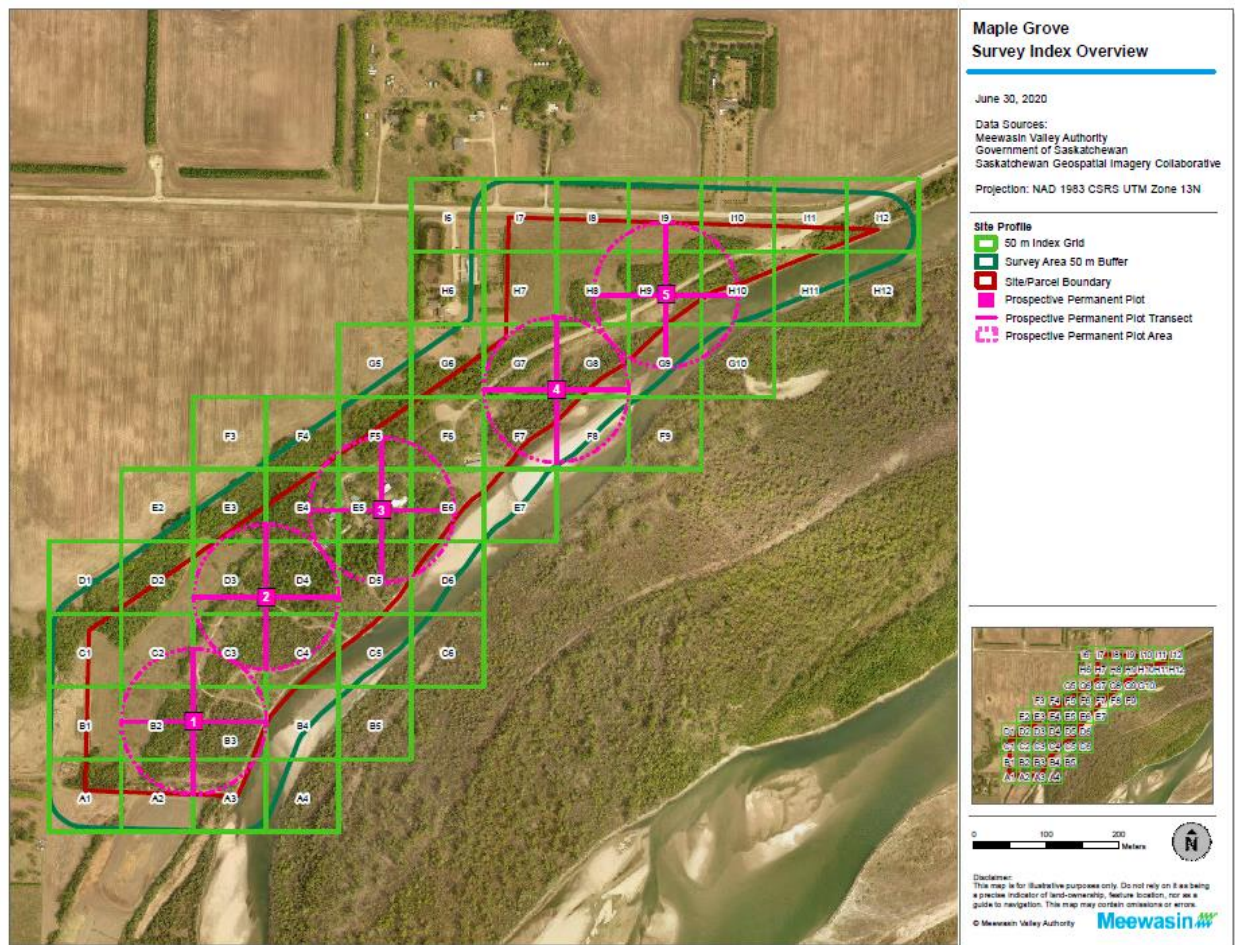


Figure 10. Maple Grove Site Grid Index Map

Figure 10 includes monitoring post centroid positions with an overlain fifty-metre grid system. This grid system was referenced throughout the baseline survey process as a basis for survey routes and the collection of observational data across the Maple Grove site region.

4.2.2 Ecological Health Assessments

Ecological health assessment surveying methods were applied across the Maple Grove site in accordance with the provincial guidelines for Grassland Range Health, Forested Rangeland Health, and Riparian Health assessment methods published by the Saskatchewan Prairie Conservation Action Plan (PCAP). The respective health assessment processes provided a visual-based qualitative description of vegetative cover and perceived health condition. This survey method was utilized as a confirmatory exercise, applied in conjunction with a variety of rapid site vegetative profile surveys. This contemporary vegetation community data supplemented the comprehensive vegetation survey data reported by Luc Delanoy of Meewasin in 2000. The entire collection of field data worksheets for the rangeland, forest, and riparian health assessments can be located in Appendix B-II. The figure below illustrates the general locations where the vegetation health surveys were conducted.



Figure 11. Maple Grove 2021 Health Assessment Locations

4.2.3 Invasive Species Monitoring

The documentation of invasive plant species and noxious weeds across the Maple Grove is a focal area of data collection at the Maple Grove property. This area of research was advanced during the baseline inventory project through targeted invasive plant surveying exercises and repeated invasive patch monitoring efforts. Meewasin staff conducted rapid surveys targeting the presence of invasive species across all site regions including forest plant communities, floodplain areas, riverbank reaches, and remnant hayfield areas. The Maple Grove grid index system (Figure 10) was utilized in conducting rapid vegetation surveys with each 50 metre grid cell serving as a signpost system for rapid site survey routes. Targeted rapid vegetation survey data was combined with data produced through the previous intensive Maple Grove vegetation survey reported by Meewasin in 2000 to create an invasive plant inventory and profile of the distribution of invasive plant species across Maple Grove.

4.2.4 Wildlife Monitoring

Wildlife Survey Efforts

Maple Grove wildlife communities were surveyed using visual and audial identification and technological monitoring equipment to document the presence, diversity, and abundance of species. Wildlife monitoring initiatives focused primarily on the presence of birds, bats, frogs, and mammals. Meewasin conducted a series of nine bird surveys during seasons of heightened activity to assess bird populations, behaviors, and uses in relation to the Maple Grove site with particular attention paid to breeding habits, migratory patterns, and species at risk habitat. Meewasin conducted additional targeted survey efforts aimed at the detection of specific species such as the Saw-whet Owl and cavity nesting species, shoreline Northern Leopard Frog surveys, and evening bat surveys. Wildlife survey routes were organized and traversed on an ad hoc basis with emphasis on forested areas and active breeding and migration seasonal windows. Additionally, passive and active monitoring technologies were deployed and utilized to supplement wildlife species observations across the Maple Grove site.

Autonomous Recording Data Capture Devices

Autonomous Recording Unit (ARU) technology was used throughout the baseline inventory data collection process to supplement survey datasets with audial and visual documentation of fauna on site. ARUs are self-contained, passive recording devices designed to capture data pertaining to bioacoustics. ARU devices used during this project included: the Wildlife Acoustics Song Meter SM3BAT, Browning Dark OPS HD 26LC wildlife camera units, and the Wildlife Acoustics Echo Meter Touch 2 ultrasonic acoustic recording device. ARU device positions contributing to the capture of Maple Grove baseline data are illustrated below in Figure 12. Individual ARU device deployment is summarized in Table 6 and ARU data collection records associated species observations are located in Appendix B-III.

Four wildlife cameras units (model Browning Dark OPS HD 26LC) were installed in stationary positions across the Maple Grove site in the spring of 2020 (Figure 12). Wildlife camera devices

are pre-set to capture images triggered by motion occurring within an 80-foot range of the camera. Cameras are set to capture imagery in a series of three rapid shots with zero seconds of delay from triggering motion. There are periodic gaps in photos due to irregular checking of cameras, resulting in full camera cards, depleted batteries, and technological malfunctions caused by extreme weather conditions.

The Acoustic Song Meter SM3 device was used for the passive capture of wildlife vocalizations. During the data collection period the SM3 device was rotated between four separate site locations to capture audial acoustic recordings on six-hour daily intervals (Figure 12). Bat surveys were conducted using the Echo Meter Touch 2 which is a handheld ultrasonic autonomous recording capture device unit. The Echo Meter enabled the identification of bat species using echolocation translation software. Bat surveys were conducted at night using the Echo Meter with survey routes targeting various forested locations across the Maple Grove site.

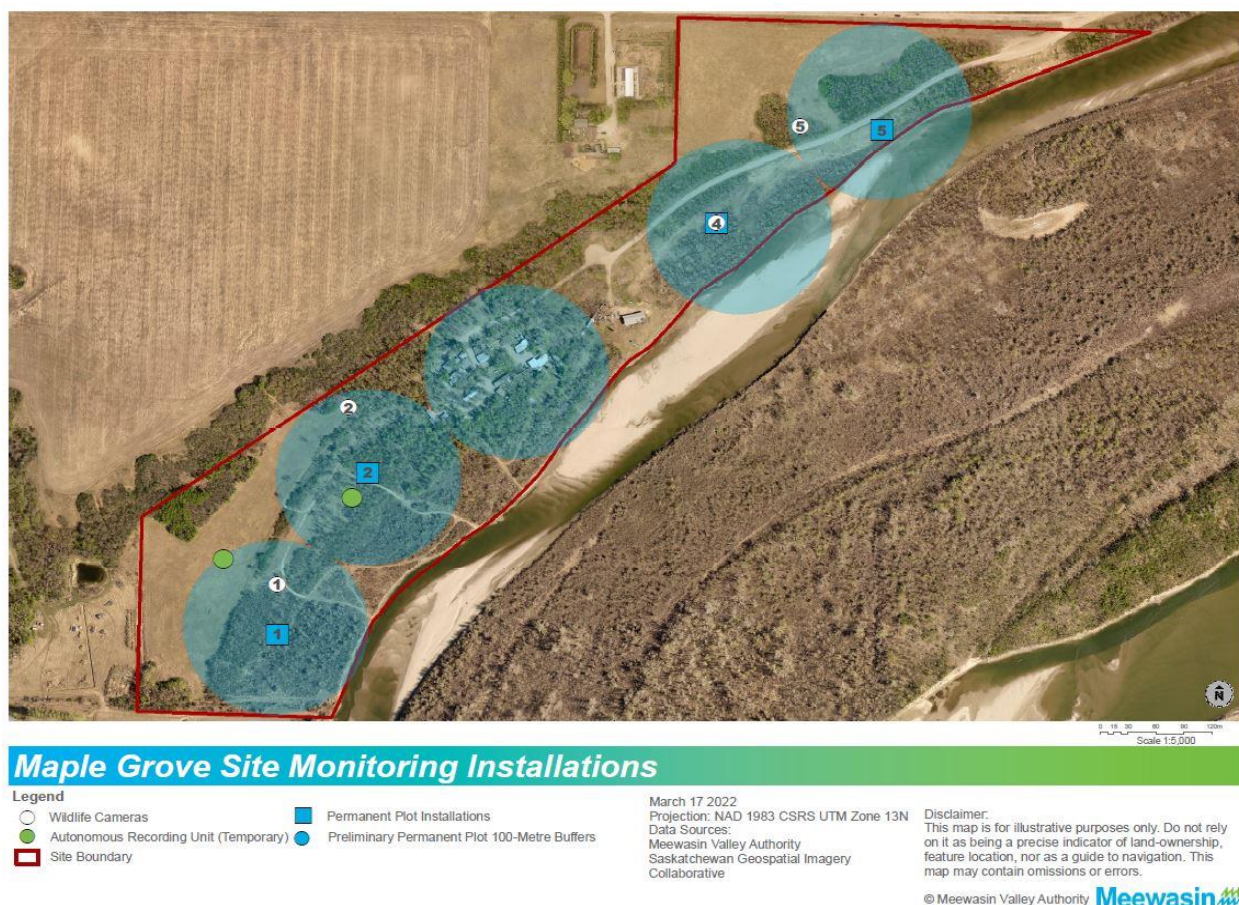


Figure 12. Maple Grove Baseline Stationary Data Capture Devices

Table 5. Maple Grove Baseline Autonomous Recording Device Inventory

ARU Type	Make / Model	Timeframe	Position	Data Capture Setting
Autonomous Acoustic Recording Unit	Acoustic Song Meter SM3	Installation: 06/15/2021 Removal: 06/28/2021	Southwest hayfield	Device set to record 6 hours daily – 3 hours around sunrise and 3 hours around sunset.
Autonomous Acoustic Recording Unit	Acoustic Song Meter SM3	Installation: 06/02/2021 Removal: 06/14/2021	Permanent post No. 1 (MG-P1)	Device set to record 6 hours daily – 3 hours around sunrise and 3 hours around sunset.
Autonomous Acoustic Recording Unit	Acoustic Song Meter SM3	Installation: 05/19/2021 Removal: 05/25/2021	Permanent post No. 2 (MG-P2)	Device set to record 6 hours daily – 3 hours around sunrise and 3 hours around sunset.
Autonomous Acoustic Recording Unit	Acoustic Song Meter SM3	Installation: 05/26/2021 Removal: 06/01/2021	Permanent post No. 4 (MG-P4)	Device set to record 6 hours daily – 3 hours around sunrise and 3 hours around sunset.
Wildlife Camera	Browning Dark OPS HD 26LC	Installation: spring of 2020 – device remaining stationary	Southwest riparian floodplain area	Motion-triggered image capture within 80 feet of camera; 3 photos captured per motion trigger with a zero second delay of triggering.
Wildlife Camera	Browning Dark OPS HD 26LC	Installation: spring of 2020 – device remaining stationary	Southwest hayfield margin	Motion-triggered image capture within 80 feet of camera; 3 photos captured per motion trigger with a zero second delay of triggering.
Wildlife Camera	Browning Dark OPS HD 26LC	Installation: spring of 2020 – device remaining stationary	Permanent post No. 4 (MG-P4)	Motion-triggered image capture within 80 feet of camera; 3 photos captured per motion trigger with a zero second delay of triggering.
Wildlife Camera	Browning Dark OPS HD 26LC	Installation: spring of 2020 – device remaining stationary	Northeast upland forested area, roadway and hayfield	Motion-triggered image capture within 80 feet of camera; 3 photos captured per motion trigger with a zero second delay of triggering.
Ultrasonic Autonomous Recording & Capture Device	Echo Meter Touch 2 Ultrasonic Model	Survey Dates (duration): 06/23/2021 (2 hours) 08/18/2021 (3 hours) 10/04/2021 (2 hours)	Non-stationary handheld device	Ultrasonic detection software actively recording and identifying bat vocalizations in areas traversed with handheld device.

4.3 Baseline Data Observations

4.3.1 Wildlife Observations

The wildlife cameras captured eight species of mammals: White-tailed Deer (*Odocoileus virginianus*), Mule Deer (*Odocoileus hemionus*), Moose (*Alces alces*), Snowshoe Hare (*Lepus americanus*), Striped Skunk (*Mephitis mephitis*), Coyote (*Canis latrans*), Red Fox (*Vulpes vulpes*), and North American Porcupine (*Erethizon dorsatum*). Other lifeforms caught on wildlife camera included various insects and bird species captured at a lesser rate. Wildlife camera record inventory tables are located in Appendix B-III.

72 bird species have been identified and documented at the Maple Grove site. A total of 34 bird species (and one frog species) were captured on the Acoustic Song Meter SM3 device. The SM3 device was actively recording on the Maple Grove site between mid-May to the end of June 2021.

Four bat species were identified at the Maple Grove site using the Echo Meter 2 device. Identified bat species included: Little Brown Bat (*Myotis lucifugus*), Big Brown Bat (*Eptesicus fuscus*), Silver-haired Bat (*Lasionycteris noctivagans*) and Hoary Bat (*Lasiurus cinereus*). Comprehensive acoustic capture records are located in Appendix B- III.

A comprehensive inventory table of wildlife species observations documented at Maple Grove is located in Appendix B-I.

4.3.2 Vegetation Pattern Observations

Rangeland Plant Community Health

Rangeland health is an evaluation of the ability of a rangeland ecosystem to perform certain key functions (PCAP, 2008a). Functional variables of healthy rangeland ecosystems include productivity, site stability, capture and slow release of water, nutrient cycling, and plant species diversity (PCAP, 2008a). The Rangeland Health Assessment process evaluates rangeland ecosystem functionality based on a holistic set of relational criterion. Indicators include species composition, community structure, invasive species, site stability, and hydrologic function and soil protection (PCAP, 2008a).

A series of ten rangeland health assessments were conducted in the late fall of 2021. These assessments were distributed along a diagonal transect spanning across the two historic hayfields at the Maple Grove site. Table 7 summarizes the results of grassland range health assessments performed in the remnant hayfield areas at Maple Grove.

Table 6. Summary of 2021 Grassland Range Health Data Collected at Maple Grove

Range Health Quadrat ID	Remnant Hayfield Position	Reference Community Code	Section A (Vegetation Status /60)	Section B (Hydrology & Soil /40)	Total Score (/100)	Summary Range Health Rating
MG-RHA-Q01	NE	MG-LM-G	14	40	54	Healthy with Problems
MG-RHA-Q02	NE	AP-LM-B	10	35	45	Unhealthy
MG-RHA-Q03	NE	MG-LM-G	14	37	51	Healthy with Problems
MG-RHA-Q04	NE	MG-LM-G	14	35	49	Unhealthy
MG-RHA-Q05	NE	MG-LM-G	10	40	50	Healthy with Problems
MG-RHA-Q06	SW	PEZ-SUB-B	14	40	54	Healthy with Problems
MG-RHA-Q07	SW	PEZ-SUB-B	14	40	54	Healthy with Problems
MG-RHA-Q08	SW	PEZ-SUB-B	14	40	54	Healthy with Problems
MG-RHA-Q09	SW	PEZ-SUB-B	17	40	57	Healthy with Problems
MG-RHA-Q10	SW	PEZ-SUB-B	14	40	54	Healthy with Problems
Mean Score Results			13.5	38.7	52.2	Healthy with Problems

Five rangeland health assessments were conducted in each of the hayfield units with quadrats thrown in areas representing distinct vegetative changes. Reference communities selected for this process included the following Saskatchewan Rangeland Ecosite Reference Communities: Mixed Grassland Loam Ecosite G (Crested Wheatgrass – Native grasses), Aspen Parkland Loam Ecosite B (Western Porcupine Grass – Northern Wheatgrass – Sedge – Pasture Sage), and Prairie Ecozone Sub-irrigated and Overflow Ecosite B (Smooth Brome). These reference communities are described in Table 8 below. Grassland range health assessment field data is located in Appendix B-II.

Table 7. Summary of Maple Grove Rangeland Ecosite Reference Communities

Ecozone: Ecosite	Reference Community (Code)	Count	General Description Summary
Mixed Grassland: Loam Ecosite	<i>Crested Wheat- grass – Native grasses</i> (MG-LM-G)	4	Grasslands dominated by exotic grasses. Interpreted as showing severe alteration from the reference community as a result of exotic invasion, often adjacent to seeded forage stands. This community represents one end of a continuum, starting with native grasslands with a few scattered Crested Wheatgrass (<i>Agropyron cristatum</i> ssp. <i>pectinatum</i>) plants, and ending with stands dominated by Crested Wheatgrass. (Thorpe, 2014b)
Aspen Parkland: Loam Ecosite	<i>Western Porcupine- grass – Northern Wheatgrass – Sedge – Pasture Sage</i> (AP-LM-B)	1	Mixed prairie dominated by mid-grasses, with significant amounts of short-grasses and lesser amounts of half-shrubs and forbs. Shrub cover low in many of the sampled areas, but absence of disturbances such as fire can lead to expansion of snowberry (<i>Symphoricarpos</i> spp.) cover. Probably develops from AP-LM-A by decrease in Rough Fescue (<i>Festuca hallii</i>) and increase in Western Porcupine Grass (<i>Hesperostipa curtiseta</i>), Northern Wheatgrass (<i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i>), June Grass (<i>Koeleria macrantha</i>), and Pasture Sage (<i>Artemisia frigida</i>). Interpreted as showing moderate alteration from the reference community as a result of grazing impact. (Thorpe, 2014b)
Prairie Ecozone: Sub-irrigated and Overflow Ecosites	<i>Smooth Brome</i> (PEZ-SUB-B)	5	This community represents grassland dominated by Smooth Brome (<i>Bromus inermis</i>), on the sub-irrigated and overflow ecosites. Note that this community does not include Smooth Brome stands on upland ecosites. This community is interpreted as showing severe alteration from the reference community as a result of heavy grazing impact coupled with exotic invasion. Smooth Brome invades aggressively into native communities, usually spreading from disturbed sources such as road ditches or tame pasture. It is particularly aggressive on overflow and sub-irrigated ecosites where it is favoured by moisture availability and may be restricted to these ecosites in the drier climates of the mixed grassland and dry mixed grassland. There is a wide range in Smooth Brome abundance, from native grassland with a few patches of brome to nearly complete brome domination as in the description here. (Thorpe, 2014c)

****Table information retrieved and summarized from Thorpe, 2014(b) and Thorpe, 2014(c) in the Saskatchewan Rangeland Ecosystems Publications Volumes 4 and 12.**

Range health assessments conducted across the remnant hayfield areas provided indication that the overall rangeland ecosystem status at Maple Grove is “healthy with problems”. Range health scores (out of 100 potential marks) ranged from 49 to 57 with a median score of 54 and an average score of 52.2. The overall vegetation status assessment portion of the range health surveys indicated that the hayfield areas have seen significant alteration from the composition of their associated reference communities. Disturbance impact was observed to be very heavy these

areas due to a disruption in natural disturbance cycles and there was a moderate to high distribution of invasive species observed across the rangeland areas.

Dominant plant community species observed within the remnant hayfield areas included a high percentage of invasive grasses such as Crested Wheatgrass (*Agropyron cristatum* ssp. *pectinatum*), Smooth Brome and Kentucky Blue Grass (*Poa pratensis*). Invasive forb species such as Alfalfa (*Medicago sativa* ssp. *sativa*), Canada Thistle (*Cirsium arvense*), and Common Dandelion (*Taraxacum officinale* ssp. *officinale*) were also commonly present. The shrub species Western Snowberry (*Symphoricarpos occidentalis*) was the most abundant shrub species with higher concentrations noted along forest margins and upland transitional areas bordering the hayfield plant communities. Forb species such as Northern Bedstraw (*Galium boreale*), Vetch (*Astragalus* sp.), and Smooth Blue Aster (*Symphootrichum leave* var. *geyeri*) were documented amongst the forb community layer. Vegetation status scores (out of 60) ranged from 10 to 17 with a median score of 14 and average score of 13.5. The vegetation section scores were consistently lower in the range health process, resulting from observed reference community alteration, absence of expected plant community layers, and presence of invasive species. The hydrologic function and soil protection section of the range health surveys revealed very little erosion in the hayfield areas with high amounts of litter buildup present. Hydrologic function and soil protection scores (out of 40) ranged from 35 to 40 with a median score of 40 and an average score of 38.7.

Forested Plant Community Health

Forested range health assessments were conducted in the fall of 2021 across the Maple Grove site near each of the five permanent monitoring plot locations. The lineation of monitoring plots was used as a transect route across the site, with forest health assessment conducted in broadly representative forested areas with particular attention on characteristic vegetative regime shifts. The Saskatchewan forest range health assessment indicator method was selected to address the vegetation status, hydrologic function and soil protection within forested plant communities and provide an overall forest range health score. Results from the forest health assessments are summarized below in Table 9.

The dominant reference community used in the forest health assessment process was the Aspen Parkland Ecozone Moist Ecosite C (Balsam Poplar – Aspen / Willow – River Birch) (referred to as AP-MO-C). AP-MO-C is described as a grazed community found in open poplar stands with a distinct tall shrub layer with relatively low abundance of decreaser species (Thorpe & Godwin, 2008).

Table 8. Summary of 2021 Forest Health Data Collected at Maple Grove

Forest Health Plot ID	Reference Community Code	Section A (Vegetation Status /70)	Section B (Hydrology & Soil /30)	Total Score (/100)	Final Range Health Rating
MG-FHA-01	AP-MO-C	40	28	68	Healthy with Problems
MG-FHA-02	AP-MO-C	40	30	70	Healthy with Problems
MG-FHA-03	AP-MC-O	20	30	50	Healthy with Problems
MG-FHA-04	AP-MC-O	20	30	50	Healthy with Problems
MG-FHA-05	AP-MC-O	40	25	65	Healthy with Problems
Mean Score Results		32	28.6	60.6	Healthy with Problems

Dominant plant community species observed across Maple Grove forested areas included invasive grasses such as Smooth Brome, Quackgrass (*Thinopyrum intermedium*), and Western Wheatgrass (*Agropyron trachycaulum*). Dominant forb species included Bearberry (*Arctostaphylos uva-ursi*), Goldenrod (*Solidago spp.*), Aster (*Asteraceae*), Northern Bedstraw, and Vetch species as well as coverage of invasive forbs such as Canada Thistle, Sweet Clover (*Melilotus spp.*), Common Dandelion, and Asparagus (*Asparagus officinalis*). Dominant shrub species included Rose (*Rosa spp.*), Western Snowberry, Red-osier Dogwood (*Cornus sericea*), High Bush-cranberry (*Viburnus opulus var. americanum*), Willow species (*Salix spp.*), Wolf Willow (*Elaeagnus commutata*), Chokecherry (*Prunus virginiana*), Saskatoon (*Amelanchier alnifolia var. alnifolia*), and high coverage of the invasive European Buckthorn. Balsam poplar trees (*Populus balsamifera*) were the most abundant canopy species recorded.

Scores received through the forest health assessments indicated that general health status of forested regions across the site falls within the “healthy with problems” range. Overall forest range health scores (out of 100 potential marks) ranged from 50 to 70 with an average score of 60.6. Vegetation status scores (out of 70 marks) ranged from 20 to 40 with an average score of 32. Vegetation status section scores indicated minor to moderate shifting away from reference plant community with less abundance in decreaser species. Invasive species were present with more than 1% coverage at each assessment point and European Buckthorn was highlighted as a problem species with broad coverage across the site. Hydrologic function and soil protection scores (out of 30 marks) ranged from 25 to 30 with an average score of 28.6. The scoring results revealed some to little soil erosion with mostly non-compacted soil. Some compaction was noted in areas with trail systems and travelled wildlife routes. Full forest range health assessment survey data forms may be found in Appendix B-II.

Riparian Plant Community Health

Riparian health assessment surveys were conducted across the eastern Maple Grove site boundary along the riverbank riparian area along two reach segments. The riparian zone refers to the transitional area between the river water and the surrounding terrestrial area (PCAP, 2008b). Riparian health assessments are a standard method of rapidly assessing and estimating the current health status of riparian areas and advancing the identification of the presence, scale, and magnitude of issues (PCAP, 2008b). The entire eastern property line, which runs directly adjacent to the South Saskatchewan River, was surveyed through this process in a linear fashion from the northern point of the site boundary to the southern point of the site boundary along the riparian riverbank property edge. Riparian health results are summarized in the table below.

Table 9. Summary of 2021 Riparian Health Data Collected at Maple Grove

Riparian Reach No.	Total Score Awarded	Potential Score	Overall Percentage	Riparian Health Rating
MG-01	48	63	76%	Healthy with Problems
MG-02	46	63	73%	Healthy with Problems

Overall riparian health scores for the area were estimated at 73% which falls within the low range of the ‘healthy’ threshold and highest end of the ‘healthy with problems’ evaluative spectrum. Riparian survey results generally found vegetation coverage to be 85-95% with a total invasive species canopy cover of less than 1%. Within the riparian area, there was high evidence of

streambank erosion observed with a reported 15-35% of the reach displaying active lateral cutting. It was estimated that 5-15% of the reach has been physically altered by human activity, most notably the presence of trail systems and property access points forged along the rivers' edge.

4.3.3 Rare Species Observations

Significant species observed on the Maple Grove site are documented in Table 11 below. Columns reflect provincial, federal, and international assessments of conservation status. The 'G-Rank' and 'S-Rank' columns align with provincial conservation status ranks assigned through the Conservation Data Centre (CDC). CDC rankings were designed by The Nature Conservancy and reflect the at-risk status of significant species applied at various geographical scales. The 'G-Rank' column refers to the global assessment assigned by national and international conservation authorities. The 'S-Rank' column refers to subnational ranks assigned and maintained by regional or provincial Conservation Data Centre branches. Within these CDC ranking columns, geographical prefix codes (G or S) indicate the spatial level at which the status rank has been applied. Modifier codes (number or letter characters proceeding the status rank letter) reflect the associated severity of risk associated with the species listed.

The 'COSEWIC' column provides associated designation from The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) ranking system which provides an indication of the risk of extinction associated with endangered wildlife species. The 'SARA Schedule' column provides status assessment information listed in the federal species at risk public registry associated with the Species at Risk Act (SARA).

Table 11 provides an inventory of significant species observations documented in the general vicinity of the Maple Grove site. This range or 'study area' includes observations made on the adjacent Yorath Island site and areas directly bordering the site. The location column indicates where the species observations have occurred. Within the location column, 'MG' refers to observations documented directly on the Maple Grove site and 'OOR' denotes observations made outside of the Maple Grove site boundary, within a relatively close geographical region. These proximal observations are included to acknowledge that additional species may have the potential to inhabit the site. Species identified within this table hold special significance due to the concerns associated with their conservation status. Each of the species listed have associated COSEWIC provincial rarity rankings from special concern to endangered status. The S-Rank status of some species is affected by life cycle stages such as migration and breeding, meaning that time of year impacts the ranking associated with particular species (noted in the notes section). Species included within this table have been observed directly by Meewasin or confirmed through provincial and citizen science databases.

Table 10. Significant Species Observations Documented in the Maple Grove Area

Scientific Name	Common Name	Global Rank (G-Rank)	Subnational Rank (S-Rank)	COSEWIC Status	SARA Schedule	Location*		Notes
						MG	OOR	
AMPHIBIANS								
<i>Lithobates pipiens</i>	Northern Leopard Frog	G5	S3	Special Concern	Special Concern	X		
BIRDS								
<i>Accipiter cooperii</i>	Cooper's Hawk	G5	S4B,S2N,S2M	Not at Risk			X	Migration - OOR
<i>Accipiter gentilis</i>	Northern Goshawk	G5T5	S4B,S3N	Not at Risk			X	Non-Breeding - OOR
<i>Aechmophorus occidentalis</i>	Western Grebe	G5	S3B	Special Concern	Special Concern		X	Breeding Window - OOR
<i>Aegolius acadicus</i>	Northern Saw-whet Owl	G5	S5B, S4N			X		
<i>Anthus spragueii</i>	Sprague's Pipit	G3G4	S3B	Threatened	Threatened		X	Breeding Window - OOR
<i>Aquila chrysaetos</i>	Golden Eagle	G5	S3B,S3N,S4M	Not at Risk			X	Breeding Window - OOR
<i>Asio flammeus</i>	Short-eared Owl	G5	S3B,S2N	Threatened	Special Concern		X	Breeding Window - OOR
<i>Buteo platypterus</i>	Broad-winged Hawk	G5	S4B,S3M				X	Migration - OOR
<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B	Special Concern	Threatened	X		Non-Breeding
<i>Cardellina canadensis</i>	Canada Warbler	G5	S4B,S3M	Special Concern	Threatened	X		Birds of Saskatoon say most sightings are in the Fall; no Fall migration window given - OOR
<i>Cathartes aura</i>	Turkey Vulture	G5	S3B			X		Breeding Window
<i>Centronyx bairdii</i>	Baird's Sparrow	G4	S4B	Special Concern	Special Concern		X	Historical - OOR
<i>Chordeiles minor</i>	Common Nighthawk	G5	S4B	Special Concern	Threatened	X		
<i>Contopus cooperi</i>	Olive-sided Flycatcher	G4	S4B	Special Concern	Threatened		X	OOR
<i>Cygnus buccinator</i>	Trumpeter Swan	G4	S3B	Not at Risk			X	Breeding Window - OOR
<i>Dolichonyx oryzivorus</i>	Bobolink	G5	S5B	Special Concern	Threatened		X	OOR
<i>Dryocopus pileatus</i>	Pileated Woodpecker	G5	S3				X	Breeding Window - OOR

* Location Column: 'MG' refers to observations documented directly on the Maple Grove site and 'OO' denotes observations made outside of the Maple Grove site boundary, within a relatively close geographical region.

<i>Euphagus carolinus</i>	Rusty Blackbird	G4	S3B,SUN	Special Concern	Special Concern		X	Migration Window - OOR
<i>Grus americana</i>	Whooping Crane	G1	SXB,S1M	Endangered	Endangered		X	Migration - OOR
<i>Hirundo rustica</i>	Barn Swallow	G5	S4B	Special Concern	Threatened	X		
<i>Hydroprogne caspia</i>	Caspian Tern	G5	S2B	Not at Risk			X	OOR
<i>Lanius ludovicianus</i>	Loggerhead Shrike	G4T4	S3B	Threatened	Threatened		X	Breeding Window - OOR
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	G5	S1B	Endangered	Endangered		X	Breeding Window - OOR
<i>Numenius americanus</i>	Long-billed Curlew	G5	S3B	Special Concern	Special Concern		X	Breeding Window - OOR
<i>Pandion haliaetus</i>	Osprey	G5	S3B				X	Breeding Window - OOR
<i>Riparia riparia</i>	Bank Swallow	G5	S4B,S5M	Threatened	Threatened		X	OOR
<i>Tringa flavipes</i>	Lesser Yellowlegs	G5	S4B	Threatened			X	OOR
<i>Zonotrichia querula</i>	Harris's Sparrow	G5	SUB,S5M	Special Concern			X	OOR
MAMMALS								
<i>Myotis lucifugus</i>	Little Brown Bat	G3	S4B,S4N	Endangered	Endangered	X		
PLANTS								
<i>Carex saximontana</i>	Rocky Mountain Sedge	G5	S3				X	Historical; large polys that are more centered on Saskatoon central, not MG site
<i>Cypripedium parviflorum var makasin</i>	Small Yellow Ladyslipper	G5T4T5	S3			X		
<i>Elymus glaucus ssp. glaucus</i>	Blue Wild Rye	G5T5	S3				X	Historical; large polys that are more centered on Saskatoon central, not MG site
<i>Hierochloe odorata</i>	Sweetgrass	G5T5	S4			X		Noted as a culturally significant species
<i>Potentilla rubricaulis</i>	Red-stemmed Cinquefoil	G4G5	S3				X	Historical; large polys that are more centered on Saskatoon central, not MG site

Regionally Significant Species

Maple Grove provides habitat for a number of culturally and ecologically important species in addition to the significant species listed above in Table 11. Many species observed at the Maple Grove site lack a provincial status ranking above S4 but are locally and regionally recognized for their cultural, social, and ecological significance.

Bats species are critically important within the prairie region due to their ecological significance. The general sensitivity to human-induced environmental changes renders bat populations as an excellent ecological indicator. In addition to the endangered Little Brown Bat species (*Myotis lucifugus*), three other bat species were identified on the Maple Grove site including: Big Brown Bat (*Eptesicus fuscus*), Silver-haired Bat (*Lasionycteris noctivagans*), and Hoary Bat (*Lasiurus cinereus*). Bat populations are being carefully monitored because of the continental presence of white-nose syndrome (caused by fungus *Pseudogymnoascus destructans*), which is considered to be one of the worst wildlife diseases in North America that has the potential to drastically reduce global bat population numbers (U.S. Fish & Wildlife, 2022).

The term 'keystone species' refers to particular species that are critical to the survival of other species in the ecosystem. Most cavity nesting species depend on the construction of a nest site that has been forged by woodpeckers. In this way, woodpecker species inhabit keystone roles within the Maple Grove ecosystem. Species that have been observed at Maple Grove include: Northern Flicker (*Colaptes auratus*), Downy Woodpecker (*Dryobates pubescens*), and the Hairy Woodpecker (*Dryobates villosus*). The North American Beaver (*Castor Canadensis*) is also considered a keystone species in their ability to alter habitat. Beavers hold broader cultural significance within the prairie region and several beaver sightings, lodges, and areas of beaver activity have been observed in the floodplain and riverbank areas at the Maple Grove site.

Old growth riparian forest provides important habitat for cavity nesters, bats, birds, and an array of other wildlife. Established forest stands at Maple Grove provide habitat for woodpeckers, as made evident by the presence and abundance of cavities and foraging activity indicators (Delanoy, 2000). The major canopy species at Maple Grove include Eastern Cottonwood (*Populus deltoides*), Balsam Poplar (*Populus balsamifera*), Green Ash (*Fraxinus pennsylvanica*), Manitoba Maple (*Acer negundo*), Trembling Aspen (*Populus tremuloides*), and Yellow Willow (*Salix famelica*). Cottonwood forest provides unique wildlife habitat at the Maple Grove site. The presence of Cottonwood species in Maple Grove forest areas holds particular significance within the Saskatoon region due to its position at the northern edge of the North American cottonwood range (Delanoy, 2000).

4.3.4 Invasive Species Observations

Table 12 documents 35 notable invasive and issue non-native plant species that have been observed on the Maple Grove site. Thirteen of the invasive plant species identified in the table below have been classified as “noxious” according to the *Saskatchewan Weed Control Act* and four species included within the table are classified as “nuisance”. Additional non-native plant species have been documented on the site and are included within the comprehensive plant species inventory in Appendix B-I.

Table 11. Invasive Plant Species Documented at Maple Grove

Scientific Name	Common Name	SK Weed Control Act Designation
<i>Agropyron cristatum</i>	Crested Wheatgrass	
<i>Agropyron repens</i>	Quackgrass, Creeping Wild Rye	Nuisance
<i>Agrostis stolonifera</i>	Creeping Bentgrass	
<i>Artemisia absinthium</i>	Absinthe	Noxious
<i>Asparagus officinalis</i>	Asparagus	
<i>Astragalus cicer</i>	Cicer Milkvetch	
<i>Bromus inermis</i>	Smooth Brome	
<i>Campanula rapunculoides</i>	Creeping Bellflower	
<i>Caragana arborescens</i>	Caragana	
<i>Carduus nutans</i>	Nodding Thistle	Noxious
<i>Cirsium arvense</i>	Canada Thistle	Noxious
<i>Crepis tectorum</i>	Annual Hawksbeard	Noxious
<i>Euphorbia esula</i>	Leafy Spurge	Noxious
<i>Gypsophila paniculata</i>	Tall Baby's Breath	Noxious
<i>Kochia scoparia</i>	Kochia	Noxious
<i>Lactuca serriola</i>	Prickly Lettuce	Noxious
<i>Lappula echinata</i>	Blue-bur	
<i>Linaria vulgaris</i>	Yellow Toad-flax	Noxious
<i>Lonicera tatarica</i>	Tatarian Honeysuckle	
<i>Lythrum salicaria</i>	Purple Loosestrife	Noxious
<i>Medicago lupulina</i>	Black Medick	
<i>Medicago sativa</i> spp. <i>Sativa</i>	Alfalfa	
<i>Melilotus alba</i>	White Sweet-clover	
<i>Melilotus</i> spp.	Sweet Clover	
<i>Plantago major</i>	Common Plantain	
<i>Poa pratensis</i>	Kentucky Bluegrass	
<i>Rhamnus cathartica</i>	European Buckthorn	Noxious
<i>Rumex stenophyllus</i>	Narrow-leaved Field Dock	
<i>Salsola kali</i> var. <i>tenuifolia</i>	Russian-thistle	Nuisance
<i>Sonchus arvensis</i> ssp. <i>arvensis</i>	Field Sow-thistle	Noxious
<i>Sorbus aucuparia</i>	Rowan Tree	
<i>Tanacetum vulgare</i>	Common Tansy	Noxious
<i>Taraxacum officinale</i> ssp. <i>officinale</i>	Common Dandelion	Nuisance
<i>Tragopogon dubius</i>	Yellow Goat's-beard	Nuisance
<i>Trifolium pretense</i>	Red Clover	

Figure 13 below provides an overview of invasive plant concentrations observed across the Maple Grove site. This map figure combines mapped exotic polygon units reported by Meewasin in the 2000 Maple Grove site vegetation survey with contemporary point invasive species observations and approximated known invasive concentration areas.

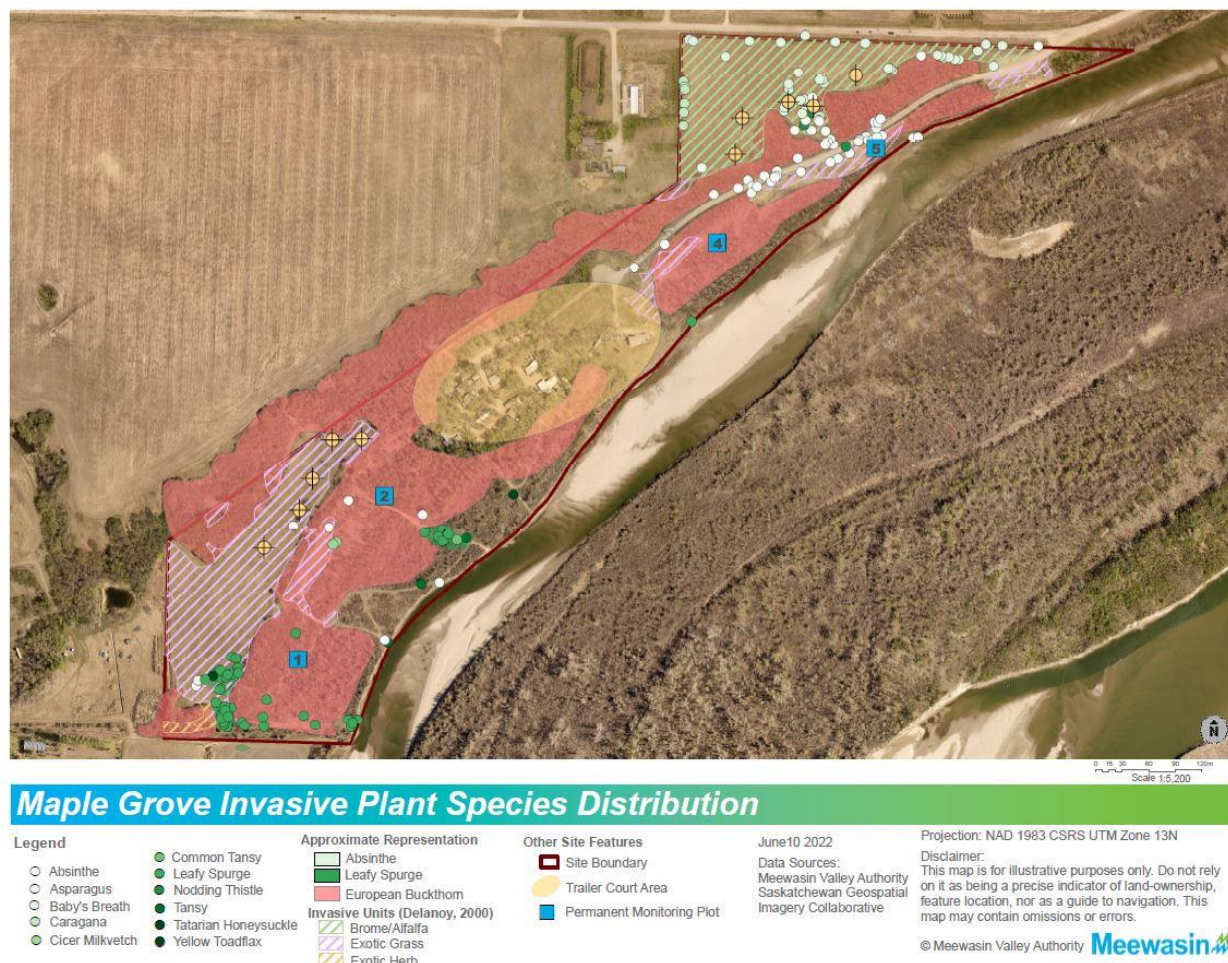


Figure 13. Invasive Plant Species Distribution at Maple Grove

Invasive grasses such as Smooth Brome, Quackgrass, Kentucky Bluegrass, and Crested Wheatgrass have extensive coverage across the Maple Grove site. Exotic grasses most commonly occur in understory areas across the site with most widespread colonization observed in remnant hayfield areas, disturbed slope positions, and adjacent floodplain areas in the northern portion of the site. The two remnant hayfield areas on the site are dominated by invasive grasses such as Smooth Brome and Kentucky Blue Grass with scattered concentrations of invasive forb species such as Absinthe (*Artemisia absinthium*), Baby's Breath (*Gypsophila paniculata*), Canada Thistle (*Cirsium arvense*), and Sweet Clover (*Melilotus spp.*). Invasive forbs such as Absinthe, Canada Thistle, Leafy Spurge (*Euphorbia esula*), Common Dandelion (*Taraxacum officinale ssp. officinale*), and Baby's Breath are progressively establishing larger populations on the site. Site roadways and trail networks contain frequent patches of invasive forbs such as Absinthe, Sweet Clover, and Asparagus with multiple concentrations noted throughout the site along major pathways and lateral spread into marginal adjacent trail and roadways areas. Common Dandelion and Quackgrass are abundant in areas where regular landscape maintenance mowing occurs and various invasive horticultural ornamentals, such as Creeping Bellflower (*Campanula rapunculoides*), have been observed in the trailer court area. European Buckthorn is well established in forested areas across the entire Maple Grove site, in populations that are too numerous to document.

Meewasin has engaged in some invasive patch monitoring and management efforts over the years to control the spread of invasive plant species and restore disturbance areas on the Maple Grove site. Targeted invasive species control efforts have been relatively limited on the Maple Grove site with the exception of an extensive effort to control the spread of the small tree species known as European Buckthorn. Meewasin has been targeting the controlled removal of European Buckthorn across the Meewasin Valley for over 20 years, with an extensive history of control efforts dating back to the late 1990s occurring in the Maple Grove and Yorath Island region (Delanoy, 2000). Annual controlled chemical spot treatments of herbicide is applied to notable established patch concentrations of Leafy Spurge, Common Tansy (*Tanacetum vulgare*), and Yellow Toadflax (*Linaria vulgaris*). Routine annual application of chemical control to these noxious weed patches has been occurring since 2015. In the summer of 1998, Leafy Spurge Flea Beetles (*Aphthona spp.*) were released at the south end of Maple Grove as a biocontrol method to reduce concentrations (Delanoy, 2000). Four sizeable patch concentrations of the noxious weed Leafy Spurge are documented in the southwestern portion of the site and subject to routine monitoring and annual treatment.

4.4 Site Vegetation Cover Comparative Pattern Analysis

This subsection compares available vegetative data mapping and land classification profiles for the Maple Grove area to create a rounded site vegetation profile. This discussion references detailed vegetation quadrat survey data and mapping of the Maple Grove site presented in the *Vegetation and Wildlife Survey of Maple Grove and Yorath Island* report, dated February 16, 2000. Also included within this discussion is the 2014-2018 Meewasin State of the Valley reported land use land cover type classification system (Hooey, 2021) which is used to provide a 2018 land cover status overview for the Maple Grove region. Baseline inventory survey data and supplemental multi-source comprehensive species observation datasets are additionally reflected upon within this discussion.

4.4.1 Key 2000 Historic Vegetation Survey Data

The *Vegetation and Wildlife Survey of Maple Grove and Yorath Island* (Delanoy, 2000) provides a high-quality vegetative inventory and detailed vegetation community mapping for Maple Grove and the adjacent Yorath Island area. Within this study, the Maple Grove and Yorath Island site region is divided into vegetation community series units or polygons based on observed similarities in dominant vegetation within the macro area classifications of forest, shrub, herb, and complex cover areas (Delanoy, 2000).

The reported 2000 data observed 51% of the study area (inclusive of Maple Grove and Yorath Island areas) to be under forest cover and 18 forest type vegetation units were identified (Delanoy, 2000). The main tree species observed within the study area forest units included: Cottonwood, Balsam Poplar, Green Ash, Manitoba Maple, Trembling Aspen, and Yellow Willow (Delanoy, 2000). Shrub dominant vegetation cover represented 37% of the Maple Grove and Yorath Island study area (Delanoy, 2000). Shrub cover within the study was further classified into 23 shrub dominant community types with additional elevation-based sub-classification groupings for shrub dominated vegetation communities (Table 13).

The following table provides a summary of dominant shrub type communities described in the 2000 Maple Grove vegetation survey (Delanoy, 2000).

Table 12. Shrub Community Elevation Distribution (Delanoy, 2000)

Shrub Zone	Area of Occupation	Main Shrub Species
Upland Shrub	Highest site areas, forming the understory of Aspen, Ash, Maple and Balsam Poplar forests.	Snowberry, Rose, Chokecherry, Saskatoon
Floodplain Shrub	Occurring more extensively, in lower site elevations. Forming strong understory in Cottonwood, Yellow Willow, and open Ash forests.	Sandbar Willow, Dogwood, Silverberry, and Yellow Willow
Mixed Shrub	Occur where topography is suitable.	Includes both upland and floodplain species.

Delanoy (2000) reported exotic herb and grasses as the most extensively represented plant communities in the open grass playing fields and hayfield areas at Maple Grove. Within these regions, dominant exotics such as Smooth Brome, Alfalfa, Leafy Spurge, and Canada Thistle are used to define community types (Delanoy, 2000). At the time of the 2000 report, an open sewage pond was in operation near the southwestern corner of Maple Grove, on the periphery of the playing field area (Figure A-I 6). The open sewage pond is no longer present or operational.

Table 14 includes a manipulated summary of the 2000 Delanoy vegetation community units, where catalogued units have been isolated to the Maple Grove site area with an associated estimation of site area coverage in relation to the Maple Grove site.

Table 13. 2000 Delanoy Vegetation Community Data Merged to Maple Grove Site Area

Community Type	Vegetation Community Unit	Estimated Site Coverage	
		Area (ha)	Area (ac)
Forest Types	Ash-Upland Shrub	0.96	2.37
	Ash-Upland Shrub/Buckthorn	0.12	0.30
	Ash/Aspen-Mixed Shrub	0.12	0.30
	Ash/Maple-No Shrub	1.59	3.94
	Ash/Maple-Upland Shrub	1.95	4.81
	Cottonwood-Floodplain Shrub	0.37	0.90
	Cottonwood-No Shrub	0.05	0.11
	Ash/Yellow Willow-Floodplain Shrub	2.43	6.02
	Aspen-Upland Shrub	0.10	0.25
	Balsam Poplar-Floodplain Shrub	0.35	0.86
	Balsam Poplar/Ash-Floodplain Shrub	0.51	1.26
	Balsam Poplar/Ash-Upland Shrub	0.43	1.07
	Balsam Poplar/Ash/Maple-No Shrub	1.07	2.64
	Balsam Poplar/Ash/Maple-Upland Shrub	0.55	1.35
Shrub Types	Chokecherry/Saskatoon	0.13	0.32
	Chokecherry/Saskatoon-Exotic Herb	0.04	0.10
	Snowberry	0.01	0.04
	Dogwood/Other Shrub	0.14	0.34
	Floodplain Shrub	0.36	0.88

	Ash/Upland Shrub-Exotic Grass	0.05	0.12
	River Birch/Willow	0.83	2.05
	Sandbar Willow	0.13	0.32
<i>Herb Types</i>	Exotic Grass	3.46	8.54
	Sedge Meadow	0.14	0.33
	Brome/Alfalfa	2.68	6.62
	Snowberry-Exotic Grass	0.09	0.22
	Snowberry-Exotic Herb	0.05	0.12
	Snowberry/Rose	0.05	0.13
	Snowberry/Upland Shrub	0.12	0.30
	Upland Shrub	0.15	0.37
	Yellow Willow/Floodplain Shrub	1.34	3.31
<i>Complexes Types</i>	Ash/Maple/Yellow	0.04	0.09
	Willow-Floodplain Shrub and Exotic Complex		
<i>Other Types</i>	Pond	0.01	0.02

The following figures map the observed vegetation community patterns reported in the Meewasin 2000 *Vegetation and Wildlife Survey of Maple Grove and Yorath Island* report document. Figure 14 illustrates the spatial distribution of reported vegetation community units across the Maple Grove site and Figure 15 illustrates the reported distribution of dominant shrub and tree species observed across Maple Grove and Yorath Island sites.

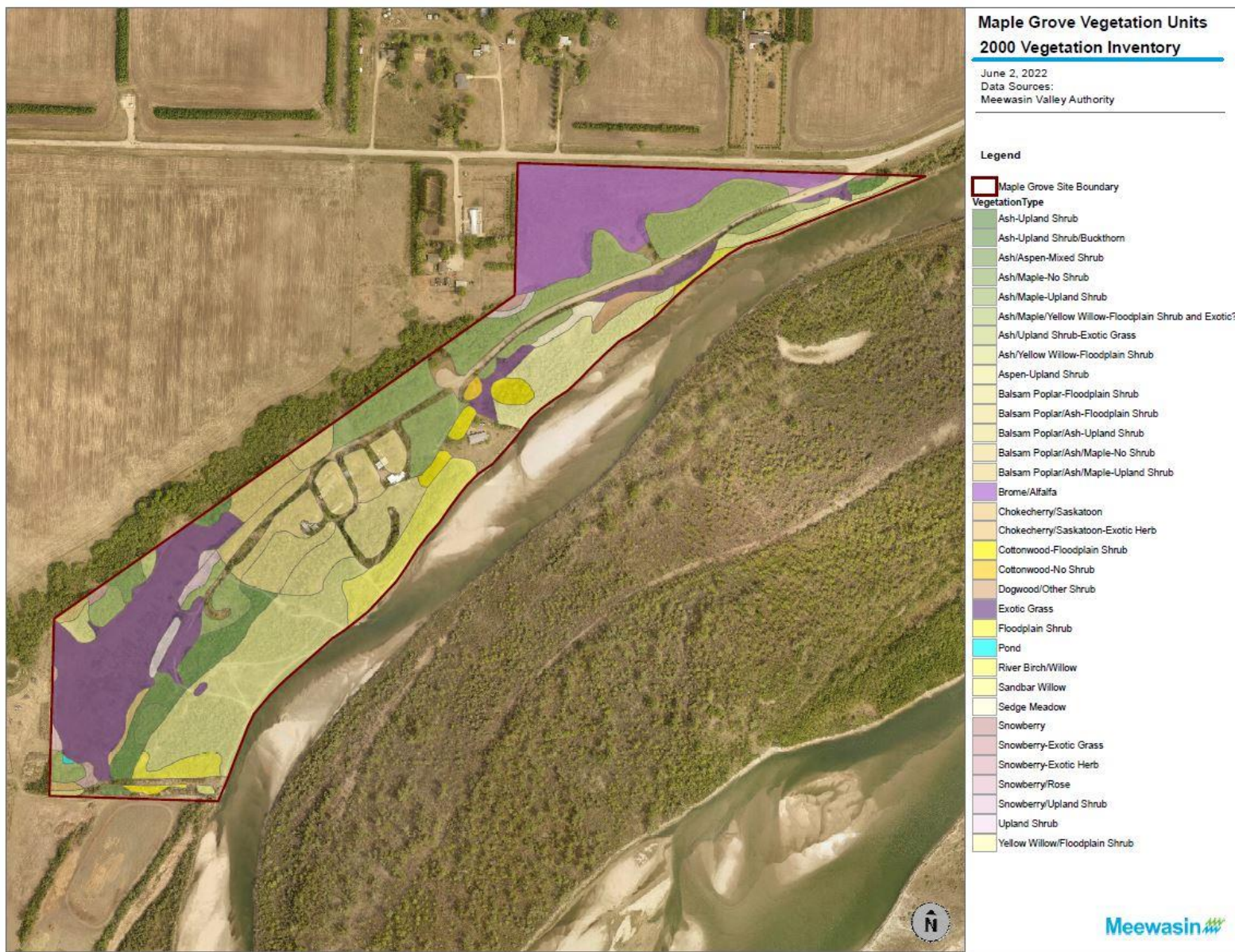


Figure 14. 2000 Maple Grove Vegetation Inventory Trends (Delanoy, 2000)

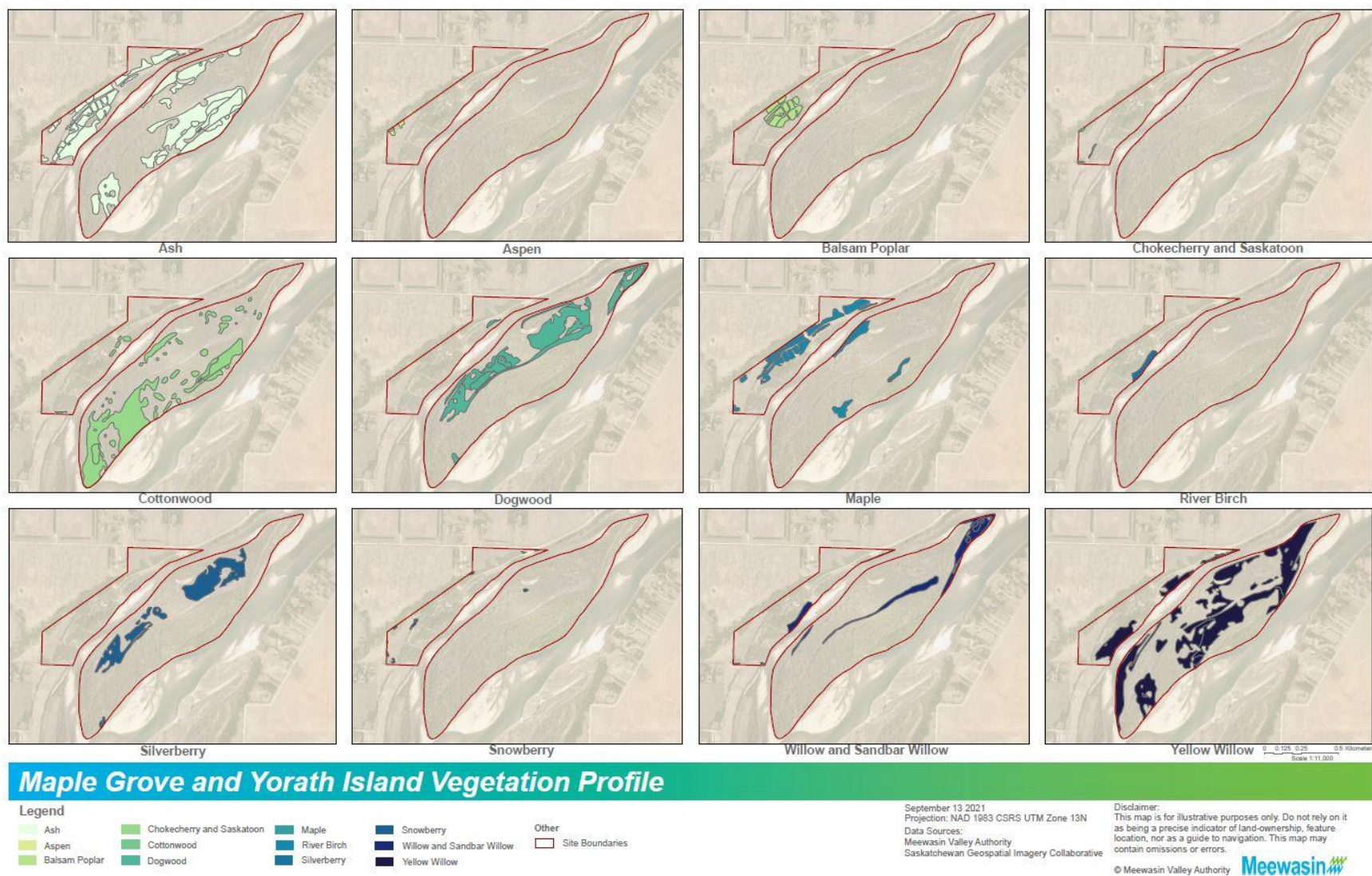


Figure 15. 2000 Shrub Community Distribution Mapped in Maple Grove and Yorath Island Region (Delanoy, 2000)

4.4.2 Meewasin State of the Valley Data 2014-2018

The land use and land cover classification is a multifaceted desktop analysis process involving the aggregation of multiple land cover information sources, associated subject matters, and a temporal spectrum of aerial imagery to deliver a summary of land cover and associated land use across the Meewasin Valley region (Hooey, 2021). The 2014-2018 State of the Valley report delivers a summary of 2018 land cover in the Valley region and discusses associated changes and perceived shifts in land cover and use that have occurred during the reporting period (Hooey, 2021).

Land cover is classified into two main cover categories that include Built Environment and Ecological Environment. The 'Built Environment' classification category broadly applies to artificial surfaces, of anthropogenic use and construction (Hooey, 2021). The 'Ecological Environment' classification category applies to environments where natural surfaces predominately comprise the land cover and surroundings are low in anthropogenic intensity and range (Hooey, 2021). Within each of those main categories, features are sub-categorized based on the most appropriate observed corresponding land use and land cover types (Hooey, 2021).

Table 15 illustrates the land cover classifications applied to the Maple Grove site area with associated estimated site area coverage. Figure 16 illustrates the application of 2018 land use land cover classification on map of the Maple Grove and Yorath Island region.

Table 14. State of the Valley Land Use Land Cover Classifications Dissolved to Maple Grove Site Area (Hooey, 2021)

LULC Category	LULC Subcategory Classifications					Maple Grove Site Cover	
	1	2	3	4	5	Area (ha)	Area (ac)
Built Environment	Exposed & Barren	Informal Road & Trail				0.23	0.56
	Road & Rail					0.53	1.30
	Urban & Rural Development					1.92	4.74
Ecological Environment	Green Space	Informal Green Space	Verge			0.00	0.01
	Native & Naturalized Environment	Aquatic Systems	River			0.14	0.34
		Forested & Shrubland Systems	Native & Naturalized			12.87	31.80
		Grassland Systems	Naturalized Grass			0.56	1.38
				Agricultural Production	Old Field	0.33	0.83
				Naturalized Green Space		1.00	2.48
				Vegetated Margin	Field Edge	0.18	0.45
			Tame Forage	Agricultural Production	Forage Crop	4.59	11.34
				Vegetated Margin	Field Edge	0.25	0.62



Maple Grove and Yorath Island Site Profile

Legend					
Built Environment		Aquatic Systems	Forested & Shrubland Systems	Grassland Systems	Green Space
Informal Road & Trail	River	Native & Naturalized	Naturalized Grass	Verge	Site Boundaries
Road & Rail	Wetland	Afforested	Tame Forage		
Urban & Rural Development					

August 17 2021
 Projection: NAD 1983 CSRS UTM Zone 13N
 Data Sources:
 Meewasin Valley Authority
 Saskatchewan Geospatial Imagery Collaborative

Disclaimer:
 This map is for illustrative purposes only. Do not rely on it as being a precise indicator of land-ownership, feature location, nor as a guide to navigation. This map may contain omissions or errors.

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Figure 16. State of the Valley Land Use Land Cover Classification for Maple Grove and Yorath Island Region

4.4.3 Contemporary Vegetation Community Shifts

Comparative analysis conducted with the combined information from the land cover classification and mapped vegetation community data above is summarized below in Table 16. This analysis was performed to verify assumptions about current land cover and illuminate areas of land cover change in the 20-year period that has passed since the Maple Grove vegetation survey conducted by Delanoy in 2000 and the 2018 State of the Valley land cover classification. To perform this analysis, a union dissolve tool was run on ArcGIS data mapping software to expose areas of overlap between the 2000 Delanoy vegetation community polygon units and the 2018 State of the Valley land cover land use classification data. Table 16 summarizes the land cover area changes that have been identified based on overlapping dataset conversions. A comprehensive spreadsheet summary of this data union overlap is located in Appendix B-IV, Table B-IV 2.

Table 15. 2000-2018 Land Cover Conversions and Vegetation Community Shifts on Maple Grove Site

Conversion Summary	2000 Delanoy Vegetation Cover Types Impacted	2018 SOTV LULC Category Overlap	Rough MG Site Area Estimate		Notes / Possible Correlations
			ha	ac	
Vegetation Cover to Built Environment	Upland Forest (3); Floodplain Forest (1); Forest (2); Exotic Grass (1)	Informal Road & Trail	0.23	0.56	Trail networks created;
	Forest Types (2); Exotic Grass (1); Hayfield (1)	Road & Rail	0.09	0.21	Entrance parking area; artist residence decommission
	Upland Forest (2); Floodplain Forest (1); Forest (1); Exotic Grass (1); Hayfield (1); Upland Shrub (1)	Urban & Rural Development	1.22	3.01	Parking areas expanded;
Vegetation Cover to Green Space	Upland forest (1); Exotic Grass (1); Upland Shrub (1)	Verge	0.00	0.01	Drainage ditches
Vegetation Cover to Aquatic Environment	Floodplain Forest (1); Floodplain Shrub (4)	River	0.13	0.33	Erosion
Vegetation Cover to Agricultural Production	Upland Forest (3); Upland Shrub (4); Exotic Grass (1)	Old Field	0.33	0.83	
	Upland Forest (4); Mid-Forest (1); Upland Shrub (6); Exotic Grass (1); Hayfield (1)	Forage Cover	4.59	11.34	Haying of remnant hayfield areas;
Vegetation Cover to Naturalized Grass	Upland Forest (2); Floodplain Forest (2); Forest (1); Upland Shrub (5); Floodplain Shrub (3); Hayfield (1)	Naturalized Grass	0.31	0.76	Haying and naturalization of hayfield areas; reduced forest margin areas

Vegetation Cover to Naturalized Green Space	Upland Forest (2); Floodplain Forest (2); Floodplain Shrub (3); Cottonwood Forest (2); Forest (1); Upland Shrub (1); Sedge Meadow (1)	Naturalized Green Space	0.51	1.26	Some reduction in old growth canopy;
No Cover Class to Native & Naturalized	Not Classed	Forested & Shrubland Systems	0.68	1.67	Site areas previously located within built/modified environment may lack vegetation cover classification from Delanoy's 2000 assessment.
		Naturalized Grass	0.18	0.44	

The land cover change analysis suggests that approximately 1.53 hectares (3.79) acres of land was converted from vegetative cover to built environment during the 2000 to 2018 period. This alteration occurred within upland and floodplain environments with tree dominated canopies as well as exotic grass dominated area and the northern hayfield area. Small portions of the site changed from vegetation cover to verge and river. These small shifts may be due to the implementation of drainage ditches and erosion along the riverbank. The analysis observed around 0.13 hectares (0.33 acres) of conversion from vegetation class cover to 2018 forage crop. This shift occurred predominately in the upland areas dominated by shrubs, exotic grasses, and remnant hayfield, which may suggest some alteration had occurred as a result of the 3-year period of haying. A total of approximately 0.42 hectares (1.03 acres) was naturalized from 2000 exotic grass cover to 2018 native and naturalized cover. This reflects a shift towards naturalization of native species within the remnant hayfield units and floodplain areas.

4.5 Site Management Issues

A number of site management challenges and maintenance issues were highlighted throughout the course of the baseline inventory compilation. Section 2.3.1 provides some background information on the contemporary management and maintenance of Maple Grove in the period following site purchase by Meewasin. Main disturbance factors that pose an ongoing threat to the Maple Grove site include anthropogenic threats such as illegal trespassing activities and hazardous materials and external natural threats posed by environmental disturbances. The following tables provide a summary of site management challenges broadly grouped according to driving force.

4.5.1 Anthropogenic Disturbances and Hazards

Table 17 summarizes ‘Anthropogenic Site Issues’. This category of site management challenges relates to issues with direct initiation and causal linkages to human actions and the associated enduring effects and repercussions.

Table 16. Anthropogenic Site Issues Observed at Maple Grove

Site Issue	Concern Areas	Historic Observations / Incidents	Notes
Trespass Issues & Property Damage	Entire site; high concentration of incidents at site entrance area.	Two suspected acts of arson at the Artist Studio building in 2008; multiple graffiti and property damages reported across property; evidence of all-terrain vehicle trespass in northeast and southwest hayfield areas; trespass on site from the river access areas	Safety of trailer court and house residents is of particular concern.
Dumping	Site entrance, northern riverbank area adjacent to entrance, and forested areas adjacent road.	Drainage ditch at south end of site was cleaned in summer of 1999 (Delanoy, 2000). Regular dumping occurrences in site entry area – particularly on adjacent slope towards river.	
Illegal Trapping and Hunting	Maple Grove and Yorath Island region.	Incident reported in 1999: trapped coyote on site and trapping activity on island (Delanoy, 2000).	
Trailer Court	Central site area.	Presence of trailer court area has provided ongoing interruptions to site wildlife populations and increased spread of invasive species. Contemporary issues noted in relation to the demolition and decommission of remnant trailer units.	
Historic Hazards & Contaminants	Southwest hayfield, Northeast hayfield, site roadway, central trailer court area and historic structural areas.	Decommissioned historic open water sewage pond previously located in Southwest corner of property – Environmental Assessment conducted by AMEC in 2002; Historic Artist Studio Building located in northeast hayfield decommissioned in 2008; Recreational Hall demolished in 2004; Train Shed structure and various trailer units demolished in central site area.	Unknown environmental legacies – site roadway construction; soil contamination; presence of hazardous materials.

4.5.2 Natural Disturbances and Hazards

'Environmental Site Issues' summarized below in Table 18 include hazards and site management issues that are directly linked to natural systems and environmental forces.

Table 17. Environmental Site Issues Observed at Maple Grove

Site Issue	Site Extent (Concern Area)	Historic Observations	Notes
Flooding	Property areas lying below the 1:500 flood line.	Site flooding events (2013/14) that caused property damages to white house.	
Wildfire	Remnant hayfield areas; residential structure areas.	Grassfire in 2003 in southern site area; 2 fire incidents in 2008 with damages resulting in demolition of Artist Studio building. Grass fire observed in May of 2022 around the mailbox and rivers edge adjacent to the northeastern site entrance area.	Litter buildup in remnant hayfield areas and drought conditions causing wildfire risk; electrical storm occurrences provide fire risk.
Riverbank Slumping	Across entire eastern site property boundary on the west riverbank of the South Saskatchewan River.	Slumping identified as issue in 2000 Maple Grove survey (Delanoy, 2000).	River channel dynamics causing sloughing, infilling, and gullyng of soil along bank. Reducing floodplain areas.
Invasive Species	Remnant hayfield areas; forested regions; trail systems and roadway; open floodplain slopes; disturbed areas.	Exotic vegetation cover units and invasive species observations made in 2000 Maple Grove survey (Delanoy, 2000).	Extensive invasive coverage in hayfield areas dominated by invasive grasses; portions of unmaintained trail systems are heavily colonized by invasive species; high concentrations of absinthe lining roadways; 4 patches of leafy spurge noted in south extent of site; extensive European buckthorn coverage noted across forested regions of site; patches of Canada thistle and baby's breath in hayfield areas; additional scattered observations of noxious and nuisance weed species.
Beaver Foraging	Old growth riparian forest areas.		Removal of old growth trees noted in forested areas; extensive patches adjacent to river; beaver slides contributing to bank erosion near trail system.

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Series A-I: Property Background Figures & Maps



	Government of Saskatchewan	CERTIFICATE OF TITLE
M.C.	No. 98SA03150	
Value \$ 410,000.00		
Grant No.	Ref. 96S30385	
THIS IS TO CERTIFY that MEEWASIN VALLEY AUTHORITY		
is now the owner of an estate in fee simple		
of and in		
FIRSTLY:		
All that portion of the North East Quarter of Section 12		
Township 36		
Range 6		
West of the Third Meridian, Saskatchewan		
which lies to the West of the left bank of the South Saskatchewan River		
48.40 acres Township survey dated January 10, 1902		
SECONDLY:		
The North West Quarter of Section 12		
160 acres		
EXCEPT: all that portion described as follows: Commencing at the South West corner; thence Easterly along the Southern boundary 775.5 feet; thence Northerly and parallel with the Western boundary 726 feet; thence North Easterly in a straight line to a point on the Eastern boundary Southerly 544.5 feet from the North East corner; thence Northerly along the Eastern boundary to the North East corner; thence Westerly along the Northern boundary to the North West corner; thence Southerly along the Western boundary to the point of commencement.		
MINERALS IN THE CROWN		
SUBJECT TO THE ENCUMBRANCES, LIENS AND INTERESTS NOTIFIED BY MEMORANDUM NOW OR HEREAFTER UNDERWRITTEN OR ENDORSED HEREON, OR WHICH ATTACH BY IMPLICATION UNDER THE LAND TITLES ACT. ANY REFERENCE TO AREA IS "MORE OR LESS".		
IN WITNESS WHEREOF I have hereunto subscribed my name and affixed my official seal this		
9	day of February, A.D. 19 98	
Post Office Address 402 3rd AVENUE SOUTH		
SASKATOON SK S7K 3G5		
 Registrar		
Saskatoon Land Registration District		
ej Province of Saskatchewan		
<div style="border: 1px solid black; padding: 5px; width: fit-content;">NOTICE: The Land Titles Act provides that "every owner or mortgagee shall notify the Registrar of any change in his Post Office Address."</div>		
Form 182A		

Figure A-I 1. Original Certificate of Title to Meewasin for the Maple Grove Property (Dated February 9, 1998).

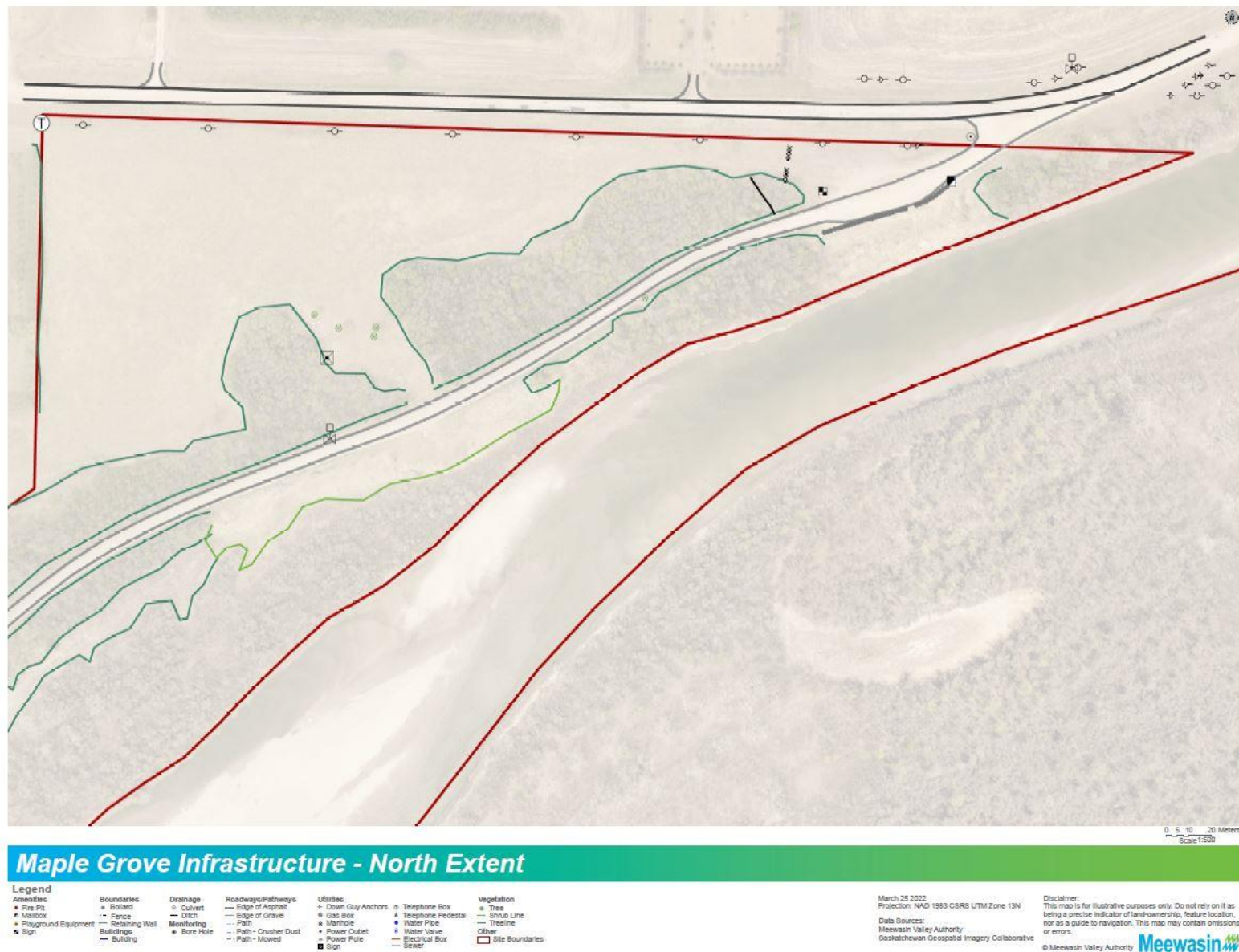


Figure A-I 2. Maple Grove Site 2021 Infrastructure Amenities Survey Map Northern Site Extent.

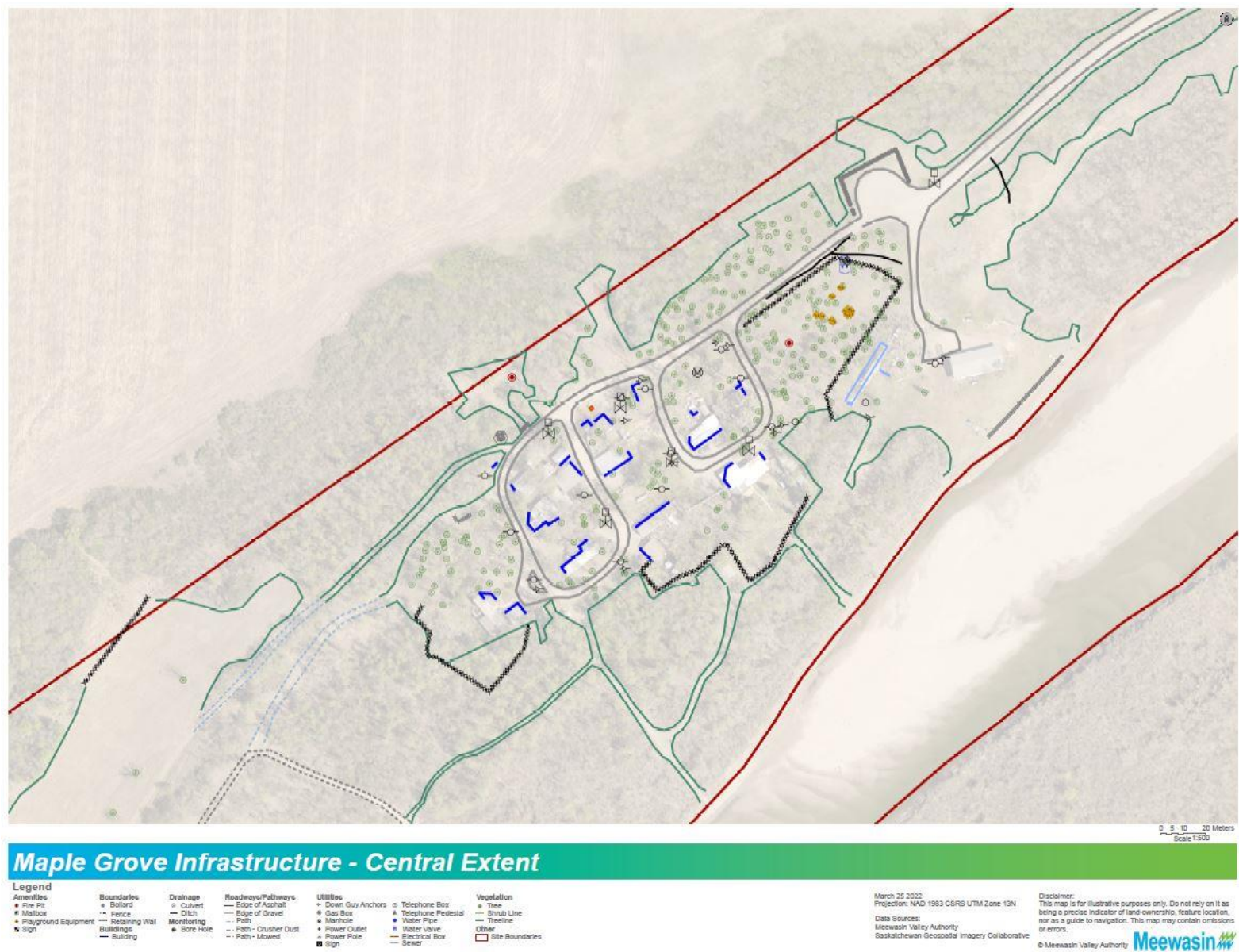


Figure A-I 3. Maple Grove Site 2021 Infrastructure Amenities Survey Map Central Site Extent.

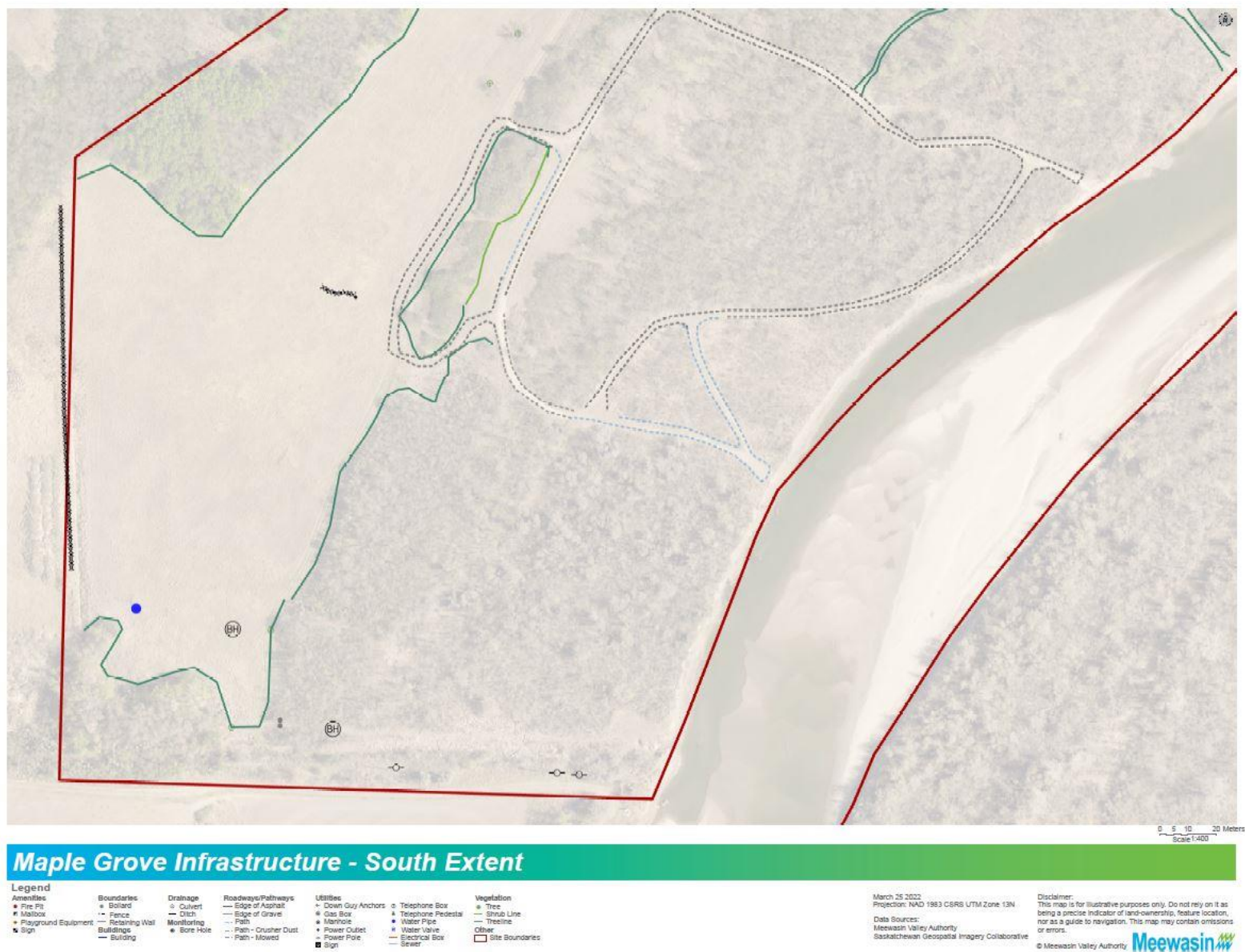


Figure A-I 4. Maple Grove Site 2021 Infrastructure Amenities Survey Map Southern Site Extent.

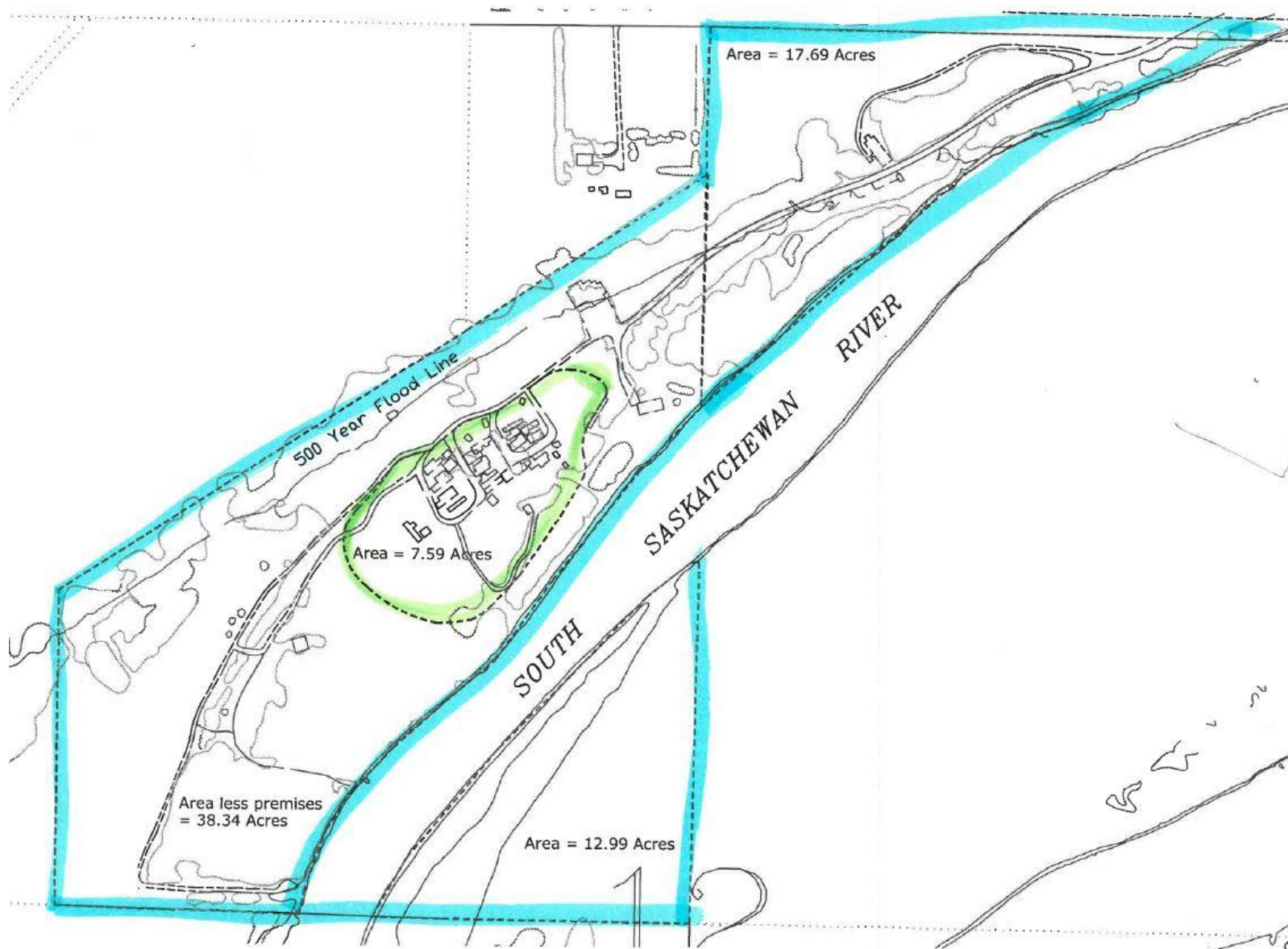


Figure A-I 5. Historic Maple Grove Site Layout (estimated date late 1990s to early 2000s).



Figure A-I 6. Location map figure taken from 2002 environmental assessment report on the Maple Grove sewage lagoon (AMEC, 2002, p.13).

SASKATOON NORTH PARTNERSHIP FOR GROWTH DISTRICT ZONING BYLAW

Map 9 of 11, Township 36, Range 6

P4G DISTRICT ZONING DESIGNATIONS

- DAG1 - Agricultural 1
- DAG2 - Agricultural 2
- DAR1 - Agricultural Residential 1
- DCR1 - Country Residential 1
- DCR2 - Country Residential 2
- DCR3 - Country Residential 3
- DC1 - Rural Convenience Commercial 1
- DC2 - Arterial Commercial 2
- DB - Business
- DM1 - Light Industrial 1
- DM2 - Heavy Industrial 2
- DCS - Community Service
- DREC - Recreational
- DCONS - Conservation
- DWM - Waste Management

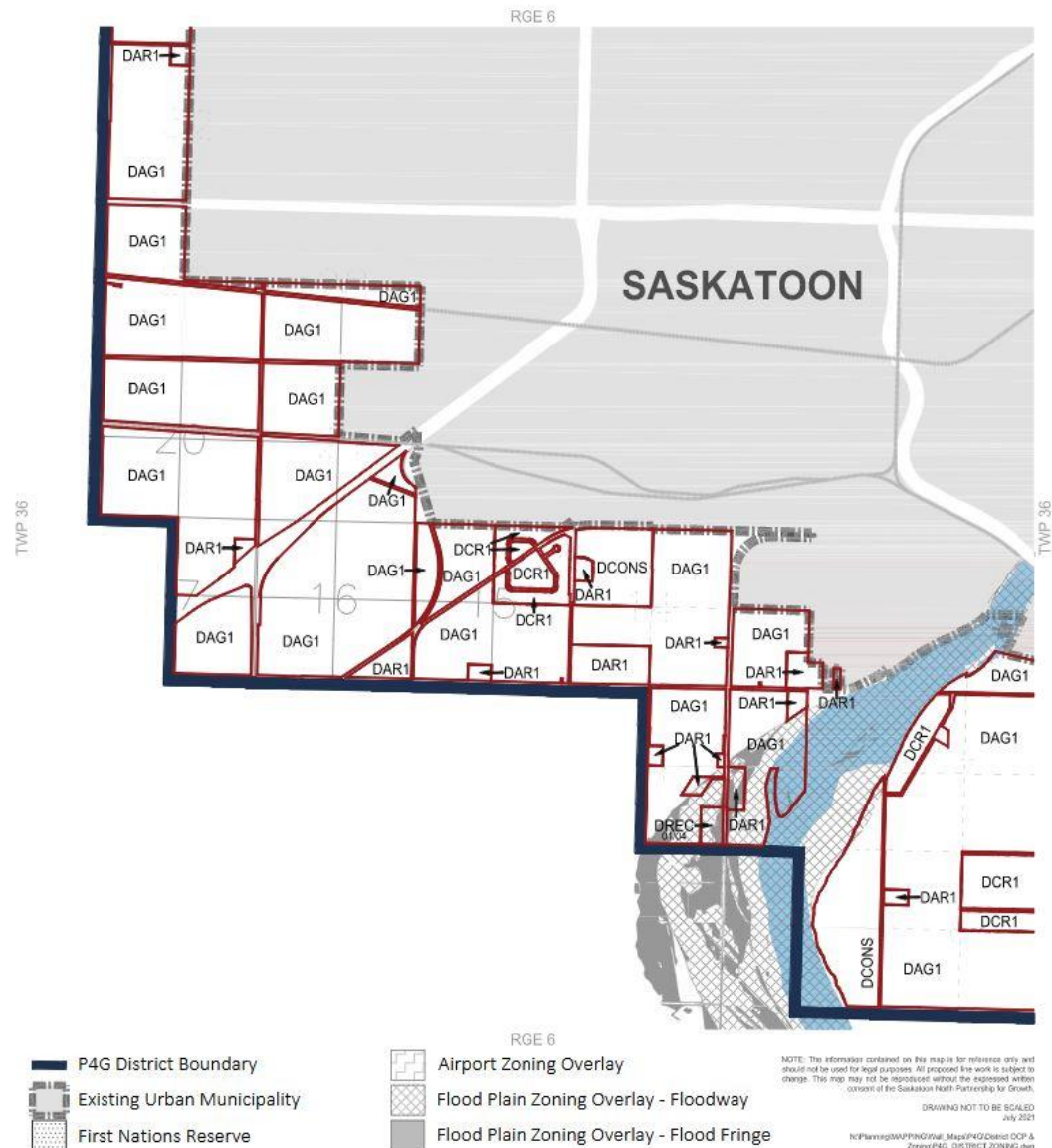


Figure A-I 7. Saskatoon North Partnership for Growth (P4G) Schedule 1 District Zoning Map. Figure retrieved from P4G, 2023b, P4G Planning District Zoning Bylaw: Schedule 1 Zoning Bylaw Map, Figure 9 of 11: p.173).

Series A-II: Maple Grove Site Infrastructure



Figure A-II 1. Aerial photograph of Maple Grove and Yorath Island (Meewasin, taken 04/11/2022).



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Figure A-II 3. Aerial photograph of the Maple Grove site (Meewasin, taken 04/11/2022).



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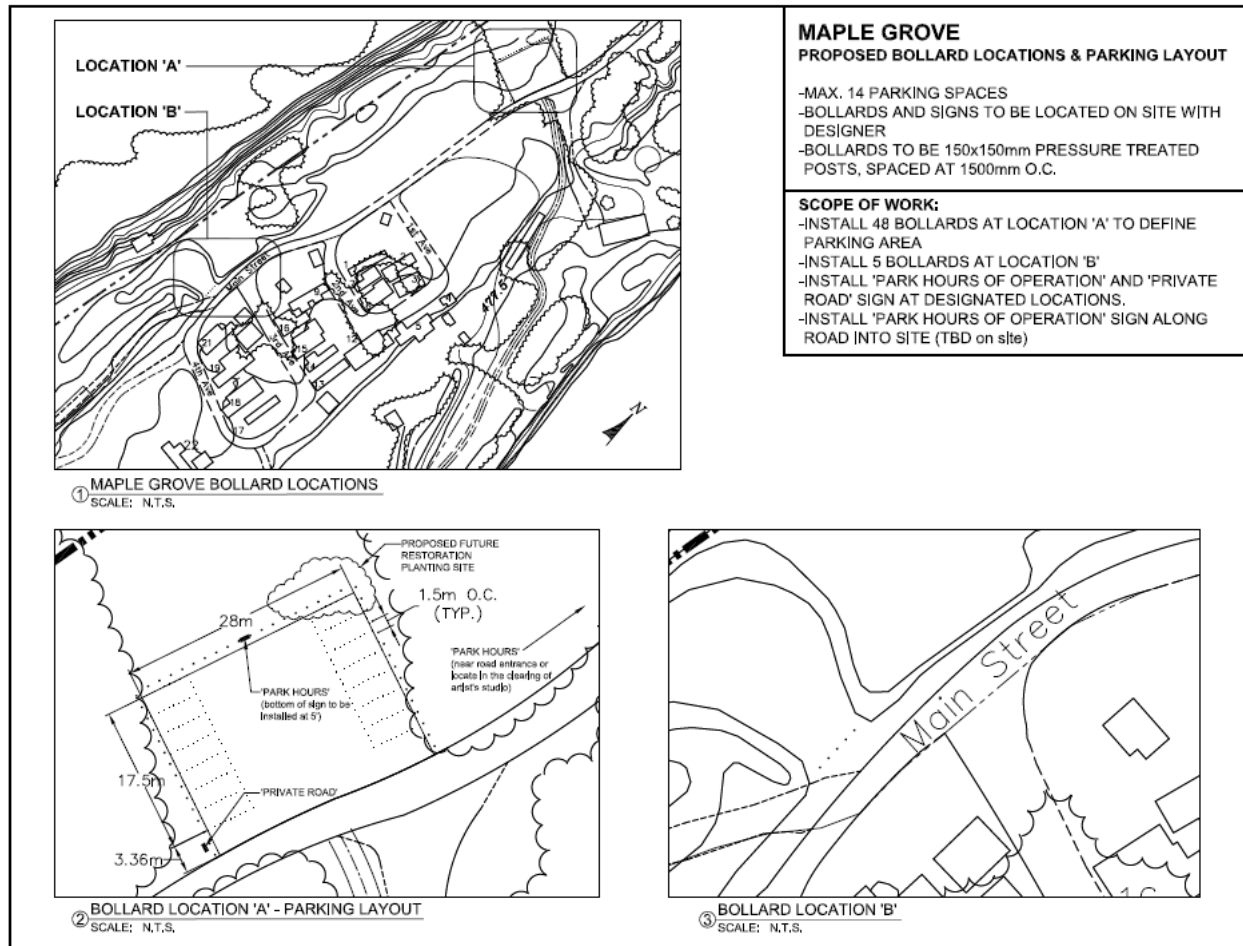
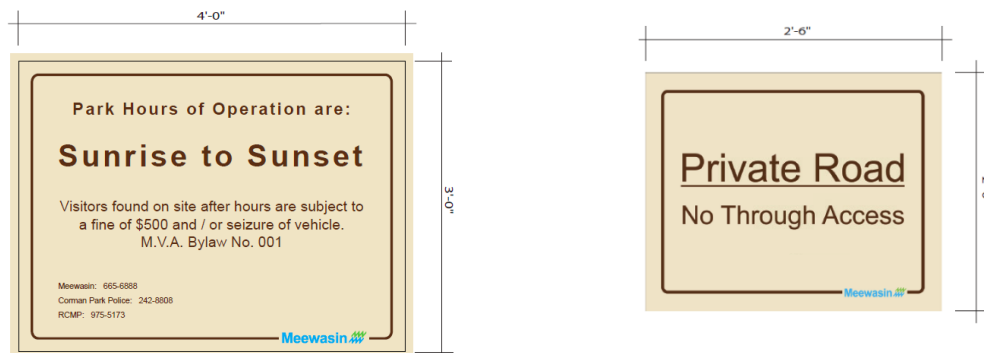


Figure A-II 7. Proposed parking lot layout and bollard locations for Maple Grove, Meewasin 2009.



Meewasin
Identification Sign

date: Nov, 2008

file: Park Hours.ai
drawn: jc

quantity:
1
scale: n.t.s.

Meewasin
Identification Sign

date: Nov, 2008

file: Private Property.ai
drawn: jc

quantity:
1
scale: n.t.s.

Figure A-II 8. Proposed Maple Grove signage design, Meewasin 2008.



Figure A-II 9. Maple Grove grid roads. Pictured left: site entrance road. Right: trailer court road (Meewasin, taken 05/06/2022).



Figure A-II 10. Grid-based recreation trails located in the southwestern floodplain area of the site (Meewasin, taken 05/06/2022).



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Figure A-II 14. Maple Grove playground structures. Left: slide. Right: swing set (Meewasin, taken 05/06/2022).



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Figure A-II 24. Artists Studio (Small Banquet Hall) Building (Meewasin, taken before structure was burnt, official date unknown).



Figure A-II 25. Damages following first fire at Maple Grove Artist Studio building in 2008. (Meewasin, dated 05/12/2008).

Series A-III: Maple Grove Site Ecology



Figure A-III 1. Floodplain shrub-dominated, hydro-riparian forest community. (Meewasin, 2022).



Figure A-III 2. Floodplain area, shrub and exotic grass dominated. (Meewasin, 2022).



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Figure A-III 9. Autonomous recording devices at Maple Grove. LEFT: wildlife camera. RIGHT: acoustic recorder. (Meewasin, 2021).



Figure A-III 10. Deer caught on wildlife camera at Maple Grove. Left: White-tailed Deer Right: Doe and fawn. (Meewasin, Date: 08/10/2020).

Series A-IV: Historic Newspaper Articles and Photographs



Figure A-IV 1. Aerial survey photograph of southwest Saskatoon and area captured in 1967. [CP-5251-A-1] Courtesy of Saskatoon Public Library.



Figure A-IV 2. People enjoying sandy beaches of Yorath Island. [PH-2020-87] courtesy of Saskatoon Public Library.



Figure A-IV 3. Photo of “Miss Pyroil”, a miniature imitation paddle-wheel steamboat built to convey passengers on South Saskatchewan River by Colin Parker (financed by father James Parker), leaving Yorath Island. [PH-2005-257] courtesy of Saskatoon Public Library.



*Figure A-IV 4. Swimming bathers in river channel between Yorath Island and Maple Grove. [A-1320].
Courtesy of Saskatoon Public Library.*

Thrills, Spills and Laughs at Yorath Island



THE Saskatoon Motorcycle Club, a lively organization, held its annual sports day at Yorath Island Sunday and a goodly number of spectators were treated to a fine display. In the above picture are seen the performers from left to right Doug Wood, Allan Geares, Art Johnson, Lawrence Nicholson, Ben Shelley, Steve Shalansky, Bernie Nicholson, Roman Pogoda, Robert Dyer, Bob Bartholomew, Gordon Lambert and Gordon Oliver. In the picture to the left Doug Wood aided by Muriel Reed goes through a bit of stunting which found the approval of the crowd.

—Star-Phoenix Photos

Listening In PROGRAMS—COMMENT

CANADIAN	
CBK—Winnipeg	540
CFAC—Calgary	860
CFQC—Saskatoon	600
CJCA—Edmonton	930
CJCN—Yukon	1450
CRN—Regina	580
CRBL—Prince Albert	1240
CKCK—Regina	620
CKX—Brandon	1150
CKY—Winnipeg	590
AMERICAN	
KFI—Los Angeles—N.B.C.—Red	640
KFTR—Bismarck—N.B.C.—Blue	550
KGHL—Billings, Red	790
KOA—Denver—N.B.C.—Blue	550
KNX—Hollywood—C.B.S.	1070
KPO—San Francisco—N.B.C.—Red	680
KSL—Salt Lake City—C.B.S.	1160
KSTP—St. Paul—N.B.C.—Red	1260
WBBM—Chicago—C.B.S.	780
WCCO—Minneapolis—C.B.S.	830
WENR—WLS—Chicago—N.B.C.	810
WGN—Chicago—M.B.S.	720
WTO—Des Moines—N.B.C.—Red	1040
WLW—Cincinnati—N.B.C.—Red	760
WMAQ—Chicago—N.B.C.—Red	670

The central character in Earle Grey's amusing play "The Clinger" in the Drama program at 10 o'clock Thursday, is an unrepentant old reprobate, by name Hegarty. Having deserted his wife and child for 20 years, he turns up at their home one day, cheerfully ready to "forgive all"—and to be comfortably supported for the rest of his days. The play tells the story of his family's efforts to get rid of him again, but its real charm lies in the character of the old man. George Secord, familiar to Western network listeners, will play the part of Hegarty.

Woodhouse and Hawkins are back at 6.30 o'clock in Fun time. Russ Gerow's orchestra, Patricia Bailey and Charlie Sullivan, soloists, are featured with the fun makers. The Music Hall follows Fun Time at 7 o'clock.

Figure A-IV 5. Saskatoon StarPhoenix. 1941. Saskatoon Motorcycle Club at Yorath Island. Credit: Terry Hoknes, 'Saskatoon History StarPhoenix Index Project': TH, 08131941.

XXX

Motorbike Boys To Race Sunday

Douglas Wood, president of the Saskatoon Motorcycle Club, announced today that his organization will hold a program of races at 1.30 o'clock Sunday afternoon at Yorath Island.

Motorcyclists and others interested are requested to convene at the Brandon Block, 212 Second Avenue, north, at 12 o'clock. Each is requested to bring his lunch and a spoon.

Included in the program are stake races, which involve driving motorcycles around stakes, jumping from a ramp, slow racing, and relay racing.

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BANQUET HALL

(Just past Queen Elizabeth Powerhouse)

Family Buffet Dinner

Sunday, 4:30 to 7:30 p.m.
ADULTS \$1.75 CHILD \$1.00

Make Reservations Now for All Occasions!

Complete Catering to

- WEDDINGS
- BANQUETS
- PICNICS
- BARBECUES
- WIENER ROASTS
- PLAYGROUNDS

For Reservation Phone 244-9338, 343-1344

Figure A-IV 6. Saskatoon StarPhoenix Newspaper Adverts. Credit: Terry Hoknes, 'Saskatoon History StarPhoenix Index Project': TH, 08071941 & 09141963.

(LEFT): Saskatoon StarPhoenix, 1941. Saskatoon Motorcycle Club Yorath Island Races. TH 08071941.

(RIGHT): Saskatoon StarPhoenix, 1963. Leisureland banquet hall events. TH 09141963.



Figure A-IV 7. Saskatoon StarPhoenix, 1946. Nutana Biology Class in Yorath Island. Terry Hoknes, 'Saskatoon History StarPhoenix Index Project': TH, 05291946.

Annual Ice Harvest



—Star-Phoenix Photo

on of Family Farm Farm Union Brief

Area; to adopt a western grain policy and make the promotion of marketing boards an integral part of federal agricultural policy.

In a brief submitted by NFU President Alfred P. Gleave and other members of the NFU board of directors to Prime Minister Diefenbaker and members of his cabinet, the NFU expressed concern about the propagation of the idea that "technolo-

gical advances' and 'efficiency' demand the removal of the majority of farm families from the land," that this change is "inevitable" and desirable and that farmers must accept it and "adjust themselves to these new economic developments."

Even farm and co-operative organizations were promoting this idea, the NFU said and quoted from a publication of the National Farm Radio Forum which said: "Farmers . . . must learn the hard way that

Annual ice harvest, which will probably bring out 7,000 to 8,000 tons of ice blocks, began recently near Yorath Island, south of the city. Some 23 men are employed throughout the six-week harvest period by Arctic Ice Co. to cut and haul the 22 by 24-inch blocks. Thickness is 18 inches and manager of the firm, William McBeath, said this is normal. Warmer weather did not affect the ice this year, he said. The ice is cut into blocks and then a float containing several blocks is sawed away, floated down a channel to the water shed and pulled onto the loading bench with hooks. From here, trucks take the loads directly to the CNR and CPR ice sheds, where they are stored for use in refrigerator cars.

Figure A-IV 8. Saskatoon StarPhoenix, 1961. Ice Harvest 7000 tons of ice blocks Yorath Island south of Saskatoon. Terry Hoknes, 'Saskatoon History StarPhoenix Index Project': TH, 02151961.

Nelson Brisseau, Fireman, Drowned Near Maple Grove

A 21-year-old Saskatoon firefighter, Nelson Brisseau, 1121 Avenue O, south, was drowned Wednesday afternoon while swimming in the South Saskatchewan River at Maple Grove about five miles south of the city.

Another Saskatoon man, David Middlebrook, 22, of 1428 Twenty-second Street, west, came close to losing his own life when he went to Mr. Brisseau's rescue. Mr. Middlebrook was assisted to safety by Chuck McCullough, well-known Saskatoon and Vancouver hockey star, who is one of the proprietors of the Maple Grove resort.

Both Middlebrook and McCullough barely man-

FIREMAN

Continued on Page 2, Column 5



NELSON BRISSEAU

Young Saskatoon fireman who was drowned Wednesday while swimming in the river south of the city.



DAVID MIDDLEBROOK

Local man who came close to losing his own life when he tried to save Mr. Brisseau from drowning.



CHUCK McCULLOUGH

Well-known hockey star, who swam to the aid of Mr. Middlebrook when the latter got into difficulty.

Figure A-IV 9. Saskatoon StarPhoenix Article, front page on July 14, 1955. Death of Nelson Brisseau, age 21 firefighter, drowning in river adjacent to Maple Grove. Terry Hoknes, 'Saskatoon History StarPhoenix Index Project'



GAY PARTY DRESSES and corages seemed strangely out of place this morning as 100 men and women left the Leisureland hall at the end of a Christmas staff party which ended much later than expected. Some of the people at the party attended by Cavalier Hotel employees and their husbands and wives are shown here smiling happily with relief as they left the hall and started for home just before noon today.

SNOWPLOW RESCUES 100 AT LEISURELAND HALL

Tow Truck Left Cars Stranded in the Snow

CITY ENGINEER CHARGES

A Saskatoon towing firm was criticized today for failing to assist many of the motorists stranded overnight in the Maple Grove vicinity just south of the city.

E. J. Cole, city engineer, said that more plans from the city were called to clear the road to the stranded motorists at the request of the RCMP. Normally engineering equipment would not leave the city unless in case of an emergency.

Mr. Cole said a tow truck followed behind the snow plow to tow the cars out once the plow reached them. The truck apparently pulled out only three or four vehicles, he said, and left the remainder stranded there for no apparent reason, and decided to come back to the city.

By morning the road was drifted in again, and equipment from the City municipality was called in to assist. Other tow trucks were dispatched to the scene, and just before noon the last stranded motorist was freed.

An RCMP official confirmed that a tow truck had been sent to the scene early in the morning with city snow plows, and had apparently turned around and returned to the city. The spokesman said that he could give no reason why the tow truck did not stay to assist, and didn't know, in fact, if it had pulled any cars out at all.

Wednesday's storm struck Saskatoon just eight years and a day after the worst December blizzard in the province's history, one which took four lives and left hundreds of travellers stranded for days.

The Dec. 15, 1955, blizzard raged for more than 24 hours, leaving an estimated 100,000 people from freezing. He was finally able to walk a mile to the nearest farmhouse.

For the remainder of the 1955-56 winter the department of highways faced an almost impossible task keeping highways clear. Brisseau at the time of the blizzard was a highway engineer.

Worst Blizzard Eight Years Ago Almost To a Day

Wednesday's storm struck Saskatoon just eight years and a day after the worst December blizzard in the province's history, one which took four lives and left hundreds of travellers stranded for days.

The Dec. 15, 1955, blizzard raged for more than 24 hours, leaving an estimated 100,000 people from freezing. He was finally able to walk a mile to the nearest farmhouse.

For the remainder of the 1955-56 winter the department of highways faced an almost impossible task keeping highways clear. Brisseau at the time of the blizzard was a highway engineer.

HOTEL SERVICE BIT SLOW

Wednesday evening's blizzard caused mild panic at the Cavalier-Cavalier Motor Hotel this morning. About 16 staff members were stranded overnight on the outskirts of the city by the unexpected storm. As a result, the usual busy downtown 1955-56 hotel found itself virtually without staff.

It was meat and coffee for guests looking for breakfast in the dining room as the two waitresses who showed up for work tried to maintain some sort of order.

Figure A-IV 10. Article Saskatoon StarPhoenix. December 12, 1963. Snowstorm stranding Leisureland Hall Christmas party guests. Terry Hoknes, 'Saskatoon History StarPhoenix Index Project'.

HOTEL SERVICE BIT SLOW

Wednesday evening's blizzard caused mild panic at the Sheraton-Cavalier Motor Hotel this morning. About 50 staff members were stranded overnight on the outskirts of the city by the unexpected storm. As a result, the usually-busy downtown 100-room hotel found itself virtually without staff.

It was toast and coffee for guests looking for breakfast in the dining room as the two waitresses who showed up for work tried to maintain some sort of order.

For the rest of the hotel's operations it was a matter of improvisation.

Without the normal complement of cooks, waitresses, desk clerks, room maids and maintenance staff, those that did report for work doubled up to serve guests.

One bellhop doubled as chef. After confusion resulted in a breakfast not being delivered to the right room, the beleaguered bellhop apologized for the mistake and said he would cook up another one.

Ron Carter, hotel manager, who arrived at work amidst confusion this morning, pitched in to help. After telling a reporter the scanty details of his troubles, and assuring him that the normal routine had been re-established shortly before noon, he cut the interview short.

"I'm on the switchboard," he said, "and the thing is lit up like a Christmas tree!"

CONTAINS THOSE ESSENTIALS WHICH

Maple Grove Picnic Still Major Event

RADISSON. — One of the longest-established annual picnics in the province was continued this year and combined with a church service on July 1, as Ruddell and Denholm residents rallied at Maple Grove, popular site of the yearly gatherings since 1905.

Maple Grove, one of the beauty spots of the district, four miles south of Ruddell and on the banks of the North Saskatchewan River consists of a tract of 20 acres of fine old maples. Oldtimers have worked for years to have a portion of this tract set aside as a community ground, and last year their ambition was realized when the provincial government set aside 10 acres for this purpose, as a living monument to the pioneers of the district.

The early days saw all manner of sports played at the grove, horse racing proving a most popular sport then with some of the finest horses in the province on display.

A. C. Whitlaw, Peter McLellan and the late John White were the three men responsible for this idea. Whitlaw came to the district in 1903 at the age of 19 and he and John White were the first two settlers to come to the district and stay. Six of the original oldtimers were present this year.

The picnic was also a farewell to the Rev. David Cline, United church minister of Ruddell, Denholm and Wavy Bank. Mr. Cline took charge of the service; after the service his three congregations presented him with a purse of money as a farewell gift. Mrs. Cline was presented with an autograph book by the young people.

Figure A-IV 11. StarPhoenix Newspaper Clippings.

(LEFT): . Saskatoon StarPhoenix. 1963. Hotel Sheraton Cavalier. Credit: Terry Hoknes, 'Saskatoon History StarPhoenix Index Project': TH, 12121963.

(RIGHT): Saskatoon StarPhoenix. July 9, 1951. Page 13. Maple Grove leisure history. Courtesy of Saskatoon Public Library.

Know Your Quakers

(HOCKEY)

Hockey fans who have watched Saskatoon Quakers' rugged Bill Heindl bounce opponents at defence may be somewhat surprised to learn that his hobby is the gentle art of needlecraft. He devotes his spare time to developing patterns and teammates say the Quaker rearguard has turned out some excellent work.

Heindl is also keenly interested in woodworking and once owned shares and worked in a hockey stick manufacturing plant. That was in Sherbrooke, Que., where Bill played three years for the Sherbrooke Saints before coming here in 1950 to join the Quakers after a stormy transfer season. A Winnipeg boy, Bill is now 29 and holds the distinction of hitting the playoffs with every hockey team with which he has played through minor ranks right to senior.



Heindl

In the early 40's, Bill played on successive Memorial Cup championship teams, helping Winnipeg Rangers to the Canadian junior title in 1941 and Portage la Prairie Terriers in 1942.

After that came a three-year stretch in the Royal Canadian Navy, following which Heindl joined the Ottawa Senators, later moving on to Sherbrooke.

The Heindls have three sons—Danny (7), Billy (5) and Barry (3)—and Bill says it won't be long until he turns them loose as a brother forward line. Danny and Billy are already playing hockey.

Besides hockey, Heindl has starred at football, baseball and softball. He was a full-back in football, outfielder in baseball and second baseman in softball. He played for Vancouver Grizzlies during their brief period in the Western Football Conference.

During the summer Heindl is a partner with a teammate in operating a nearby Saskatoon summer resort—Maple Grove. Heindl refers to Maple Grove as "The Poor Man's Waskesiu." But Heindl and McCullough have big plans for their resort and next summer hope to have a pretty inviting spot for Saskatonians—just a 15 or 20-minute drive from the city.

school's hockey teams until 1945.

From Notre Dame College, Chuck went to the New York Rovers for a season and then returned for a whirl with Regina Caps in the early days of the Western Canada Senior League. The next fall found him with Fresno Falcons of the Pacific Coast League, just before the circuit turned professional. He then came back to Regina and helped the Caps into the Allan Cup final in the spring of 1948. They were beaten by Ottawa Senators.

McCullough moved to Saskatoon in 1949, but Regina Caps kicked up such a fuss over his transfer that he almost was forced out of hockey before finally getting clearance to play with Quakers. Last year, of course, Chuck was with Quakers again and played an important role in their winning the Western League championship for the first time in the loop's history.

(HOCKEY)

Rangers Out Of Basement

NEW YORK, Nov. 29 (CP). New York Rangers burst out with their biggest scoring spree of the season last night as they defeated Chicago Black Hawks 6-3 at Madison Square Garden to move into a three-way tie for third place in the National Hockey League.

The defeat dumped the Black Hawks into last place, a single point behind the Rangers, Boston Bruins and Montreal Canadiens.

Last night's high-scoring game was watched by 8,135 fans.

Both goal tenders were brilliant, Chuck Rayner making some great saves in the New York net, and Harry Lumley performing brilliantly for Chicago.

Lumley, who was playing with an injured left knee, had 36 saves compared with 22 for Rayner.

One of the goals—New York's fifth—was scored at 18:17 of the finale while Lumley was sitting on the players' bench. He had been lifted in a vain attempt by Chicago to get the tying goal.

Red Sinclair shoved the puck into the empty net on a pass from Edgar Laprade as the Chicago strategy backfired.

Other New York snipers were

Figure A-IV 12. Saskatoon StarPhoenix. November 29, 1951. Page 21. Feature on Saskatoon Quakers Hockey Player Bill Heindl, co-owner of Maple Grove in the 1950s. Courtesy of Saskatoon Public Library.

Story and Photos
by Peter Wilson

Wealth of happy memories

He stared at the framed painting and the memories immediately came flooding back from across eight decades of Saskatchewan history. The image brought back a time when the production from a quarter-section of prairie land was all there was to keep a growing family from starvation.

And as Mike Egnatoff took in the water color, painted by his nephew and presented to him on his 90th birthday, he once again relived the scene portrayed in the painting. The time when he was that eight-year-old boy illustrated in the painting, the youngster who had tugged and tugged on the reins of the mismatched team hauling his wagon of grain, in a desperate attempt to prevent disaster.

"We were in two wagons, with my father in the leading one, when we came to a steep gully. My dad managed to get down and on up the rise," Mike explains, smiling broadly at the memory. "I had an ox and a horse pulling my wagon and one of the wheels ended up running over the ox which had fallen down during my own very rapid descent."

It was about as scary a predicament as an eight-year-old fledgling farmer might experience driving a team on his first 25-kilometre trip from the family homestead to the elevator in Perdue. Luckily, his father managed to untangle the mess and persuade the ox to get on its feet, and they managed to complete their journey without further mishap.

But it was a good lesson for the terrified youngster, one that would stay with him for the rest of his life. When the wagon went out of control, nothing the boy could do despite all his desperate attempts could prevent the collision.

"I've run my life with the idea that you work hard, try not to stand on anybody's toes and do the best you can. After that, you leave the rest to God," he says.

A devout Baptist, Egnatoff's theories that he developed over his lifetime have helped guide him through careers as a teacher, businessman and landlord. At 90, he can look back with a happy nostalgia to when he was a youngster living in a sod-house and "milking seven cows in the morning before school, and milking them again when I got home."

Even when his family moved to the city, after giving up the family farm to settle their outstanding debts, there was no end to work. As a 16-year-old living in Saskatoon, he sold early morning newspapers before starting out on his school day.

"We'd buy them and pay three cents each at the office and sell them for five cents to the customers. It was a good mark-up, but you had to sell a lot of papers to make any money," he recalls.

All the money that any member of the family made had to go into the joint family coffers to help defray household expenses. While the young boy's personal profits from the newspapers sales were nil, he learned some other valuable lessons that would stay with him.

"As a family we worked together. I think at an early age I learned that we not only had to work hard, we had to pull together if we were to survive and succeed."

As the large family grew, a new enterprise began, one that would plant the roots for Mike's future successful business endeavors. The Egnatoffs opened a small confectionery store on Third Avenue in Saskatoon.

While his father worked as a French polisher, the trade he had bought with him from his native St. Petersburg, Mike's mother operated the store with the help of the rest of the family.

In 1932, Mike, who had just finished his first year at the University of Saskatchewan, switched to Normal School and focused his career goals on becoming a teacher.

"My parents believed strongly in the importance of education and encouraged us in that direction."

But this was the Dirty 30s, and teaching jobs, paid ones at least, were tough to find. After graduating, Mike began working in the Hudson Bay store in Saskatoon. It wasn't until 1943 that he started teaching at the School for the Deaf.

In 1946, he married a teacher, Lillian, a woman who was to be his wife and best friend for 54 years until her death. It was also in the mid-40s that Mike and Lillian established a retail operation in town, Handicraft Supplies, a company they would own until they finally sold it in 1979.

But even in the beginning, the store started to flourish, and with it the demand on Mike's time.

"It was around 1954, and I was working at City Park Collegiate, when I finally quit my teaching job, something I was very reluctant to do because I loved teaching. But poor Lillian was run off her feet in the store and she needed help."

While the couple were busy it did not stop them from looking around for new business opportunities. One such opportunity came about in 1960, when the Egnatoffs decided to buy 85.4 acres of riverbank land just outside the southern edge of Saskatoon.

Mike realized that as the city grew, there would be more and more demand by Saskatoon residents for recreational space to enjoy their leisure time. Accompanied by a couple of hired men and armed with a chain saw, Mike descended on the thickly-treed property and set to work trimming and cutting branches on the stands of maples and elms.

"We also seeded three different types of grass under the trees and set up barbecue areas for visitors. I also started work on a new banquet hall to accommodate the groups who wanted to celebrate parties and social events indoors," Mike says.

Calling their new purchase Leisureland, the recreational site became a popular spot with visitors and a newly established camping area was soon beginning to attract trailers. It wasn't long before the trailer site became a permanent home for some tenants, who began to construct additions to their mobile homes and build garages.

For the next 40 years or so, Mike enjoyed the busy days running Leisureland, whether it meant lending a hand in the kitchen, cutting the extensive lawns or decorating the hall for countless weddings, Christmas parties and other festivities that were held out there. Even though he has now sold the property, his connection with the complex was to have a happy ending.

The fact that it was the Meewasin Valley Authority (MVA) and a Leisureland residents co-operative which purchased the property from him was the icing on the cake for the long-time owner.

"Leisureland is in good hands. The 17 families who live here can stay and the future of this beautiful spot will be preserved by the MVA. That's the best 90th birthday gift I could have asked for," he says.



Photos clockwise from top: Mike shows off the painting to his sister Ann.

Mike looks over Leisureland Trailer Park.

Family picture outside their Third Avenue store in 1931. Left to right: brothers, John and Peter, Mike and mother, Katherine.



Figure A-IV 13. Saskatoon Sun Newspaper. February 15, 1998. Tribute to Mike Egnatoff in celebration of his 90th birthday. Courtesy of Saskatoon Public Library.



Figure A-IV 14. Maple Grove Newspaper Advertisements.

(LEFT): StarPhoenix Saskatoon. June 6, 1953, page 5. Advertisement for Maple Grove public site opening in the 1950s under co-owners Bill Heindl and Chuck McCullough. Courtesy of Saskatoon Public Library.

(RIGHT): Saskatoon StarPhoenix. September 19, 1956. Page 4. Advertisement for music and dancing event at the Maple Grove Dance Hall featuring Rhythm Rocks music group. Credit: Terry Hoknes, 'Saskatoon History StarPhoenix Index Project'.



Figure A-IV 15. Maple Grove Newspaper Advertisements.

(LEFT): Saskatoon StarPhoenix. Printed May 22, 1948, p.4. Newspaper Advertisement for event at Maple Grove. Courtesy of Saskatoon Public Library.

(RIGHT): Saskatoon StarPhoenix. Printed May 15, 1953, p.4. Newspaper Advertisement for event at Maple Grove. Courtesy of Saskatoon Public Library.



Figure A-IV 16. Saskatoon StarPhoenix. Advertisement for trailer space bookings at Leisureland. Printed on October 29, 1960. Credit: Terry Hoknes, 'Saskatoon History StarPhoenix Index Project'.

NOW OPEN FUNTIME AMUSEMENT PARK

LOCATED AT LEISURELAND — 244-0807
RIVERSIDE DRIVE — WEST OF QUEEN ELIZABETH POWER STATION

OPEN DAILY

MINIATURE GOLF — 18 HOLE
TRAMPOLINES
PLAYGROUNDS — SWINGS
SLIDES - CLIMBERS
SCHOOL PICNICS

PICNIC AREA
ADULT AND KIDDIE RIDES
HORSESHOE PITCHES
ORGANIZATION AND GROUP PICNICS

RIDES OPEN 1 P.M. - 9 P.M.

CLIP AND USE THESE TICKETS ON SUNDAY, JUNE 4 FOR

ONE FREE
COTTON CANDY
JUNE 4, 1972

ONE FREE
MERRY GO ROUND
JUNE 4, 1972

ONE FREE
TRAIN RIDE
JUNE 4, 1972

Catering to Banquets — Wedding Receptions

By Reservation 244-5435

Figure A-IV 17. Saskatoon StarPhoenix, 1972. Advertisement Leisureland Funtime Amusement Park. Credit: Terry Hoknes, 'Saskatoon History StarPhoenix Index Project': TH, 06031972.

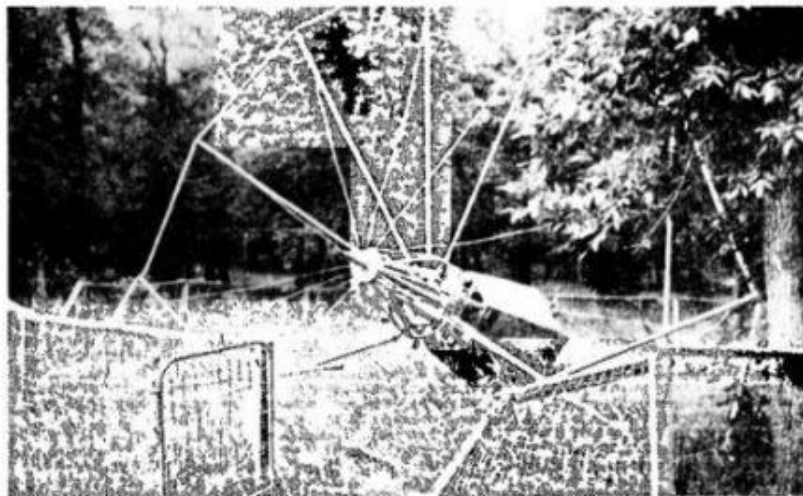
DATELINE Nov. 12-19
by F. W. Musselwhite

The Art Department is introducing a new program which will bring to the campus sculpture to be viewed outside. At present, the Department is pleased to present a work by Katie Ohe, a Calgary sculptress. This work will be displayed on the terrace outside Marquis Hall until November 20th.

Saturday, November 13th
1:30 p.m. The Saskatoon Cricket Association will hold their annual general meeting in Emmanuel College. If interested, phone Victor Allman at 244-7149.
9:00 p.m. Education's "PARISIAN HOLIDAY". Semi-formal held at Leisureland with music by the Shadows. Cost is \$3.00 per couple for members and \$3.50 for non-members.

Sunday, November 14th
7:00 p.m. ISC "International Chit-Chat," a friendly evening featuring a slide show by Milton Orris.

Figure A-IV 18. The Sheaf, 1965. University of Saskatchewan Newspaper. Leisureland Parisian Holiday. Credit: Terry Hoknes, 'Saskatoon History StarPhoenix Index Project': TH, 11131965.



Above: A massive abandoned symbol of former amusement park's glory is the deserted ferris wheel, silhouetted against a cloudy sky. Left: Leisureland rides have been deliberately pushed over by the owner to make them less tempting to visitors and children.

Story by
Eric O. Burt
Photos by
Tammy Tompalaki



Amusement park concept goes to seed

Leisureland is having a "leisure" all its own these days. Service clubs, commercial firms and other groups still have dinners in the banquet hall or barbecues in the premises out-of-doors, but the days of the Sunday picnic when you gave the kids a dame apiece to ride the merry-go-round or the miniature train are no more.

Mike Egnatoff, owner of the 85-acre site just outside the southwest Saskatoon limits, wishes the city or some organization would assume responsibility for redevelopment of the place.

"It's unique," he says as he talks of the plans he once had for the place.

The 85 acres include 12 acres on an island in the South Saskatchewan River, the main stream of which actually runs down the opposite side of the island from the Leisureland property. Between the island and what used to be a popular amusement park is a broad channel that is more or less a backwater.

Egnatoff once had plans for damming both ends of the strip, putting in sluices which would make it possible to control the flow and the depth of the water.

"It would be fine for canoeing or for those little pedal boats you see at summer resorts and amusement parks," he says.

He concedes the season is short but he had an idea for overcoming that, too. The Queen Elizabeth power station is close at hand and is continually discharging hot water into the river. A little piping could channel some of this into the lagoon so it could be used spring, summer and fall.

The idea never got past the thinking stage, but Egnatoff still thinks it's a possibility for the city or some other developer to carry out.

What did develop during the 17 years since Egnatoff bought the property was a ferris wheel and a number of other thrill rides for the small fry who joined their parents and others for a picnic in the park.

But Egnatoff's Handicraft Supplies Ltd. in downtown Saskatoon occupies most of his time and attention. He hasn't really got the time to run an amusement park.

He thought he had a solution when he made a deal with a midway operator who catered to small fairs and carnivals to add some of his rides to those already in the park and to operate the whole place. It worked for a while "but then he went away and didn't come back."

Egnatoff says he could pay a man \$35 a day to run the place but is afraid he'd only stay a day or two.

"If he's worked somewhere for eight weeks he can collect pretty near that much in unemployment insurance, so why should he work?"

So the ferris wheel and all the other rides that used to rock and whiz and whirl their young patrons through space have been pushed over, partly dismantled or otherwise made less tempting to the small fry who visit the place.

The miniature train which once carried visitors along a half

mile scenic route through the trees to the picnic site is locked away in a "roundhouse" that is more straight than round, the station house is rotting away and grass is growing up between the rails in much the same way it is doing on all those other abandoned rail lines across the Prairies.

Swings, a roundabout, a monkey puzzle and a couple of slides are there for the benefit of the youngsters of families living in the adjacent trailer park (also owned by Egnatoff) or for those who may still picnic in the park.

The site is just off the west end of the Spadina Crescent cycle route and young cyclists also have a brief swing, a slide and a turn or two of the roundabout before heading back to town.

Egnatoff will still see that your banquet or reception is catered for. You can use the picnic facilities, at a price, and know Egnatoff will see the place is cleaned up afterward.

But Leisureland isn't going to become the "Disneyland of Saskatoon" until the city or some other developer takes over.

Figure A-IV 19. Saskatoon StarPhoenix. Demise of Leisureland amusement park. Printed on August 9, 1977.



Figure A-IV 20. Photo of original 'Playland Express' miniature train ride (later brought to Leisureland). Train photographed while in the possession of original owner, operator, and designer Bob Svbot. Photo courtesy of Loa and Dave Titman.



Figure A-IV 21. Oblique aerial view south along the South Saskatchewan River captured in 1972. The Grand Trunk railway bridge is in the foreground and Yorath Island is in the centre of the photo. [PH-2009-118] courtesy of Saskatoon Public Library.

LEISURELAND STUDIOS INVITE
YOU TO AN OPEN HOUSE
SAT. & SUN. NOV. 21-22
12:00 - 8:00 P.M

PAINTERS & SCULPTORS



BRYAN LANE

DOUG HUNTER

ED GIBNEY

DARLENE HAY

LOUISE COOK

MISSING FROM PHOTO

LORENZO DUPUIS

MARGARETE SIMPSON

We cordially invite you to our studio to view recent works by four painters (three landscape & one figurative) and three sculptors (multi medium). Completed works and those in progress will be on display. Our location is in a building that overlooks the river at Leisureland, a short distance southwest of the Queen Elizabeth II Power Station. Tea and coffee will be served. Everyone welcome. Bring your friends!



LEISURELAND STUDIO

LEISURELAND, RR 3, BOX 105, SASKATOON, SASK. S7K 3J6
PHONE: 382-4411

Figure A-IV 22. Leisureland Artist Studio Invite. Date unknown. Courtesy of Louise Cook (Provided August 2023).



Acreage 36" x 48" oil/canvas

OUTSKIRTS AND

ACREAGES

*"Please join me for the opening of my exhibition, **Outskirts and Acreages**. The paintings I have chosen for this show explore the notion of the urban/rural boundary, whether it be natural, man-made, physical or figurative. It is a concept that even presents itself at my riverbank studio just past the Queen Elizabeth Power Station. These areas are in the twilight, neither city nor country, but balancing precariously between both."*

Louise Cook

Opening: Thursday, December 4 , 7:00 - 9:00 pm
 Frances Morrison Library Gallery, Dec. 2, '97 to Jan. 3, '98

Figure A-IV 23. Art Exhibition Promotion, Louise Cook. Dated December 1997 – January 1998. Painting Illustrates acreage adjacent to Maple Grove site. Courtesy of Louise Cook (Provided August 2023).

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Series B-I: Species Inventory Tables

This section contains comprehensive inventories of species observed and reported at the Maple Grove site and within the broader Maple Grove Yorath Island study region. Data sets contain species observations from a range of databases and report sources with observations temporally scattered (sources detailed in section 5). Species inventory data sets were updated in June of 2022.

Table B-I 1. Wildlife Species Observation Inventory for Maple Grove and Yorath Island region (updated June 2022).

SCIENTIFIC NAME	COMMON NAME	Global Rank	Subnational Rank	COSEWIC	SARA Schedule
Bird Species					
<i>Acanthis flammea</i>	Common Redpoll	G5	S4B,S4N		
<i>Actitis macularius</i>	Spotted Sandpiper	G5	S5B		
<i>Aechmophorus occidentalis</i>	Western Grebe	G5	S3B	Special Concern	Special Concern
<i>Aegolius acadicus</i>	Northern Saw-whet Owl	G5	S5B,S4N		
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	G5	S5B,SUN		
<i>Anas acuta</i>	Northern Pintail	G5	S5B		
<i>Anas platyrhynchos</i>	Mallard	G5	S5B		
<i>Anser albifrons</i>	Greater White-fronted Goose	G5	S5M		
<i>Antigone canadensis</i>	Sandhill Crane	G5	S5B		
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	G5	S5B,S4M		
<i>Ardea herodias</i>	Great Blue Heron	G5	S5B		
<i>Bombycilla cedrorum</i>	Cedar Waxwing	G5	S5B		
<i>Branta canadensis</i>	Canada Goose	G5	S5B		
<i>Bonasa umbellus</i>	Ruffed Grouse	G5	S5		
<i>Bubo virginianus</i>	Great Horned Owl	G5	S4		
<i>Bucephala albeola</i>	Bufflehead	G5	S5B		
<i>Bucephala clangula</i>	Common Goldeneye	G5	S5B		
<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B	Special Concern	Threatened
<i>Buteo swainsoni</i>	Swainson's Hawk	G5	S4B		
<i>Catharus fuscescens</i>	Veery	G5	S4B		
<i>Catharus ustulatus</i>	Swainson's Thrush	G5	S5B		
<i>Charadrius vociferus</i>	Killdeer	G5	S5B		
<i>Chordeiles minor</i>	Common Nighthawk	G5	S4B	Special Concern	Threatened
<i>Circus hudsonius</i>	Northern Harrier	G5	S4B	Not at Risk	
<i>Colaptes auratus</i>	Northern Flicker	G5	S5B,SUN		
<i>Corvus brachyrhynchos</i>	American Crow	G5	S5B,S4N		
<i>Corvus corax</i>	Common Raven	G5	S5		
<i>Cyanocitta cristata</i>	Blue Jay	G5	S5		
<i>Dryobates pubescens</i>	Downy Woodpecker	G5	S5		
<i>Dryobates villosus</i>	Hairy Woodpecker	G5	S5		

<i>Dumetella carolinensis</i>	Gray Catbird	G5	S5B		
<i>Empidonax alnorum</i>	Alder Flycatcher	G5	S5B		
<i>Empidonax minimus</i>	Least Flycatcher	G5	S5B		
<i>Eremophila alpestris</i>	Horned Lark	G5	S4B,S3N,SUM		
<i>Falco columbarius</i>	Merlin	G5	S5B,S5N	Not at Risk	
<i>Falco sparverius</i>	American Kestrel	G5	S5B,S1N		
<i>Geothlypis trichas</i>	Common Yellowthroat	G5	S5B		
<i>Haemorhous mexicanus</i>	House Finch	G5	S4B		
<i>Haemorhous purpureus</i>	Purple Finch	G5	S5B,S4N		
<i>Hirundo rustica</i>	Barn Swallow	G5	S4B	Special Concern	Threatened
<i>Icterus galbula</i>	Baltimore Oriole	G5	S5B		
<i>Junco hyemalis</i>	Dark-eyed Junco	G5	S5B,S4N		
<i>Larus argentatus</i>	Herring Gull	G5	S5B		
<i>Larus californicus</i>	California Gull	G5	S4B		
<i>Larus delawarensis</i>	Ring-billed Gull	G5	S5B		
<i>Mareca americana</i>	American Wigeon	G5	S5B		
<i>Megaceryle alcyon</i>	Belted Kingfisher	G5	S4B		
<i>Melospiza melodia</i>	Song Sparrow	G5	S5B		
<i>Mergus merganser</i>	Common Merganser	G5	S5B		
<i>Mniotilta varia</i>	Black-and-white Warbler	G5	S5B		
<i>Molothrus ater</i>	Brown-headed Cowbird	G5	S5B,SUN		
<i>Pandion haliaetus</i>	Osprey	G5	S3B		
<i>Passer domesticus</i>	House Sparrow	G5	SNA		
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	G5	S5B		
<i>Pica hudsonia</i>	Black-billed Magpie	G5	S5		
<i>Pinicola enucleator</i>	Pine Grosbeak	G5	S2B,S4N		
<i>Pipilo maculatus</i>	Spotted Towhee	G5	S5B		
<i>Poecile atricapillus</i>	Black-capped Chickadee	G5	S5		
<i>Poocetes gramineus</i>	Vesper Sparrow	G5	S5B		
<i>Progne subis</i>	Purple Martin	G5	S5B		
<i>Seiurus aurocapilla</i>	Ovenbird	G5	S5B		
<i>Setophaga coronata</i>	Yellow-rumped Warbler	G5	S5B		
<i>Setophaga magnolia</i>	Magnolia Warbler	G5	S5B		
<i>Setophaga palmarum</i>	Palm Warbler	G5	S5B		
<i>Setophaga petechia</i>	Yellow Warbler	G5	S5B		
<i>Sitta canadensis</i>	Red-breasted Nuthatch	G5	S5B,S5N,S5M		
<i>Sitta carolinensis</i>	White-breasted Nuthatch	G5	S5		
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	G5	S5B		
<i>Spinus tristis</i>	American Goldfinch	G5	S5B		
<i>Spizella pallida</i>	Clay-colored Sparrow	G5	S5B		
<i>Spizella passerina</i>	Chipping Sparrow	G5	S5B		

<i>Spizelloides arborea</i>	American Tree Sparrow	G5	S1B,S5M		
<i>Sterna hirundo</i>	Common Tern	G5	S5B	Not at Risk	
<i>Sturnella neglecta</i>	Western Meadowlark	G5	S5B		
<i>Tachycineta bicolor</i>	Tree Swallow	G5	S5B		
<i>Tringa melanoleuca</i>	Greater Yellowlegs	G5	S5B		
<i>Toxostoma rufum</i>	Brown Thrasher	G5	S5B		
<i>Troglodytes aedon</i>	House Wren	G5	S5B		
<i>Turdus migratorius</i>	American Robin	G5	S5B,SUN		
<i>Tyrannus tyrannus</i>	Eastern Kingbird	G5	S5B		
<i>Vireo gilvus</i>	Warbling Vireo	G5	S5B		
<i>Vireo olivaceus</i>	Red-eyed Vireo	G5	S5B		
<i>Zenaida macroura</i>	Mourning Dove	G5	S5B		
<i>Zonotrichia albicollis</i>	White-throated Sparrow	G5	S5B		
Mammal Species					
<i>Alces alces</i>	Moose	G5	S5		
<i>Canis latrans</i>	Coyote	G5	S5		
<i>Castor canadensis</i>	North American Beaver	G5	S5		
<i>Eptesicus fuscus</i>	Big Brown Bat	G5	S5		
<i>Erethizon dorsatum</i>	North American Porcupine	G5	S4		
<i>Lasionycteris noctivagans</i>	Silver-haired Bat	G3G4	S5B		
<i>Lasiurus cinereus</i>	Hoary Bat	G3G4	S5B		
<i>Lepus americanus</i>	Snowshoe Hare	G5	S5		
<i>Mephitis mephitis</i>	Striped Skunk	G5	S5		
<i>Myotis lucifugus</i>	Little Brown Myotis	G3	S4B,S4N	Endangered	Endangered
<i>Neovison vison</i>	American Mink	G3	S5		
<i>Odocoileus hemionus</i>	Mule Deer	G5	S4		
<i>Odocoileus virginianus</i>	White-tailed Deer	G5	S4		
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	G5	S5		
<i>Thomomys talpoides</i>	Northern Pocket Gopher	G5	S5		
<i>Vulpes vulpes</i>	Red Fox	G5	S5		
Amphibian Species					
<i>Pseudacris maculata</i>	Boreal Chorus Frog	G5	S5	Not at Risk	
<i>Lithobates pipiens</i>	Northern Leopard Frog	G5	S3	Special Concern	Special Concern
Reptile Species					
<i>Thamnophis radix haydenii</i>	Western Plains Gartersnake	G5T5	S5		

Table B-I 2. Plant Species Observation Inventory for Maple Grove and Yorath Island region (updated June 2022).

Scientific Name	Common Name	Global Rank	National Rank	Subnational Rank	Invasive
<i>Achillea millefolium</i>	Common Yarrow	G5	NNR	S5	
<i>Actaea rubra</i>	Red Baneberry	G5	N5	S5	
<i>Agrimonia striata</i>	Agrimony	G5	N5	S4	
<i>Agropyron cristatum ssp. pectinatum</i>	Crested Wheatgrass	G5TNR	NNA	SNA	X
<i>Agropyron repens</i>	Creeping Wild Rye	GNR	NNA	SNA	X
<i>Agrostis stolonifera</i>	Creeping Bentgrass				X
<i>Amelanchier alnifolia var. alnifolia</i>	Saskatoon	G5T5	N5	S5	
<i>Anemonastrum canadense</i>	Canada Anemone	G5	N5	S5	
<i>Anemone canadensis</i>	Canada Anemone	G5	N5	S5	
<i>Anemone cylindrica</i>	Long-fruited Anemone	G5	N5	S4	
<i>Anemone multifida var. multifida</i>	Cut-leaved Anemone	G5T5	N5	S4	
<i>Apocynum androsaemifolium</i>	Spreading Dogbane	G5	N5	S4	
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	G5	N5	S5	
<i>Artemisia absinthium</i>	Absinthe	GNR	NNA	SNA	X
<i>Artemisia frigida</i>	Pasture Sage	G5	N5	S5	
<i>Asparagus officinalis</i>	Asparagus	G5?	NNA	SNA	X
<i>Astragalus cicer</i>	Cicer Milk-vetch	G5	NNA	SNA	X
<i>Atriplex patula</i>	Orache	G5	NNA	SNA	
<i>Betula occidentalis</i>	River Birch	G5	N5	S4	
<i>Betula papyrifera</i>	Paper Birch	G5	N5	S5	
<i>Bidens cernua</i>	Nodding Beggar-ticks	G5	N5	S4	
<i>Boechera grahamii</i>	Rockcress	G5	N5	S4	
<i>Brassica rapa</i>	Wild Mustard	GNR	NNA	SNA	
<i>Bromus ciliatus</i>	Fringed Brome	G5	N5	S4	
<i>Bromus inermis</i>	Smooth Brome	G5	NNA	SNA	X
<i>Campanula rapunculoides</i>	Creeping Bellflower	GNR	NNA	SNA	X
<i>Campanula rotundifolia</i>	Harebell	G5	N5	S5	
<i>Caragana arborescens</i>	Common Caragana	GNR	NNA	SNA	X
<i>Carduus nutans</i>	Nodding Thistle	GNRTNR	NNA	SNA	X
<i>Carex atherodes</i>	Awned Sedge	G5	N5	S4	
<i>Carex aurea</i>	Golden Sedge	G5	N5	S4	
<i>Carex bebbii</i>	Bebb's Sedge	G5	N5	S4	
<i>Carex deweyana var. deweyana</i>	Dewey's Sedge	G5T5	N5	S5	
<i>Carex eburnea</i>	Bristle-leaved Sedge	G5	N5	S3	
<i>Carex lanuginosa</i>	Woolly Sedge	G5	N5	S4	
<i>Carex obtusata</i>	Blunt Sedge	G5	N5	S5	
<i>Carex peckii</i>	White-tinged Sedge	G5	N5	S4	
<i>Carex retrorsa</i>	Turned Sedge	G5	N5	S4	

<i>Carex rostrata</i>	Northwest Territory Sedge	G5	N5	S4	
<i>Carex sartwellii</i> var. <i>sartwellii</i>	Sartwell's Sedge	G5T4T5	NNR	S4	
<i>Carex siccata</i>	Dry-spike Sedge	G5	N5	S4	
<i>Carex sprengelii</i>	Sprengel's Sedge	G5	N5	S4	
<i>Carex vaginata</i>	Sheathed Sedge	G5	N5	S4	
<i>Cirsium arvense</i>	Canada Thistle	G5	NNA	SNA	X
<i>Conyza canadensis</i>	Horseweed	G5	N5	S4	
<i>Cornus sericea</i> ssp. <i>sericea</i>	Red-osier Dogwood	G5T5	N5	S5	
<i>Crataegus chrysocarpa</i>	Northern Hawthorn	G5	N5	S4	
<i>Crepis tectorum</i>	Annual Hawksbeard	GNR	NNA	SNA	X
<i>Elaeagnus commutate</i>	Wolf Willow	G5	N5	S4	
<i>Eleocharis palustris</i>	Creeping Spike-rush	G5	N5	S5	
<i>Equisetum arvense</i>	Common Horsetail	G5	N5	S5	
<i>Erigeron asper</i>	Streamside Fleabane	G5T5	N5	S5	
<i>Erigeron canadensis</i>	Horseweed	G5	N5	S4	
<i>Euphorbia esula</i>	Narrow Leafy Spurge	GNRTNR	NNA	SNA	X
<i>Euphorbia helioscopia</i>	Sun Spurge	G5	NNA	SNA	
<i>Fragaria virginiana</i> ssp. <i>glauca</i>	Smooth Wild Strawberry	G5T5	N5	S5	
<i>Fraxinus pennsylvanica</i>	Green Ash	G5	N5	S4	
<i>Galium boreale</i>	Northern Bedstraw	G5	N5	S5	
<i>Galium triflorum</i>	Sweet-scented Bedstraw	G5	N5	S4	
<i>Geum aleppicum</i>	Yellow Avens	G5	N5	S4	
<i>Glechoma hederacea</i>	Ground-ivy	GNR	NNA	SNA	
<i>Glycyrrhiza lepidota</i>	Wild Licorice	G5	N5	S4	
<i>Gypsophila paniculata</i>	Tall Baby's Breath	GNR	NNA	SNA	X
<i>Hackelia floribunda</i>	Large-flowered Stickseed	G5	N5	S5	
<i>Helenium autumnale</i>	Common Sneezeweed	G5	N5	S4	
<i>Heracleum maximum</i>	Cow Parsnip	G5	N5	S4	
<i>Heuchera richardsonii</i>	Alumroot	G5	N5	S4	
<i>Houstonia longifolia</i>	Long-leaved Bluets	G5	N5	S4	
<i>Juncus balticus</i>	Baltic Rush	G5	N5	S4	
<i>Juncus nodosus</i>	Knotted Rush	G5T5	N5	S4	
<i>Juniperus horizontalis</i>	Creeping Juniper	G5	N5	S5	
<i>Kochia scoparia</i>	Kochia	GNR	NNA	SNA	X
<i>Lactuca serriola</i>	Prickly Lettuce	GNR	NNA	SNA	X
<i>Lappula echinata</i>	Blue-bur	GNR	NNA	SNA	X
<i>Lathyrus ochroleucus</i>	Cream-coloured Vetchling	G5	N5	S5	
<i>Lathyrus venosus</i>	Wild Peavine	G5	N5	S4	
<i>Linaria vulgaris</i>	Yellow Toad-flax	GNR	NNA	SNA	X
<i>Lonicera dioica</i>	Wild Honeysuckle	G5	N5	S5	
<i>Lonicera tatarica</i>	Tartarian Honeysuckle	GNR	NNA	SNA	X

<i>Lycopus americanus</i>	Water-horehound	G5	N5	S4	
<i>Lycopus asper</i>	Western Water-horehound	G5	N4N5	S4	
<i>Lysimachia ciliata</i>	Fringed Loosestrife	G5	N5	S4	
<i>Lysimachia hybrida</i>	Lance-leaved Loosestrife	G5	N5?	S5	
<i>Lythrum salicaria</i>	Purple Loosestrife	G5	NNA	SNA	X
<i>Maianthemum canadense</i>	Two-leaved Solomon's-seal	G5	N5	S5	
<i>Maianthemum stellatum</i>	Starflower False Solomon's-seal	G5	N5	S4	
<i>Malus sp.</i>	Crabapple				X
<i>Medicago lupulina</i>	Black Medic	GNR	NNA	SNA	X
<i>Medicago sativa ssp. sativa</i>	Alfalfa	GNRTNR	NNA	SNA	X
<i>Melilotus alba</i>	White Sweet-clover	G5	NNA	SNA	X
<i>Mentha arvensis</i>	Wild Mint	G5	N5	S4	
<i>Moehringia lateriflora</i>	Blunt-leaved Sandwort	G5	N5	S4	
<i>Muhlenbergia racemosa</i>	Bog Muhly	G5	N5	S4	
<i>Oenothera biennis</i>	Hairy Evening-primrose	G5T5?	NNR	S4	
<i>Oryzopsis asperifolia</i>	White-grained Mountain Rice Grass	G5	N5	S4	
<i>Oryzopsis hymenoides</i>	Sand Ricegrass	G5	N5	S4	
<i>Osmorhiza depauperata</i>	Blunt-fruited Sweet-cicely	G5	N5	S4	
<i>Phalaris arundinacea</i>	Reed Canary Grass	G5	N5	S4	
<i>Physostegia ledinghamii</i>	Ledingham's Physostegi	G4G5	N4	S4	
<i>Plantago major</i>	Common Plantain	G5	NNR	SNA	X
<i>Poa palustris</i>	Fowl Blue Grass	G5	N5	S4	
<i>Poa pratensis</i>	Kentucky Blue Grass	G5	N5	SNA	X
<i>Polygonum lapathifolium</i>	Pale Persicaria	G5	N5	S4	
<i>Populus balsamifera ssp. balsamifera</i>	Balsam Poplar	G5T5	N5	S5	
<i>Populus deltoides ssp. monilifera</i>	Eastern Cottonwood	G5T5	N5	S4	
<i>Potentilla anserina ssp. anserina</i>	Silverweed	G5T5	N5	S4	
<i>Prunus virginiana var. virginiana</i>	Chokecherry	G5T5	N5	S5	
<i>Psoraleidium lanceolatum</i>	Lance-leaved Psoralea	G5	N4N5	S4	
<i>Pyrola secunda</i>	One-sided Wintergreen	G5	N5	S5	
<i>Rhamnus cathartica</i>	European Buckthorn	GNR	NNA	SNA	X
<i>Rhus aromatica var. aromatica</i>	Fragrant Sumac	G5T5	N5	S5	
<i>Ribes oxyacanthoides var. oxyacanthoides</i>	Bristly Gooseberry	G5T5	N5	S4	
<i>Ribes triste</i>	Northern Red Currant	G4G5	NNA	SNA	
<i>Rosa acicularis ssp. sayi</i>	Prickly Rose	G5T5	N5	S5	
<i>Rosa woodsii var. woodsii</i>	Wood's Rose	G5T5	N5	S5	
<i>Rubus pubescens</i>	Dewberry	G5	N5	S5	
<i>Rumex maritimus</i>	Golden Dock	G5	N5	S5	
<i>Rumex stenophyllus</i>	Narrow-leaved Field Dock	GNR	NNA	SNA	

<i>Salix bebbiana</i>	Long-beaked Willow	G5	N5	S4	
<i>Salix discolor</i>	Pussy Willow	G5	N5	S4	
<i>Salix famelica</i>	Yellow Willow	G5T5	N5	S4	
<i>Salix interior</i>	Sandbar Willow	G5	N5	S4	
<i>Salix lutea</i>	Yellow Willow	G5T5	N5	S4	
<i>Salix monticola</i>	False Mountain Willow	G5	N5	S4	
<i>Salsola kali</i> var. <i>tenuifolia</i>	Russian-thistle	GNR	NNA	SNA	X
<i>Sanicula marilandica</i>	Black Snakeroot	G5	N5	S4	
<i>Schizachne purpurascens</i>	Purple Oat Grass	G5	N5	S4	
<i>Sisyrinchium montanum</i> var. <i>montanum</i>	Common Blue-eyed-grass	G5T5	N5	S4	
<i>Sium suave</i>	Water Parsnip	G5	N5	S4	
<i>Smilacina stellata</i>	Starflower False Solomon's-seal	G5	N5	S4	
<i>Smilax lasioneura</i>	Herbaceous Greenbrier	G5	N4N5	S4	
<i>Solidago canadensis</i>	Canescent Goldenrod	G5T5	N5	S5	
<i>Solidago graminifolia</i>	Flat-top Goldentop	G5T5	N5	S4	
<i>Solidago missouriensis</i>	Low Goldenrod	G5	N5	S5	
<i>Sonchus arvensis</i> ssp. <i>arvensis</i>	Field Sow-thistle	GNRTNR	NNA	SNA	X
<i>Sorbus aucuparia</i>	Rowan Tree	G5	NNA	SNA	X
<i>Spiraea alba</i> var. <i>alba</i>	Narrow-leaved Meadow-sweet	G5T5	N5	S4	
<i>Sporobolus cryptandrus</i>	Sand Dropseed	G5	N5	S4	
<i>Stellaria longifolia</i>	Long-leaved Stitchwort	G5	N5	S4	
<i>Stipa comata</i>	Needle-and-thread Grass	G5T5	N5	S5	
<i>Stipa curtiseta</i>	Porcupine Grass	G5	N5	S5	
<i>Symphoricarpos occidentalis</i>	Western Snowberry	G5	N5	S5	
<i>Symphyotrichum boreale</i>	Northern Aster	G5	N5	S4	
<i>Symphyotrichum lanceolatum</i> var. <i>hesperium</i>	White Panicked American-aster	G5T5	N5	S4	
<i>Tanacetum vulgare</i>	Tansy	GNR	NNA	SNA	X
<i>Taraxacum officinale</i> ssp. <i>officinale</i>	Common Dandelion	G5T5	NNA	SNA	X
<i>Thalictrum venulosum</i>	Veiny Meadow-rue	G5	N5	S5	
<i>Thermopsis rhombifolia</i>	Golden-bean	G5	N5	S5	
<i>Toxicodendron rydbergii</i>	Poison Ivy	G5	N5	S4	
<i>Tragopogon dubius</i>	Yellow Goat's-beard	GNR	NNA	SNA	
<i>Trifolium pratense</i>	Red Clover	GNR	NNA	SNA	X
<i>Typha latifolia</i>	Common Cattail	G5	N5	S4	
<i>Urtica dioica</i> ssp. <i>gracilis</i>	Stinging Nettle	G5T5	N5	S4	
<i>Viburnum edule</i>	Low Bush-cranberry	G5	N5	S5	
<i>Viburnum opulus</i> var. <i>americanum</i>	High Bush-cranberry	G5T5	N5	S4	
<i>Vicia americana</i> ssp. <i>americana</i>	American Purple Vetch	G5T5	N5	S5	
<i>Viola canadensis</i> var. <i>rugulosa</i>	Western Canada Violet	G5T5	N5	S5	
<i>Xanthium strumarium</i>	Cocklebur	G5	N5	S4	

<i>Zizia aptera</i>	Heart-leaved Alexanders	G5	N5	S4	
<i>Acer negundo</i> var. <i>interius</i>	Manitoba Maple	G5T5	N5	S5	
<i>Andropogon scoparius</i>	Little Bluestem	G5T5	N5	S4	
<i>x Agrohordeum macounii</i>	Macoun's Wild-rye	GNA	NNA	SNA	
<i>Agropyron smithii</i>	Western Wheatgrass	G5	N5	S5	
<i>Agropyron subsecundum</i>	Slender Wheatgrass	G5T5	N5	S5	
<i>Agropyron trachycaulum</i>	Slender Wheatgrass	G5T5	N5	S5	
<i>Agrostis scabra</i> var. <i>scabra</i>	Hair Grass	G5T5	NNR	S4	
<i>Apocynum cannabinum</i> var. <i>hypericifolium</i>	Hemp Dogbane	G5T5	N5	S4	
<i>Calamagrostis canadensis</i> var. <i>canadensis</i>	Marsh Reedgrass	G5T5	N5	S4	
<i>Carex aquatilis</i> var. <i>aquatilis</i>	Water Sedge	G5T5	N5	S4	
<i>Carex pensylvanica</i>	Sun Sedge	G5T5	N5	S5	
<i>Elaeagnus commutata</i>	Silverberry	G5	N5	S4	
<i>Elymus canadensis</i> var. <i>canadensis</i>	Canada Wild Rye	G5T5	N5	S4	
<i>Equisetum hyemale</i> var. <i>affine</i>	Common Scouring-rush	G5T5	N5	S4	
<i>Erigeron philadelphicus</i> var. <i>philadelphicus</i>	Philadelphia Fleabane	G5T5	N5	S4	
<i>Fragaria virginiana</i> var. <i>glauca</i>	Smooth Wild Strawberry	G5T5	N5	S5	
<i>Gentiana amarella</i> var. <i>acuta</i> ;	Autumn Dwarf-gentian	G5T5	N5	S4	
<i>Gaura coccinea</i>	Scarlet Gaura	G5	N4N5	S4	
<i>Helianthus petiolaris</i> ssp. <i>petiolaris</i>	Prairie Sunflower	G5T5	N5	S4	
<i>Hordeum jubatum</i> ssp. <i>jubatum</i>	Fox-tail Barley	G5T5	N5	S5	
<i>Juniperus communis</i> var. <i>depressa</i>	Common Juniper	G5T5	N5	S4	
<i>Monarda fistulosa</i> var. <i>menthifolia</i>	Wild Bergamot	G5T5	NNR	S4	
<i>Piptatherum micranthum</i> ?	Little-seed Rice Grass	G5	N5	S4	
<i>Populus deltoides</i> var. <i>occidentalis</i>	Eastern Cottonwood	G5T5	N5	S4	
<i>Populus tremuloides</i>	Trembling Aspen	G5	N5	S5	
<i>Pyrola asarifolia</i> ssp. <i>asarifolia</i>	Pink Wintergreen	G5T5	N5	S5	
<i>Prunus virginiana</i> var. <i>virginiana</i>	Chokecherry	G5T5	N5	S5	
<i>Rhamnus alnifolia</i>	Alder-leaved Buckthorn	G5	N5	S4	
<i>Rhus radicans</i> var. <i>rydbergii</i>	Poison Ivy	G5	N5	S4	
<i>Ribes oxycanthoides</i>	Smooth Gooseberry	G5	N5	S4	
<i>Rorippa palustris</i> ssp. <i>palustris</i>	Bog Yellow-cress	G5T5	NNR	S4	
<i>Sambucus racemosa</i> var. <i>racemosa</i>	Red Elderberry	G5T5	N5	S2	
<i>Spiraea alba</i> var. <i>alba</i>	Narrow-leaved Meadow-sweet	G5T5	N5	S4	

<i>Stachys palustris</i> var. <i>pilosa</i>	Hairy Hedge-nettle	G5T5	N5	S4	
<i>Symphoricarpos albus</i> var. <i>albus</i>	Snowberry	G5T5	N5	S5	
<i>Symphotrichum laeve</i> var. <i>geyeri</i>	Smooth Blue Aster	G5T5	N5	S5	
<i>Vicia americana</i> ssp. <i>americana</i>	American Purple Vetch	G5T5	N5	S5	
<i>Viola adunca</i> var. <i>adunca</i>	Early Blue Violet	G5T5	N5	S5	
<i>Xanthisma spinulosum</i> var. <i>spinulosum</i>	Spiny Goldenaster	G5T4	N4N5	S4	

Series B-II: Maple Grove Baseline Survey Data

Tables within this section contain inventory of survey and field assessment data collected to supplement the baseline inventory efforts at Maple Grove. Survey and field assessment monitoring efforts associated with the baseline inventory were conducted between 2019 to 2021. Details on survey activities can be found in section 4.1.2 of the report.

Maple Grove Bird Survey Data

Meewasin initiated a series of nine bird surveys during various seasons of heightened activity across the Maple Grove site. The following table contains a summarized list of the bird species identified.

Table B-II 1. Summary of bird survey species observed at Maple Grove. Surveys conducted by Meewasin between 2020 and 2021 in association with the baseline inventory.

SCIENTIFIC NAME	COMMON NAME	Observations	Count	Global Rank	National Rank	Subnational Rank	COSEWIC	SARA Schedule
<i>Actitis macularius</i>	Spotted Sandpiper	1	1	G5	N5B,N3N,N5M	S5B		
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	1	1	G5	N5B,N5N,N5M	S5B,SUN		
<i>Anas acuta</i>	Northern Pintail	1	1	G5	N5B,N5N,N5M	S5B		
<i>Anas platyrhynchos</i>	Mallard	1	2	G5	N5B,N5N,N5M	S5B		
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	1	2	G5	N5B,N5M	S5B,S4M		
<i>Bombycilla cedrorum</i>	Cedar Waxwing	2	5	G5	N5B,N5N,N5M	S5B		
<i>Branta canadensis</i>	Canada Goose	3	10	G5	N5B,N5N,N5M	S5B		
<i>Bubo virginianus</i>	Great Horned Owl	1	1	G5	N5	S4		
<i>Bucephala albeola</i>	Bufflehead	1	1	G5	N5B,N5N,N5M	S5B		
<i>Bucephala clangula</i>	Common Goldeneye	1	1	G5	N5B,N5N,N5M	S5B		
<i>Buteo regalis</i>	Ferruginous Hawk	1	1	G4	N3B,N3N,NUM	S3B	Special Concern	Threatened
<i>Buteo swainsoni</i>	Swainson's Hawk	1	1	G5	N4N5B,N4N5M	S4B		
<i>Catharus fuscescens</i>	Veery	1	4	G5	N5B,N5M	S4B		
<i>Catharus ustulatus</i>	Swainson's Thrush	1	1	G5	N5B,N5M	S5B		
<i>Colaptes auratus</i>	Northern Flicker	3	3	G5	N5B,N5N,N5M	S5B,SUN		
<i>Corvus brachyrhynchos</i>	American Crow	3	6	G5	N5B,N5N,N5M	S5B,S4N		
<i>Corvus corax</i>	Common Raven	1	2	G5	N5	S5		
<i>Cyanocitta cristata</i>	Blue Jay	1	1	G5	N5B,N5N,NNRM	S5		
<i>Dryobates pubescens</i>	Downy Woodpecker	4	7	G5	N5	S5		
<i>Dumetella carolinensis</i>	Gray Catbird	2	5	G5	N5B,N5M	S5B		
<i>Empidonax minimus</i>	Least Flycatcher	1	2	G5	N5B,N5M	S5B		
<i>Falco columbarius</i>	Merlin	1	1	G5	N5B,N5N,N5M	S5B,S5N	Not at Risk	
<i>Geothlypis trichas</i>	Common Yellowthroat	1	1	G5	N5B,N5M	S5B		
<i>Haemorhous mexicanus</i>	House Finch	1	1	G5	N5	S4B		

<i>Haemorhous purpureus</i>	Purple Finch	1	1	G5	N5B,N5N,N5M	S5B,S4N		
<i>Hirundo rustica</i>	Barn Swallow	2	4	G5	N3N4B,N3N4M	S4B	Special Concern	Threatened
<i>Larus delawarensis</i>	Ring-billed Gull	2	19	G5	N5B,N5N,N5M	S5B		
<i>Megasceryle alcyon</i>	Belted Kingfisher	2	2	G5	N5B,N4N5N,N5M	S4B		
<i>Melospiza melodia</i>	Song Sparrow	3	4	G5	N5B,N5N,N5M	S5B		
<i>Mergus merganser</i>	Common Merganser	1	10	G5	N5B,N5N,N5M	S5B		
<i>Molothrus ater</i>	Brown-headed Cowbird	2	4	G5	N5B,NUN,N5M	S5B,SUN		
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	1	2	G5	N5B,N5M	S5B		
<i>Pica hudsonia</i>	Black-billed Magpie	1	7	G5	N5	S5		
<i>Pipilo maculatus</i>	Spotted Towhee	4	10	G5	N5B,N5M	S5B		
<i>Poecile atricapillus</i>	Black-capped Chickadee	4	12	G5	N5	S5		
<i>Seiurus aurocapilla</i>	Ovenbird	1	1	G5	N5B,N5M	S5B		
<i>Setophaga coronata</i>	Yellow-rumped Warbler	2	8	G5	N5B,N4N,N5M	S5B		
<i>Setophaga palmarum</i>	Palm Warbler	1	1	G5	N5B,N5M	S5B		
<i>Setophaga petechia</i>	Yellow Warbler	3	8	G5	N5B,N5M	S5B		
<i>Setophaga striata</i>	Blackpoll Warbler	1	1	G5	N5B,N5M	S5B,S4M		
<i>Sitta carolinensis</i>	White-breasted Nuthatch	2	2	G5	N5	S5		
<i>Spinus tristis</i>	American Goldfinch	4	14	G5	N5B,N5N,N5M	S5B		
<i>Spizella pallida</i>	Clay-colored Sparrow	3	7	G5	N5B,N5M	S5B		
<i>Spizella passerina</i>	Chipping Sparrow	1	1	G5	N5B,N5M	S5B		
<i>Sterna hirundo</i>	Common Tern	1	1	G5	N5B,NUN,N5M	S5B	Not at Risk	
<i>Toxostoma rufum</i>	Brown Thrasher	1	1	G5	N5B,NUN,N5M	S5B		
<i>Troglodytes aedon</i>	House Wren	2	4	G5	N5B,N5M	S5B		
<i>Turdus migratorius</i>	American Robin	4	23	G5	N5B,N4N5N,N5M	S5B,SUN		
<i>Tyrannus tyrannus</i>	Eastern Kingbird	1	4	G5	N5B,N5M	S5B		
<i>Vireo gilvus</i>	Warbling Vireo	1	2	G5	N5B,N5M	S5B		
<i>Vireo olivaceus</i>	Red-eyed Vireo	2	4	G5	N5B,N5N,N5M	S5B		
<i>Zenaidura macroura</i>	Mourning Dove	3	12	G5	N5B,N5N,N5M	S5B		

Maple Grove Grassland Range Health Assessment Data

The following tables contain data from grassland range health assessment surveys conducted in the remnant hayfield areas on the Maple Grove site. A series of five range health assessments were performed at each remnant hayfield area (respectively positioned at the northeast and southwest site regions). Survey efforts were initiated by Meewasin on 06/10/2021. Data recorded using the *Saskatchewan Native Grassland and Forest Rangeland Health Assessment Field Workbook* (PCAP, 2008a). The process and results from this data set are discussed in more detail in report sections 4.3.2 and 4.4.2.

Table B-II 2. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Northeast Hayfield. Meewasin. Date: 06/10/2021.

Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Grassland Range Health Assessment			
Assessment Date		6/10/2021	Observer(s)	BP, JH, EK (MVA)	
Quadrat Location Information					
Transect Location Description		Northeast hayfield area			
Quadrat ID		MG-RHA-2021-Q01	Quadrat GPS Location	13 U 0391112 5780537	
Ecoregion		MG	Ecosite	LM-G	
Soil Map Unit		Loam Ecosite	Soil Type		
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)	
Crested Wheat Grass (95)		Alfalfa (5)	NA	NA	
Range Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	7	40	Quadrat comprised of only Crested Wheatgrass and Alfalfa. Significant alteration from reference community due to lack of disturbance.	
2	Expected Vegetation Layers Present	7	10	Grass dominant, only one forb present.	
3	Presence of Invasive/ Noxious Species	Yes	Yes / No	Invasives species present: Crested Wheat-rass and Alfalfa	
3.1	Invasive / Noxious Species Cover	0	5	100% cover of invasive species in sample quadrat.	
3.2	Invasive / Noxious Species Distribution	0	5	Area dominated by introduced and invasive plant species.	
4.1	Amount of Soil Erosion Present	10	10	No signs of soil erosion.	
4.2	Amount of Bare Soil Present	5	5	No bare soil present.	
5	Amount of Litter Present	25	25	High amounts of litter present - lack of natural disturbance processes.	
Grassland Range Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)		14	60
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)		40	40
Total Range Health Score			Range Health Condition		General Comments
Actual Score	Potential Score	Overall Rating (%)	Healthy with Problems		Quadrat area containing mostly invasive vegetation. Little evidence of natural disturbance processes. Site previously used as a hayfield.
54	100	54%			

Table B-II 3. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Northeast Hayfield. Meewasin. Date: 06/10/2021.

06/10/2021					
Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Grassland Range Health Assessment			
Assessment Date		6/10/2021	Observer(s) (Organization)	BP, JH, EK (MVA)	
Quadrat Location Information					
Transect Location Description		Northeast hayfield area			
Quadrat ID		MG-RHA-2021-Q02	Quadrat GPS Location	13 U 0381625 5771885	
Ecoregion		AP	Ecosite	LM-B	
Soil Map Unit		Loam Ecosite	Soil Type		
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)	
Smooth Brome (95); Kentucky Blue Grass (5)		NA	NA	NA	
Range Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	7	40	Significant alteration from reference community due to lack of disturbance.	
2	Expected Vegetation Layers Present	3	10	Forb layer absent.	
3	Presence of Invasive/ Noxious Species	Yes	Yes / No	Invasive species present: Smooth Brome, Kentucky Blue Grass	
3.1	Invasive / Noxious Species Cover	0	5		
3.2	Invasive / Noxious Species Distribution	0	5		
4.1	Amount of Soil Erosion Present	7	10	Quadrat positioned in area where historic structure existed - remnant materials and signs of excavation (dirt mounds, stone blocks).	
4.2	Amount of Bare Soil Present	3	5	Bare ground is 100% human-caused (historic development).	
5	Amount of Litter Present	25	25		
Grassland Range Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)		10	60
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)		35	40
Total Range Health Score			Range Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)	Unhealthy Area where historic development and disturbance occurred connected to the former Artist Studio structure. Some evidence of slumping towards adjacent roadway. Invasive species dominate vegetation community in immediate area. Baby's Breath, Alfalfa, and Crested Wheatgrass also present in immediate area.		
45	100	45%			

Table B-II 4. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Northeast Hayfield. Meewasin. Date: 06/10/2021.

06/10/2021

Location / Site Name		Maple Grove				
Assessment Type		Saskatchewan Grassland Range Health Assessment				
Assessment Date		6/10/2021	Observer(s) (Organization)		BP, JH, EK (MVA)	
Quadrat Location Information						
Transect Location Description		Northeast hayfield area				
Quadrat ID		MG-RHA-2021-Q03	Quadrat GPS Location		13 U 0381596 5771890	
Ecoregion		MG	Ecosite		LM-G	
Soil Map Unit		Loam Ecosite	Soil Type			
Dominant Plant Community Species						
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)		Shrubs (% Cover)		
Smooth Brome (55); Crested Wheatgrass (42)		Alfalfa (2)		Highbush Cranberry (1)		
Range Health Assessment Questions						
Questions			Score		Comments	
No.	Topic		Actual	Potential		
1	Plant Community		7	40	Significant alteration from reference community due to lack of disturbance.	
2	Expected Vegetation Layers Present		7	10		
3	Presence of Invasive/ Noxious Species		Yes	Yes / No	Invasive species present: Smooth Brome, Crested Wheatgrass, Alfalfa	
3.1	Invasive / Noxious Species Cover		0	5		
3.2	Invasive / Noxious Species Distribution		0	5		
4.1	Amount of Soil Erosion Present		7	10	Some signs of soil erosion (burrowing animals).	
4.2	Amount of Bare Soil Present		5	5	Pocket Gopher activity as cause for some bare soil present.	
5	Amount of Litter Present		25	25		
Grassland Range Health Assessment Score Summary						
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)			Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)			14	60
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)			37	40
Total Range Health Score			Range Health Condition		Comments	
Actual Score	Potential Score	Overall Rating (%)	Healthy with Problems		Pocket Gopher activity in area. Vegetation coverage comprised mostly of introduced / invasive species.	
51	100	51%				

Table B-II 5. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Northeast Hayfield. Meewasin. Date: 06/10/2021.

06/10/2021:

Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Grassland Range Health Assessment			
Assessment Date		6/10/2021	Observer(s) (Organization)	BP, JH, EK (MVA)	
Quadrat Location Information					
Transect Location Description		Northeast hayfield area			
Quadrat ID		MG-RHA-2021-Q04	Quadrat GPS Location	13 U 0381544 5771872	
Ecoregion		MG	Ecosite	LM-G	
Soil Map Unit		Loam Ecosite	Soil Type		
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)	
Smooth Brome; Kentucky Blue Grass		Canada Thistle			
Range Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	7	40	Significant alteration from reference community due to lack of disturbance.	
2	Expected Vegetation Layers Present	7	10		
3	Presence of Invasive/ Noxious Species	Yes	Yes / No	Invasive species present: Smooth Brome, Kentucky Blue Grass, Canada Thistle	
3.1	Invasive / Noxious Species Cover	0	5		
3.2	Invasive / Noxious Species Distribution	0	5		
4.1	Amount of Soil Erosion Present	10	10	No soil erosion present.	
4.2	Amount of Bare Soil Present	5	5	No bare soil present.	
5	Amount of Litter Present	25	25		
Grassland Range Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)		14	60
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)		40	40
Total Range Health Score			Range Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)	Healthy with Problems		
54	100	54%			Quadrat positioned on a mid to gently sloped, SE facing position. Higher coverage of Canada Thistle and Alfalfa noted in this general area.

Table B-II 6. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Northeast Hayfield. Meewasin. Date: 06/10/2021.

Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Grassland Range Health Assessment			
Assessment Date		6/10/2021	Observer(s) (Organization) BP, JH, EK (MVA)		
Quadrat Location Information					
Transect Location Description		Northeast hayfield area			
Quadrat ID		MG-RHA-2021-Q05	Quadrat GPS Location13 U 0381536 5771831		
Ecoregion		MG	EcositeLM-G		
Soil Map Unit		Loam Ecosite	Soil Type		
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)	Shrubs (% Cover)		
Smooth Brome (60); Kentucky Blue Grass (40)			Trees (% Cover)		
Range Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	7	40	Significant alteration from reference community due to lack of disturbance.	
2	Expected Vegetation Layers Present	3	10	Forb layer absent.	
3	Presence of Invasive/ Noxious Species	Yes	Yes / No	Invasive Species Present: Smooth Brome, Kentucky Blue Grass	
3.1	Invasive / Noxious Species Cover	0	5		
3.2	Invasive / Noxious Species Distribution	0	5		
4.1	Amount of Soil Erosion Present	10	10	No soil erosion present.	
4.2	Amount of Bare Soil Present	5	5	No bare soil present.	
5	Amount of Litter Present	25	25		
Grassland Range Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)		10	60
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)		40	40
Total Range Health Score			Range Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)	Healthy with Problems		Quadrat placed at toe position of mid-grade slope. Heavy litter coverage.
50	100	50%			

Table B-II 7. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Southwest Hayfield. Meewasin. Date: 06/10/2021.

06/10/2021

Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Grassland Range Health Assessment			
Assessment Date		6/10/2021	Observer(s) (Organization) BP, JH, EK (MVA)		
Quadrat Location Information					
Transect Location Description		Southwest hayfield area			
Quadrat ID		MG-RHA-2021-Q06	Quadrat GPS Location 52.0813717; -106.7349418		
Ecoregion		PEZ	Ecosite SUB-B		
Soil Map Unit		Overflow	Soil Type		
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)	Shrubs (% Cover)		
Smooth Brome (80)		Northern Bedstraw (5); Common Dandelion (5)	Western Snowberry (10)		
Range Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	7	40	Significant alteration from reference community.	
2	Expected Vegetation Layers Present	7	10	Forb layer consistently reduced.	
3	Presence of Invasive/ Noxious Species	Yes	Yes / No	Invasive Species Present: Smooth Brome, Common Dandelion	
3.1	Invasive / Noxious Species Cover	0	5		
3.2	Invasive / Noxious Species Distribution	0	5		
4.1	Amount of Soil Erosion Present	10	10	No soil erosion present.	
4.2	Amount of Bare Soil Present	5	5	No bare soil present.	
5	Amount of Litter Present	25	25		
Grassland Range Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)		14	60
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)		40	40
Total Range Health Score			Range Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)	Disturbed site - former hayfield / sporting field area. High coverage of Smooth Brome and Canada Thistle.		
54	100	54%			
			Healthy with Problems		

Table B-II 8. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Southwest Hayfield. Meewasin. Date: 06/10/2021.

06/10/2021

Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Grassland Range Health Assessment			
Assessment Date		6/10/2021	Observer(s) (Organization)	BP, JH, EK (MVA)	
Quadrat Location Information					
Transect Location Description		Southwest hayfield area			
Quadrat ID		MG-RHA-2021-Q07	Quadrat GPS Location	52.0813641; -106.7354195	
Ecoregion		PEZ	Ecosite	SUB-B	
Soil Map Unit		Overflow	Soil Type		
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)	
Smooth Brome (30); Kentucky Blue Grass (60)		Canada Thistle (5); Vetch spp. (1); Northern Bedstraw (2); Common Dandelion (1)	Western Snowberry (2)		
Range Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	7	40	Significant alteration from reference community.	
2	Expected Vegetation Layers Present	7	10		
3	Presence of Invasive/ Noxious Species	Yes	Yes / No	Invasive Species Present: Smooth Brome, Kentucky Blue Grass, Canada Thistle, Common Dandelion	
3.1	Invasive / Noxious Species Cover	0	5		
3.2	Invasive / Noxious Species Distribution	0	5		
4.1	Amount of Soil Erosion Present	10	10	No soil erosion present.	
4.2	Amount of Bare Soil Present	5	5	No bare soil present.	
5	Amount of Litter Present	25	25		
Grassland Range Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)		14	60
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)		40	40
Total Range Health Score			Range Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)	Quadrat dominated by exotic grasses (Smooth Brome and Kentucky Blue Grass) with invasive / introduced species representing dominant cover in area generally.		
54	100	54%			
			Healthy with Problems		

Table B-II 9. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Southwest Hayfield. Meewasin. Date: 06/10/2021.

06/10/2021

Location / Site Name	Maple Grove				
Assessment Type	Saskatchewan Grassland Range Health Assessment				
Assessment Date	6/10/2021	Observer(s) (Organization)	BP, JH, EK (MVA)		
Quadrat Location Information					
Transect Location Description	Southwest hayfield area				
Quadrat ID	MG-RHA-2021-Q08	Quadrat GPS Location	52.080964; -106.735734		
Ecoregion	PEZ	Ecosite	SUB-B		
Soil Map Unit	Overflow	Soil Type			
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)	Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)		
Smooth Brome (80)	Vetch spp. (1); Goldenrod spp. (15); Canada Thistle (3); Northern Bedstraw (1)				
Range Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	7	40	Significant alteration from reference community.	
2	Expected Vegetation Layers Present	7	10		
3	Presence of Invasive/ Noxious Species	Yes	Yes / No	Invasive Species Present: Smooth Brome, Canada Thistle	
3.1	Invasive / Noxious Species Cover	0	5		
3.2	Invasive / Noxious Species Distribution	0	5		
4.1	Amount of Soil Erosion Present	10	10	No soil erosion present.	
4.2	Amount of Bare Soil Present	5	5	No bare soil present.	
5	Amount of Litter Present	25	25		
Grassland Range Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%	Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score	
	Section A: Vegetation Cover (Questions 1-3)		14	60	
	Section B: Hydrologic Function & Soil Protection (Questions 4-5)		40	40	
Total Range Health Score			Range Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)			
54	100	54%	Healthy with Problems		
					Mostly Smooth Brome coverage in area. Quadrat positioned in patch of Solidago (Goldenrod) species.

Table B-II 10. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Southwest Hayfield. Meewasin. Date: 06/10/2021.

06/10/2021

Location / Site Name		Maple Grove					
Assessment Type		Saskatchewan Grassland Range Health Assessment					
Assessment Date		6/10/2021		Observer(s) (Organization)		BP, JH, EK (MVA)	
Quadrat Location Information							
Transect Location Description		Southwest hayfield area					
Quadrat ID		MG-RHA-2021-Q09		Quadrat GPS Location		52.0806499; -106.7359358	
Ecoregion		PEZ		Ecosite		SUB-B	
Soil Map Unit		Overflow		Soil Type			
Dominant Plant Community Species							
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)		Shrubs (% Cover)		Trees (% Cover)	
Smooth Brome (40); Kentucky Blue Grass (35)		Solidago sp. (10); Smooth Blue Aster (2); Canada Thistle (1)		Western Snowberry (2)			
Range Health Assessment Questions							
Questions			Score		Comments		
No.	Topic		Actual	Potential			
1	Plant Community		7	40	Significant alteration from reference community.		
2	Expected Vegetation Layers Present		10	10			
3	Presence of Invasive/ Noxious Species		Yes	Yes / No	Invasive Species Present: Smooth Brome, Kentucky Blue Grass, Canada Thistle		
3.1	Invasive / Noxious Species Cover		0	5			
3.2	Invasive / Noxious Species Distribution		0	5			
4.1	Amount of Soil Erosion Present		10	10	No soil erosion.		
4.2	Amount of Bare Soil Present		5	5	No bare ground.		
5	Amount of Litter Present		25	25			
Grassland Range Health Assessment Score Summary							
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)			Actual Score	Potential Score	
		Section A: Vegetation Cover (Questions 1-3)			17	60	
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)			40	40	
Total Range Health Score			Range Health Condition		Comments		
Actual Score	Potential Score	Overall Rating (%)	Healthy with Problems		More diversity noted in forb layer in this quadrat position (as compared to surrounding areas). Position of quadrat in shallow vegetation-covered trench.		
57	100	57%					

Table B-II 11. Saskatchewan Grassland Range Health Assessment Data Collected at Maple Grove Southwest Hayfield. Meewasin. Date: 06/10/2021.

Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Grassland Range Health Assessment			
Assessment Date		6/10/2021	Observer(s) (Organization)	BP, JH, EK (MVA)	
Quadrat Location Information					
Transect Location Description		Southwest hayfield area			
Quadrat ID		MG-RHA-2021-Q10	Quadrat GPS Location	52.0802564; -106.7365051	
Ecoregion		PEZ	Ecosite	SUB-B	
Soil Map Unit		Overflow	Soil Type		
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)	
Crested Wheatgrass (80)		Canada Thistle (5)	Western Snowberry (15)		
Range Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	7	40	Significant alteration from reference community.	
2	Expected Vegetation Layers Present	7	10	Forb layer reduced.	
3	Presence of Invasive/ Noxious Species	Yes	Yes / No	Invasive Species Present: Crested Wheatgrass, Canada Thistle	
3.1	Invasive / Noxious Species Cover	0	5		
3.2	Invasive / Noxious Species Distribution	0	5		
4.1	Amount of Soil Erosion Present	10	10	No soil erosion present.	
4.2	Amount of Bare Soil Present	5	5	No bare soil present.	
5	Amount of Litter Present	25	25		
Grassland Range Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)		14	60
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)		40	40
Total Range Health Score			Range Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)	Healthy with Problems		
54	100	54%			
Quadrat located in pocket of crested wheatgrass. High litter load in area.					

Maple Grove Forest Range Health Assessment Data

The following tables contain data from forest health assessment surveys conducted in the forested regions of Maple Grove at permanent monitoring plot locations. Survey efforts were initiated by Meewasin on 09/29/2021. Data recorded mirrors the Saskatchewan Forest Range Health Assessment – Indicator Method field data sheet provided in the *Saskatchewan Native Grassland and Forest Rangeland Health Assessment Field Workbook* (PCAP, 2008a). The process and results from this data set are discussed in more detail in report sections 4.3.2 and 4.4.2.

Table B-II 12. Saskatchewan Forested Range Health Assessment Data Collected at Maple Grove Permanent Plot Locations. Meewasin. Date: 09/29/2021.

Location / Site Name	Maple Grove		
Assessment Type	Saskatchewan Forest Range Health Assessment - Indicator Method		
Assessment Date	9/29/2021	Observer(s) (Organization)	BP (MVA)
Quadrat Location Information			
Transect Location Description	Permanent monitoring post location		
Quadrat ID	MG-FHA-2021-PP01	Quadrat GPS Location	
Ecoregion	AP	Ecosite	MO-C
Soil Map Unit		SK Forest Ecosite	
Dominant Plant Community Species			
Grasses & Grasslikes (% Dry Weight)	Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)
Smooth Brome (5)	Bearberry (5); Goldenrod spp. (3); Aster spp. (1); Canada Thistle (2); Northern Bedstraw (3); Sweet Clover (1)	Rose spp. (5); Western Snowberry (15); Red-osier Dogwood (35); Highbush Cranberry (5)	Saskatoon (5); Salix spp. (25)
Forested Rangeland Health Assessment Questions			
Questions		Score	
No.	Topic	Actual	Potential
1	Plant Community	30	40
2	Expected Vegetation Layers Present	10	20
3	Presence of Invasive Species	0	10
4.1	Amount of Soil Erosion Present	3	5
4.2	Amount of Bare Soil Present	10	10
5	Thickness of LFH organic layer	15	15
Forested Rangeland Health Assessment Score Summary			
Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
Section A: Vegetation Cover (Questions 1-3)		40	70
Section B: Hydrologic Function & Soil Protection (Questions 4-5)		28	30
Total Forest Health Score		Forest Health Condition	
Actual Score	Potential Score	Comments	
68	100	Healthy with Problems	

Table B-II 13. Saskatchewan Forested Range Health Assessment Data Collected at Maple Grove Permanent Plot Locations. Meewasin.
Date: 09/29/2021.

Location / Site Name	Maple Grove		
Assessment Type	Saskatchewan Forest Range Health Assessment - Indicator Method		
Assessment Date	9/29/2021	Observer(s) (Organization)	BP (MVA)
Quadrat Location Information			
Transect Location Description	Permanent monitoring post location		
Quadrat ID	MG-FHA-2021-PP02	Quadrat GPS Location	
Ecoregion	AP	Ecosite	MO-C
Soil Map Unit		SK Forest Ecosite	
Dominant Plant Community Species			
Grasses & Grasslikes (% Dry Weight)	Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)
Smooth Brome (5)	Sweet clover (2); Columbine (1); Aster spp. (2); Solidago spp. (2); Vetch spp. (1)	Red-osier Dogwood (35); Wolf Willow (10); Western Snowberry (5); Rose spp. (2); Lowbush Cranberry (2)	Salix spp. (20); European Buckthorn (2);
Forested Rangeland Health Assessment Questions			
Questions		Score	Comments
No.	Topic	Actual Potential	
1	Plant Community	30 40	
2	Expected Vegetation Layers Present	10 20	
3	Presence of Invasive Species	0 10	Invasive species present: European Buckthorn, Sweet Clover
4.1	Amount of Soil Erosion Present	5 5	
4.2	Amount of Bare Soil Present	10 10	Wildlife trails present.
5	Thickness of LFH organic layer	15 15	
Forested Rangeland Health Assessment Score Summary			
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)	Actual Score Potential Score
		Section A: Vegetation Cover (Questions 1-3)	40 70
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)	30 30
Total Forest Health Score		Forest Health Condition	Comments
Actual Score 70	Potential Score 100	Overall Rating (%) 70%	Healthy with Problems

Table B-II 14. Saskatchewan Forested Range Health Assessment Data Collected at Maple Grove Permanent Plot Locations. Meewasin.
Date: 09/29/2021.

Date: 03/23/2021

Location / Site Name	Maple Grove			
Assessment Type	Saskatchewan Forest Range Health Assessment - Indicator Method			
Assessment Date	9/29/2021	Observer(s) (Organization)	BP (MVA)	
Quadrat Location Information				
Transect Location Description	Permanent monitoring post location			
Quadrat ID	MG-FHA-2021-PP03	Quadrat GPS Location		
Ecoregion	AP	Ecosite	MC-O	
Soil Map Unit		SK Forest Ecosite		
Dominant Plant Community Species				
Grasses & Grasslikes (% Dry Weight)	Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)	
Smooth Brome (3); Carex spp. (10)	Bearberry (2)	Western Snowberry (5); Chokecherry (5); European Buckthorn		
Forested Rangeland Health Assessment Questions				
Questions		Score		Comments
No.	Topic	Actual	Potential	
1	Plant Community	15	40	
2	Expected Vegetation Layers Present	5	20	Missing low shrubs and forb layers.
3	Presence of Invasive Species	0	10	Invasive species present: European Buckthorn.
4.1	Amount of Soil Erosion Present	5	5	
4.2	Amount of Bare Soil Present	10	10	
5	Thickness of LFH organic layer	15	15	
Forested Rangeland Health Assessment Score Summary				
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%	Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
	Section A: Vegetation Cover (Questions 1-3)		20	70
	Section B: Hydrologic Function & Soil Protection (Questions 4-5)		30	30
Total Forest Health Score		Forest Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)		Healthy with Problems
50	100	50%		

Table B-II 15. Saskatchewan Forested Range Health Assessment Data Collected at Maple Grove Permanent Plot Locations. Meewasin.
Date: 09/29/2021.

Date: 03/23/2021:

Location / Site Name	Maple Grove				
Assessment Type	Saskatchewan Forest Range Health Assessment - Indicator Method				
Assessment Date	9/29/2021	Observer(s) (Organization)	BP (MVA)		
Quadrat Location Information					
Transect Location Description	Permanent monitoring post location				
Quadrat ID	MG-FHA-2021-PP04	Quadrat GPS Location			
Ecoregion	AP	Ecosite	MC-O		
Soil Map Unit		SK Forest Ecosite			
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)	Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)		
Smooth Brome; Quackgrass	Thistle; Dandelion; Vetch	Rose; European Buckthorn; Snowberry; Chokecherry	Balsam Poplar		
Forested Rangeland Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	15	40	Invasive species present: exotic grasses, European Buckthorn, Dandelion, thistle	
2	Expected Vegetation Layers Present	5	20		
3	Presence of Invasive Species	0	10		
4.1	Amount of Soil Erosion Present	5	5		
4.2	Amount of Bare Soil Present	10	10		
5	Thickness of LFH organic layer	15	15		
Forested Rangeland Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%	Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score	
	Section A: Vegetation Cover (Questions 1-3)		20	70	
	Section B: Hydrologic Function & Soil Protection (Questions 4-5)		30	30	
Total Forest Health Score			Forest Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)	Healthy with Problems		
50	100	50%			

Table B-II 16. Saskatchewan Forested Range Health Assessment Data Collected at Maple Grove Permanent Plot Locations. Meewasin.
Date: 09/29/2021.

Date: 09/29/2021

Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Forest Range Health Assessment - Indicator Method			
Assessment Date		9/29/2021	Observer(s) (Organization)	BP (MVA)	
Quadrat Location Information					
Transect Location Description		Permanent monitoring post location			
Quadrat ID		MG-FHA-2021-PP05	Quadrat GPS Location		
Ecoregion		AP	Ecosite	MC-O	
Soil Map Unit			SK Forest Ecosite		
Dominant Plant Community Species					
Grasses & Grasslikes (% Dry Weight)		Forbs (% Dry Weight)	Shrubs (% Cover)	Trees (% Cover)	
Smooth Brome (10); Western Wheatgrass (10)		Thistle (5); Asparagus (3); Vetch spp. (1); Aster spp. (2); Solidago spp. (2)	Salix spp. (25); Red-osier Dogwood (35); Western Snowberry (10)	Balsam Poplar (2)	
Forested Rangeland Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Plant Community	30	40		
2	Expected Vegetation Layers Present	10	20		
3	Presence of Invasive Species	0	10	Invasive species present: Asparagus, exotic grasses	
4.1	Amount of Soil Erosion Present	5	5		
4.2	Amount of Bare Soil Present	10	10		
5	Thickness of LFH organic layer	10	15	Deer trails in area - vegetation layer somewhat compacted.	
Forested Rangeland Health Assessment Score Summary					
Healthy 75-100%; Healthy with Problems 50-74%; Unhealthy <50%		Section Subtotal Scores (Question No. Range)		Actual Score	Potential Score
		Section A: Vegetation Cover (Questions 1-3)		40	70
		Section B: Hydrologic Function & Soil Protection (Questions 4-5)		25	30
Total Forest Health Score			Forest Health Condition		Comments
Actual Score	Potential Score	Overall Rating (%)	Healthy with Problems		
65	100	65%			

Maple Grove Shoreline Riparian Health Assessment Data

The following tables contain data from riparian health surveys conducted along the South Saskatchewan River shoreline composing the eastern site margin of Maple Grove. Survey efforts were initiated by Meewasin on 09/28/2021. Data recorded mirrors the Riparian Health Assessment Field Sheet provided in the *Saskatchewan Streams and Small Rivers Riparian Health Assessment Field Workbook* (PCAP, 2008b). The process and results from this data set are discussed in more detail in report sections 4.3.2 and 4.4.2.

Table B-II 17. Saskatchewan Riparian Health Assessment Data Collected at Maple Grove along South Saskatchewan River eastern site boundary. Dated: 09/28/2021.

Location / Site Name		Maple Grove			
Assessment Type		Saskatchewan Riparian Health Assessment			
Assessment Date		9/28/2021	Observer(s) (Organization)	BP, JH (MVA)	
Survey Location Information					
Transect Location Description		Eastern site margin (west bank of the South Saskatchewan River)			
Transect ID					
Stream / River		South Saskatchewan River	Reach No.	1	
Riparian Health Assessment Questions					
Questions		Score		Comments	
No.	Topic	Actual	Potential		
1	Vegetative Cover of Floodplain & Streambank	4	6		
2.1	Invasive Plant Species (Cover)	2	3		
2.2	Invasive Plant Species (Density)	2	3		
3	Disturbance-Increaser Undesirable Herbaceous Species	3	3		
4	Preferred Tree / Shrub Establishment & Regeneration	6	6		
5	Utilization of Preferred Trees & Shrubs	2	3		
6	Standing Decadent & Dead Woody Material	2	3		
7	Streambank Root Mass Protection	4	6		
8	Human-Caused Bare Ground	4	6		
9	Streambank Structurally Altered by Human Activity	6	6		
10	Streambank Subject to Active Lateral Cutting (erosion)	2	6		
11	Reach Structurally Altered by Human Activity	2	3		
12	Stream Channel Incisement (vertical stability)	9	9		
Riparian Health Assessment Score Summary					
Healthy 80-100%; Healthy with Problems 60-79%; Unhealthy <60%	Riparian Health Condition	Total Riparian Health Score			Comments
	Healthy with Problems	Actual Score	Potential Score	Overall Rating (%)	
		48	63	76%	

Table B-II 18. Saskatchewan Riparian Health Assessment Data Collected at Maple Grove along South Saskatchewan River eastern site boundary. Dated: 09/28/2021.

Location / Site Name		Maple Grove		
Assessment Type		Saskatchewan Riparian Health Assessment		
Assessment Date		9/28/2021	Observer(s) (Organization)	BP, JH (MVA)
Survey Location Information				
Transect Location Description		Eastern site margin (west bank of the South Saskatchewan River)		
Transect ID				
Stream / River		South Saskatchewan River	Reach No.	2
Riparian Health Assessment Questions				
No.	Questions Topic	Score		Comments
		Actual	Potential	
1	Vegetative Cover of Floodplain & Streambank	4	6	
2.1	Invasive Plant Species (Cover)	2	3	
2.2	Invasive Plant Species (Density)	2	3	
3	Disturbance-Increaser Undesirable Herbaceous Species	3	3	
4	Preferred Tree / Shrub Establishment & Regeneration	6	6	
5	Utilization of Preferred Trees & Shrubs	2	3	
6	Standing Decadent & Dead Woody Material	2	3	
7	Streambank Root Mass Protection	4	6	
8	Human-Caused Bare Ground	4	6	
9	Streambank Structurally Altered by Human Activity	4	6	
10	Streambank Subject to Active Lateral Cutting (erosion)	2	6	
11	Reach Structurally Altered by Human Activity	2	3	
12	Stream Channel Incisement (vertical stability)	9	9	
Riparian Health Assessment Score Summary				
Healthy 80-100%; Healthy with Problems 60-79%; Unhealthy <60%	Riparian Health Condition	Total Riparian Health Score		
	Healthy with Problems	Actual Score	Potential Score	Overall Rating (%)
		46	63	73%

Series B-III: Maple Grove Baseline Autonomous Recording Unit Records

Maple Grove Baseline Bat Survey Records (Wildlife Acoustic Echo Meter Touch Bat Detector ver. 2.8.6)

The following table contains comprehensive record of bat species identified during baseline bat survey initiatives at the Maple Grove site during the fall of 2020 and summer of 2021. These observations were captured using Wildlife Acoustic Echo Meter Touch Bat Detector version 2.8.6 on an Apple iPad Air2.

Table B-III 1. Maple Grove Bat Detection Survey Records. Meewasin. Survey dates 06/23/2021 & 09/24/2020. Wildlife Acoustic Echo Meter Touch Bat Detector version 2.8.6.

Survey Date: June 23, 2021		
Species Abbreviation	Species Name	Time Recording
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:45 PM
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:45 PM
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:44 PM
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	10:41 PM
LASNOC	Silver-Haired Bat (<i>Lasionycteris noctivagans</i>)	10:40 PM
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	10:39 PM
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:36 PM
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:31 PM
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:29 PM
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	10:24 PM
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:23 PM
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:20 PM
MYOLUC	Little Brown Bat (<i>Myotis lucifugus</i>)	10:17 PM
Survey Date: September 24, 2020		
Species Abbreviation	Species Name	Time Recording
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	9:43 PM
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	9:42 PM
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	9:41 PM
LASCIN	Hoary Bat (<i>Lasiurus cinereus</i>)	9:40 PM
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	9:39 PM
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	9:38 PM
LASNOC	Silver-Haired Bat (<i>Lasionycteris noctivagans</i>)	9:30 PM
LASCIN	Hoary Bat (<i>Lasiurus cinereus</i>)	9:27 PM
LASNOC	Silver-Haired Bat (<i>Lasionycteris noctivagans</i>)	9:26 PM
LASCIN	Hoary Bat (<i>Lasiurus cinereus</i>)	9:25 PM
LASCIN	Hoary Bat (<i>Lasiurus cinereus</i>)	9:24 PM
LASCIN	Hoary Bat (<i>Lasiurus cinereus</i>)	9:22 PM
LASCIN	Hoary Bat (<i>Lasiurus cinereus</i>)	9:20 PM
EPTFUS	Big Brown Bat (<i>Eptesicus fuscus</i>)	9:17 PM
LASCIN	Hoary Bat (<i>Lasiurus cinereus</i>)	9:16 PM
LASCIN	Hoary Bat (<i>Lasiurus cinereus</i>)	9:10 PM
LASNOC	Silver-Haired Bat (<i>Lasionycteris noctivagans</i>)	9:09 PM

Maple Grove Autonomous Acoustic Recording Unit Observations (Acoustic Song Meter SM3)

The following tables contain species observations identified acoustically through the passive capture of audial recordings at the Maple Grove site. Data collected has been processed and verified by Meewasin staff. Data collected within these tables was captured by a stationary acoustic recording device, model Acoustic Song Meter SM3. The device was placed at various positions and recording intervals during the baseline inventory data collection process between May-June of 2021.

Table B-III 2. Species Identified through Passive Acoustic Data Capture (Song Meter SM3BAT Unit) at Maple Grove, Southwest Hayfield Position. Meewasin. Dates: 06/15/2021-07/27/2021.

Unit	Wildlife Acoustics Song Meter SM3BAT	
Unit ID Code	Maple Grove_BAT3Acoustic Recorder_2021	
Site Location	Maple Grove Ballfield (Southwest Hayfield Area – remnant batting cage)	
Device Placement Period	06/15/2021 – 07/14/2021	
Recording Date	Species ID	Total Species ID Count
6/15/2021	Clay-coloured Sparrow; Spotted Towhee; Mourning Dove; Yellow Warbler; Tree Swallow; Black-billed Magpie; Canada Goose; Cowbird; Purple Martin; Vesper Sparrow; American Crow	11
6/16/2021	Clay-coloured Sparrow; American Robin; Spotted Towhee; Mourning Dove; Vesper Sparrow; Tree Swallow; American Crow; Spotted Towhee; Red-eyed Vireo; Cedar Waxwing; Yellow Warbler	11
6/17/2021	Clay-coloured Sparrow; American Robin; Spotted Towhee; Red-eyed Vireo; Vesper Sparrow; Yellow Warbler; Mourning Dove; American Crow; Black-capped Chickadee	9
6/18/2021	American Robin; Clay-coloured Sparrow; Spotted Towhee; Vesper Sparrow; Tree Swallow; Duck sp; American Crow; Red-eyed Vireo; Yellow Warbler; Mourning Dove	10
6/19/2021	Clay-coloured Sparrow; Common Nighthawk; Gray Catbird; Spotted Towhee	4
6/20/2021	American Robin; Tree Swallow; Spotted Towhee; Yellow Warbler; Clay-coloured Sparrow; American Crow; Vesper Sparrow; House Wren	8
6/21/2021	American Robin; Tree Swallow; Spotted Towhee; Clay-coloured Sparrow; American Crow; Vesper Sparrow; Red-eyed Vireo; Duck sp - Mallard?	8
6/22/2021	Vesper Sparrow; American Robin; Tree Swallow; Clay-coloured Sparrow; Spotted Towhee; American Crow; Yellow Warbler	7
6/23/2021	Spotted Towhee; Clay-coloured Sparrow; American Robin; Yellow Warbler; American Crow; Tree Swallow; Vesper Sparrow	7
6/24/2021	Clay-coloured Sparrow; American Robin; Tree Swallow; Spotted Towhee; Yellow Warbler; American Crow; Vesper Sparrow; House Wren; American Redstart	9
6/25/2021	American Robin; Spotted Towhee; Vesper Sparrow; Tree Swallow; Clay-coloured Sparrow; House Wren; American Redstart; American Crow; Yellow Warbler	9
6/26/2021	Clay-coloured Sparrow; American Robin; Spotted Towhee; American Crow; Vesper Sparrow; Red-eyed Vireo; Yellow Warbler; Tree Swallow	8
6/27/2021	American Robin; Clay-coloured Sparrow; Spotted Towhee; Veery; Purple Martin; Yellow Warbler; Vesper Sparrow; Tree Swallow; American Crow; Red-eyed Vireo	10

Table B-III 3. Species Identified through Passive Acoustic Data Capture (Song Meter SM3BAT Unit) at Maple Grove, Permanent Plot Post Positions PP01, PP02, PP04. Meewasin. Dates: 05/19/2021-06/14/2021.

Unit	Wildlife Acoustics Song Meter SM3BAT	
Unit ID Code	Maple Grove_BAT3Acoustic Recorder_2021	
Site Location	Maple Grove Permanent Plot Locations: PP01, PP02, PP04 (Rotational Basis)	
ARU Placement Period	05/19/2021 – 06/14/2021	
Recording Date	Species ID	Total Species ID Count
5/19/2021	American Robin; Veery; Canada Goose; Duck sp Mallard ?; Clay-coloured Sparrow; Vesper Sparrow; Mourning Dove; Gray Catbird; Yellow Warbler; Black-capped Chickadee; Woodpecker sp	11
5/20/2021	American Robin; Spotted Towhee; Magpie; Clay-coloured Sparrow; Yellow Warbler; Canada Goose; American Crow	7
5/21/2021	American Robin; Clay-coloured Sparrow; Vesper Sparrow; American Crow; Black-capped Chickadee; Yellow Warbler; Canada Goose; Gray Catbird; Magpie; Spotted Towhee; Duck sp mallard?	11
5/22/2021	American Robin; Clay-coloured Sparrow; Mourning Dove; Spotted Towhee; Veery; Yellow Warbler; Black-capped Chickadee; Gray Catbird; Canada Goose; Magpie; American Crow	11
5/23/2021	American Robin; Duck sp ; Spotted Towhee; Clay-coloured Sparrow; Mourning Dove; Canada Goose; Gray Catbird; American Crow; Yellow Warbler; Black-capped Chickadee; American Goldfinch; Magpie	12
5/24/2021	NA	0
5/25/2021	NA	0
5/26/2021	Spotted Towhee; Clay-coloured Sparrow; Canada Goose; American Crow; American Robin; Common Nighthawk; Mourning Dove; Duck sp mallard?; White-throated Sparrow; House Wren; Yellow Warbler; Magpie; American Goldfinch; Western Meadowlark; Tree Swallow; Cowbird **coyotes also heard (not included in species count)	16
5/27/2021	Clay-coloured Sparrow; Spotted Towhee; American Robin; Mourning Dove; House Wren; Yellow Warbler; Canada Goose; American Crow; White-throated Sparrow; Cowbird; Black-billed Magpie; Black-capped Chickadee; Duck sp Mallard?; Baltimore Oriole; Veery; American Goldfinch; House Sparrow; Red-winged Blackbird **coyotes also heard (not included in species count)	18
5/28/2021	American Robin; Gray Catbird; Spotted Towhee; House Wren; Black-billed Magpie; Clay-coloured Sparrow; Cowbird; Yellow Warbler	8
5/29/2021	American Robin; Gray Catbird; Spotted Towhee; House Wren; Black-billed Magpie; Clay-coloured Sparrow; Cowbird; Yellow Warbler; Mourning Dove; American Goldfinch; Canada Goose; Least Flycatcher; Black and White Warbler	13
5/30/2021	American Robin; Gray Catbird; Clay-coloured Sparrow; Yellow Warbler; House Wren; American Crow; Black-billed Magpie; Canada Goose; Mourning Dove; Black-capped Chickadee; Cowbird; Spotted Towhee; American Goldfinch; Black and White Warbler	14
5/31/2021	Clay-coloured Sparrow; American Robin; Tree Swallow; Mourning Dove; Gray Catbird; Spotted Towhee; Canada Goose; Yellow Warbler; House Wren; Cowbird; Black and White Warbler; American Goldfinch; Veery; Black-capped Chickadee; Red-eyed Vireo; Black-billed Magpie ** coyotes also heard (not included in species count)	16
6/1/2021	Clay-coloured Sparrow; Gray Catbird; Yellow Warbler; American Robin; Mourning Dove; Black and White Warbler; Spotted Towhee; Vesper Sparrow; House Sparrow; Red-eyed Vireo; Black-billed Magpie; American Goldfinch; Canada Goose; Cowbird; Warbling Vireo; Black-capped Chickadee; House Wren	17
6/2/2021	Canada Goose; House Sparrow; Gray Catbird; American Robin; Spotted Towhee; Yellow Warbler; Mourning Dove; House Wren; Brown Thrasher; American Crow; Veery **Boreal Chorus Frog also heard (not included in species count)	11

6/3/2021	Gray Catbird; House Sparrow; Yellow Warbler; Mourning Dove; Spotted Towhee; Canada Goose; American Robin; House Wren; American Crow; American Goldfinch; Alder Flycatcher; Yellow-rumped Warbler; Black-capped Chickadee **Coyotes also heard (not included in species count)	13
6/4/2021	Gray Catbird; House Sparrow; American Robin; Spotted Towhee; Yellow Warbler; Mourning Dove; American Crow; Vesper Sparrow; American Goldfinch; Red-eyed Vireo	10
6/5/2021	Canada Goose; Gray Catbird; Yellow Warbler; American Robin; House Sparrow; Spotted Towhee; Mourning Dove; American Crow; Brown Thrasher; Black-billed Magpie; American Goldfinch; Red-eyed Vireo **Coyotes also heard (not included in species count)	12
6/6/2021	Gray Catbird; House Sparrow; Yellow Warbler; Spotted Towhee; Mourning Dove; American Crow; Canada Goose; American Goldfinch; Veery; Black-capped Chickadee; Brown Thrasher	11
6/7/2021	American Robin; Gray Catbird; House Sparrow; Spotted Towhee; Yellow Warbler; Mourning Dove; Clay-coloured Sparrow; American Crow; American Goldfinch; Black-billed Magpie **Coyotes also heard (not included in species count)	10
6/8/2021	Gray Catbird; American Robin; American Crow; Mourning Dove; Yellow Warbler; Spotted Towhee; Canada Goose; Purple Martin; House Sparrow; American Goldfinch; Cowbird; Woodpecker sp; Veery **Coyotes also heard (not included in species count)	13
6/9/2021	House Sparrow; Yellow Warbler; Spotted Towhee; Mourning Dove; Purple Martin; American Crow; American Goldfinch; Blue Jay; American Robin; Clay-coloured Sparrow	10
6/10/2021	House Sparrow; Yellow Warbler; American Crow; Spotted Towhee; Mourning Dove	5
6/11/2021	Spotted Towhee; House Sparrow; Yellow Warbler; American Robin; Mourning Dove; American Crow; Clay-coloured Sparrow; Cowbird; Waxwing	9
6/12/2021	Gray Catbird; American Robin; Spotted Towhee; Mourning Dove; Yellow Warbler; American Goldfinch; American Crow	7
6/13/2021	House Sparrow; Spotted Towhee; American Robin; Yellow Warbler; American Crow; Purple Martin; Clay-coloured Sparrow; American Goldfinch; Woodpecker sp; American Goldfinch	10
6/14/2021	House Sparrow; Spotted Towhee; Yellow Warbler; American Robin; Mourning Dove; Canada Goose	6

Maple Grove Wildlife Camera Observation Records (Browning Dark OPS HD 26LC Units)

The following series of tables contain identified wildlife species observations captured at the Maple Grove site by wildlife camera devices between 2020 and 2021 during the baseline inventory data collection period. The wildlife camera model in use was the Browning Dark OPS HD 26LC. This series of tables summarizes the Meewasin inventory of data passively collected by wildlife camera units set at various positions and time periods on the Maple Grove site. Identified species observations have been confirmed by Meewasin staff. Some records have been highlighted to illustrate discrepancies and potential errors in the data set.

Table B-III 4. Maple Grove Wildlife Camera Records. Meewasin. Recorded Jun-Sept 2020. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temp. (°C)	Species			
				Type	Sex	No.	Comments
	06/29/2020			WT Deer	Female	1	Says "wrong dates"
	06/29/2020		17	WT Deer	Male	1	Young buck
	06/29/2020		16	WT Deer	Female	1	
	06/29/2020		22	WT Deer	Female	1	
	Aug 20, 2020	2:40pm	31	WT Deer	Female	1	
	Aug 26, 2020	9:35pm	14	WT Deer	Female	1	
	Aug 27, 2020	5:44am	7	WT Deer	Female	2	Female with fawn
	Sept. 1, 2020	5:53am	13	WT Deer	Female	1	
	Sept. 1, 2020	4:46pm	23	WT Deer	Female	1	
	Sept. 2, 2020	8:50pm	10	WT Deer	Female	1	
	Sept. 4, 2020	3:46am	5	WT Deer	Female	2	
	Sept 4, 2020	8:04am	6	WT Deer	Female	1	
	Sept 6, 2020	1:37am	11	WT Deer	Female	1	
	June 30, 2020	5:27am	14	WT Deer	Male	1	
	July 2, 2020	4:46am	13	WT Deer	Male	1	
	July 4, 2020	11:38am	27	Deer	Fawn	1	
	July 6, 2020	12:48am	12	WT Deer	Female	1	
MG 2	June 13, 2020	8:33pm	27	WT Deer	Female	1	
	June 13, 2020	11:17pm	25	WT Deer	Unknown	1	
	June 13, 2020	8:33pm	27	WT Deer	Female	1	
	June 14, 2020	5:18am	21	WT Deer	Female	1	
	June 14, 2020	5:34pm	17	WT Deer	Female	1	
	June 14, 2020	8:32pm	15	WT Deer	Male	1	Young buck
	June 14, 2020	9:11pm	14	WT Deer	Female	1	
	June 14, 2020	9:18pm	14	WT Deer	Male	1	Young buck
	June 15, 2020	11:03am	15	WT Deer	Male	1	
	June 15, 2020	5:54pm	25	WT Deer	Female	1	
	June 17, 2020	11:21pm	8	WT Deer	Female	1	
	June 18, 2020	5:09am	6	WT Deer	Female	1	
	June 18, 2020	9:24am	9	WT Deer	Female	1	
	June 18, 2020	12:59pm	21	WT Deer	Female	1	
	June 18, 2020	6:29pm	21	WT Deer	Male	1	
	June 18, 2020	8:09pm	14	WT Deer	Female	1	
	June 19, 2020	10:58pm	8	WT Deer	Female	1	
	June 20, 2020	5:08am	7	Mule Deer	Male	2	
	June 20, 2020	6:13am	7	WT Deer	Male	1	
	June 20, 2020	6:39pm	20	WT Deer	Female	1	
	June 20, 2020	7:01pm	18	WT Deer	Male	1	Young buck
	June 20, 2020	8:21pm	14	WT Deer	Male/Female	3	
	June 20, 2020	8:57pm	12	WT Deer	Male	1	Young buck
	June 20, 2020	9:24pm	12	WT Deer	Female	2	
	June 21, 2020	4:57am	3	WT Deer	Female	1	
	June 21, 2020	3:31pm	25	WT Deer	Female	2	
	June 21, 2020	5:10pm	26	WT Deer	Female	1	
	June 21, 2020	5:49pm	3	WT Deer	Female	1	
	June 22, 2020	9:57pm	16	WT Deer	Female	2	

Table B-III 5. Maple Grove Wildlife Camera Records. Meewasin. Recorded Jun-July 2020. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	June 23, 2020	6:54am	11	WT Deer	Male	2	Young buck
	June 23, 2020	8:55pm	24	WT Deer	Female	1	
	June 24, 2020	11:36am	27	WT Deer	Female	1	
	June 24, 2020	4:18pm	27	WT Deer	Female	1	
	June 25, 2020	6:43am	14	Mule Deer	Female	1	
	June 26, 2020	10:08am	25	WT Deer	Male	1	
	June 27, 2020	8:18am	15	WT Deer	Male	2	
	June 27, 2020	10:46pm	13	WT Deer	Female	1	
	June 29, 2020	2:21pm	26	WT Deer	Female	1	
	June 30, 2020	5:22am	14	WT Deer	Female	1	
	June 30, 2020	12:39pm	19	WT Deer	Male	1	
	July 1, 2020	10:34am	18	WT Deer	Male	1	
	July 1, 2020	12:45pm	26	WT Deer	Male	1	
	July 4, 2020	10:11pm	19	WT Deer	Male	1	
	July 5, 2020	4:55am	13	WT Deer	Male	1	Young buck
101MFCAM	July 5, 2020	8:21pm	20	WT Deer	Male	2	Young buck
	July 7, 2020	6:47pm	26	Mule Deer	Female	1	
	July 7, 2020	11:34pm	21	WT Deer	Male	1	Young buck
	July 8, 2020	1:30am	19	WT Deer	Female	2	Doe with fawn
	July 9, 2020	9:02am	17	Coyote	unknown		
	July 11, 2020	2:19am	10	WT Deer	Female	1	
	July 11, 2020	5:31am	9	WT Deer	Male	2	
	July 11, 2020	8:06pm	25	Raven	Unknown	1	
	July 11, 2020	8:19pm	24	WT Deer	Male	1	Young buck
	July 12, 2020	3:04am	13	WT Deer	Female	1	
	July 12, 2020	5:32pm	28	WT Deer	Male	1	Young buck
	July 13, 2020	5:30am	10	WT Deer	Female	2	Female with fawn
	July 14, 2020	10:33pm	15	WT Deer	Female	1	
	July 15, 2020	2:49am	14	WT Deer	Female	2	Female with fawn
	July 15, 2020	7:29am	13	WT Deer	Female and Male	2	
102MFCAM	July 15, 2020	9:54am	22	Bird	unknown	1	
	July 15, 2020	9:50pm	17	WT Deer	Female		
	July 18, 2020	4:39am	10	WT Deer	Female	2	Female with fawn
	July 19, 2020	6:03am	10	Deer		1	Fawn
	July 19, 2020	6:07am	10	WT Deer	Female	1	
	July 22, 2020	5:33am	13	WT Deer	Male	1	Young buck
	July 22, 2020	7:20am	16	WT Deer	Female	2	Female with fawn
	July 22, 2020	8:18pm	28	WT Deer	Female	1	
	July 23, 2020	2:10am	23	WT Deer	Female	1	
	July 27, 2020	4:30am	9	WT Deer	Female	1	
	July 28, 2020	5:39am	10	WT Deer	Male	1	Young buck

Table B-III 6. Maple Grove Wildlife Camera Records. Meewasin. Recorded Various 2020. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	July 28, 2020	8:18pm	27	WT Deer	Female	1	
	July 29, 2020	5:31am	14	WT Deer	Female	1	
	July 29, 2020	5:32am	14	WT Deer	Male	1	
	July 29, 2020	6:49am	15	WT Deer	Female	2	Female with Fawn
	July 29, 2020	7:39pm	29	WT Deer	Male	1	
	July 29, 2020	8:15pm	28	WT Deer	Male and Female	2	
	July 30, 2020	9:56am	26	WT Deer	Female	1	
	Aug 3, 2020	5:11am	15	WT Deer	Female	1	
Test 3	Feb 18, 2020	3:57am	22	WT Deer	Female	1	Date programming issue
	Feb 18, 2020	7:37pm	17	WT Deer	Female	1	
	Feb 18, 2020	9:39pm	14	WT Deer	Female	1	
	Feb 19, 2020	8:51pm	18	WT Deer	Male	1	Young buck
	Feb 20, 2020	5:50am	8	WT Deer	Male	1	Young buck
	Feb 21, 2020	2:31am	12	WT Deer	Female	1	
	Feb 21, 2020	8:31pm	10	WT Deer	Unknown	1	Blurry running image
	Feb 22, 2020	11:41am	14	WT Deer	Male	1	Young buck
	Feb 22, 2020	3:45pm	18	WT Deer	Male	1	Young buck
	Feb 22, 2020	11:53pm	5	WT Deer	Female	1	
	Feb 23, 2020	7:50am	12	WT Deer	Male	1	Young buck
	Feb 23, 2020	6:31pm	13	WT Deer	Female	1	
	Feb 24, 2020	5:12am	6	WT Deer	Male	1	Young buck
	Feb 24, 2020	6:34am	7	WT Deer	Female	1	
	Feb 25, 2020	8:05am	21	WT Deer	Male	1	
	Feb 26, 2020	7:08am	12	WT Deer	Female	1	
	Feb 26, 2020	11:58am	26	WT Deer	Male	1	
	Feb 26, 2020	9:10pm	20	WT Deer	Male	1	Young buck
	Feb 26, 2020	11:15pm	12	WT Deer	Female	1	
	Feb 27, 2020	1:23am	10	WT Deer	Female	1	
	Feb 27, 2020	2:28am	9	WT Deer	Female	1	
	Feb 27, 2020	8:17pm	27	WT Deer	Female	1	
	Feb 27, 2020	9:33pm	23	WT Deer	Male	1	
	Feb 28, 2020	3:42pm	27	WT Deer	Female	1	
	Feb 29, 2020	3:39am	16	WT Deer	Female	1	
	Feb 29, 2020	5:07am	15	WT Deer	Male	1	Young buck
	Feb 29, 2020	5:37am	15	Mule Deer	Female	1	
	Feb 29, 2020	9:14pm	21	Mule Deer	unknown	1	Just the butt end on camera

Table B-III 7. Maple Grove Wildlife Camera Records. Meewasin. Recorded Various 2020. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
101MFCAM	Mar2, 2020	1:39am	18	Deer	Female	1	Dark
	Mar2, 2020	11:37am	1	WT Deer	Male	2	Young bucks
	Mar2, 2020	10:00pm	14	WT Deer	Female	1	
	June 30, 2020	2:52pm	20	Mule Deer	unknown	1	Head down
	July 6, 2020	9:00pm	21	WT Deer	Female	1	
	July 8, 2020	5:48am	16	Deer	Female	1	
	July 8, 2020	11:02pm	16	WT Deer	Female	1	
	July 9, 2020	6:25am	14	WT Deer	Male	1	Young buck
	July 9, 2020	1:32pm	24	WT Deer	Female	1	
	July 11, 2020	6:42am	13	Deer	Female	1	
	July 11, 2020	7:18am	15	WT Deer	Female	2	
	July 11, 2020	7:52am	21	WT Deer	Male	1	
	July 11, 2020	3:26pm	27	Deer	unknown	1	Fawn
	July 11, 2020	8:54pm	23	WT Deer	Female	1	
	July 12, 2020	8:54pm	21	WT Deer	Female	1	
	July 13, 2020	2:08am	12	WT Deer	Female	1	
	July 14, 2020	4:33am	10	WT Deer	Female	1	
	July 17, 2020	4:43am	16	WT Deer	Unknown	1	Head down
	July 17, 2020	8:22am	26	WT Deer	Male	1	Young buck
	July 17, 2020	1:22pm	26	WT Deer	Male	1	
	July 19, 2020	7:39am	16	WT Deer	Male	1	
	July 20, 2020	4:56am	13	unknown	unknown	1	Dark, blurry
	July 20, 2020	7:16pm	25	WT Deer	Female	1	
	July 20, 2020	9:38pm	19	WT Deer	Female	1	
102MFCAM	July 22, 2020	7:42pm	29	WT Deer	Male	1	
	July 23, 2020	3:14am	21	WT Deer	Female	1	
	July 24, 2020	10:39pm	18	WT Deer	Female	1	
	July 25, 2020	9:10am	21	WT Deer	Male	1	
	July 26, 2020	1:06am	12	WT Deer	Female	1	
	July 26, 2020	5:13am	11	WT Deer	Male	1	
	July 27, 2020	9:08pm	22	WT Deer	Female	1	
	July 28, 2020	5:19am	9	WT Deer	Male	1	
	July 28, 2020	5:54am	9	WT Deer	Female	1	
	July 28, 2020	6:36am	11	WT Deer	Female	2	
	July 29, 2020	4:19am	14	WT Deer	Female	1	
	July 30, 2020	6:46pm	28	WT Deer	Male	1	

Table B-III 8. Maple Grove Wildlife Camera Records. Meewasin. Recorded Jul-Aug 2020. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	July 30, 2020	11:34pm	21	WT Deer	Female	1	
	July 31, 2020	5:27am	15	WT Deer	Male	1	
	July 31, 2020	5:55am	14	WT Deer	Male	1	
	July 31, 2020	6:34am	15	WT Deer	Female	1	
	August 2, 2020	5:08am	11	WT Deer	Female	1	
	August 2, 2020	10:32pm	22	WT Deer	Male	1	
	August 4, 2020	2:10am	18	WT Deer	Male	1	
	August 4, 2020	5:38am	17	WT Deer	Male	1	
	August 4, 2020	6:11am	15	WT Deer	Female	1	
	August 4, 2020	11:30am	26	WT Deer	Male	1	
	August 4, 2020	11:45am	26	WT Deer	Male	1	Young buck
	August 4, 2020	7:34pm	25	WT Deer	Male	1	
	August 4, 2020	8:35pm	22	WT Deer	Female	1	
	August 4, 2020	9:35pm	15	WT Deer	Female	1	
	August 5, 2020	8:17pm	25	WT Deer	Male	1	
	August 5, 2020	8:26pm	24	WT Deer	Female	1	
	August 7, 2020	5:03am	19	WT Deer	Female	1	
	August 8, 2020	5:25am	13	WT Deer	Male	1	
	August 8, 2020	1:12pm	26	WT Deer	Unknown	1	Unknown, shot of hindquarters
	August 8, 2020	6:07pm	26	WT Deer	Female	1	
	August 8, 2020	6:53pm	25	WT Deer	Male	1	Young buck
	August 9, 2020	8:57am	14	WT Deer	Male	1	Young buck
	August 9, 2020	9:08am	14	WT Deer	Male	1	Young buck
	August 9, 2020	6:09pm	22	WT Deer	Male	2	
	August 10, 2020	5:53am	8	WT Deer	Female	2	Doe and fawn
	August 10, 2020	5:55am	8	WT Deer	Female	1	
	August 10, 2020	5:56am	8	WT Deer	Fawn	1	
	August 10, 2020	6:39am	9	WT Deer	Female	1	
	August 10, 2020	9:14am	20	WT Deer	Female	1	
	August 10, 2020	11:49am	26	WT Deer	Female	1	
	August 10, 2020	1:33pm	25	WT Deer	unknown	1	Unknown, shot of hindquarters
	August 10, 2020	8:23pm	21	WT Deer	Male	1	Young buck
	August 10, 2020	9:15pm	17	WT Deer	Female	1	
	August 10, 2020	9:15pm	17	WT Deer	Fawn	1	
	August 10, 2020	9:30pm	15	WT Deer	Female	1	
	August 11, 2020	5:27am	11	WT Deer	Male	1	

Table B-III 9. Maple Grove Wildlife Camera Records. Meewasin. Recorded Aug-Oct 2020. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	August 11, 2020	5:44am	11	WT Deer	Male	1	
	August 12, 2020	8:34pm	20	WT Deer	Unknown	1	
	August 12, 2020	8:46pm	19	WT Deer	Female	1	
	August 12, 2020	11:49pm	15	WT Deer	Male	1	
	August 14, 2020	5:00am	11	WT Deer	Female	1	
	August 14, 2020	6:40am	9	WT Deer	Male	1	
	August 14, 2020	6:41am	9	WT Deer	Female	1	
	August 14, 2020	6:41am	9	WT Deer	Male	1	
	August 14, 2020	8:48pm	14	WT Deer	Female	1	
	August 15, 2020	3:59am	7	WT Deer	Female	1	
	August 15, 2020	5:17am	6	WT Deer	Female	1	
	August 15, 2020	7:28am	9	WT Deer	Female	1	
	August 15, 2020	7:43am	12	WT Deer	Male	1	
	August 15, 2020	8:04am	15	WT Deer	Female	1	
	August 15, 2020	8:30am	17	WT Deer	Female	1	
	August 16, 2020	12:22am	10	WT Deer	Female	1	
	August 17, 2020	7:24pm	26	WT Deer	Female	1	
	August 18, 2020	7:28am	13	WT Deer	Female	1	
Plot 1	October 16, 2020	12:24pm	7	Mule Deer	Female	1	
	October 16, 2020	7:24am	-13	Mule Deer	Female	2	
	October 17, 2020	4:31pm	-2	WT Deer	Female	1	
	October 19, 2020	5:26am	-8	Coyote	Unknown	1	
	October 19, 2020	6:06	-8	Coyote	Unknown	1	
	October 19, 2020	7:51am	-9	Coyote			
	October 19, 2020	7:55am	-8	Mule Deer	Female	1	
	October 20, 2020	7:29am	-7	WT Deer	Female	1	
	October 20, 2020	3:49pm	-2	Coyote	unknown	1	
	October 20, 2020	4:04pm	-2	coyote	Unknown	1	
	October 20, 2020	4:41pm	-2	Mule Deer	Female	2	
	October 20, 2020	5:49pm	-3	Mule Deer	Female	3	
	October 21, 2020	2:09pm	2	Mule Deer	Female	3	
	October 21, 2020	4:06pm	0	Mule Deer	Female	3	
	October 21, 2020	4:51pm	-1	Mule Deer	Female	1	
	October 21, 2020	5:42pm	-2	Coyote	unknon	1	
	October 22, 2020	4:05pm	-3	Mule Deer	Female	1	
	October 22, 2020	4:19pm	-3	Mule Deer	Female	3	

Table B-III 10. Maple Grove Wildlife Camera Records. Meewasin. Recorded Oct-Nov 2020. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	October 22, 2020	4:25pm	-3	Mule Deer	Female	3	
	October 23, 2020	4:59am	-16	coyote	unknown	1	Blurry photo but shape of a coyote
	October 23, 2020	8:28am	-19	WT Deer	Female		
	October 24, 2020	6:23am	-8	Deer	female	1	
	October 24, 2020	8:16am	-8	Mule Deer	Female	1	
	October 24, 2020	8:17am	-8	Mule Deer	Two young		
	October 24, 2020	9:41am	-7	Mule Deer	female	3	
	October 24, 2020	4:03pm	-4	Mule deer	Female	1	
	October 24, 2020	6:50pm	-7	Deer	Female	1	
	October 24, 2020	8:41pm	-7	Coyote	Unknown	1	Dark and burry
	October 25, 2020	7:40am	-7	coyote	unknown	1	Dark and blurry
	October 25, 2020	10:26pm	-12	coyote	Unknown	1	
	October 26, 2020	7:54am	-12	Coyote	Unknown	1	
	October 26, 2020	12:30pm	0	Magpie	Unknown	1	
	October 26, 2020	5:07pm	1	Bird	Unknown	1	
	October 27, 2020	1:37am	-5	Deer	Female	1	
	October 27, 2020	7:47 am	2	Deer	female	1	
	October 28, 2020	7:46am	-1	Deer	female	3	
	October 28, 2020	8:35am	1	Deer	Male	1	
	October 30, 2020	7:14pm	4	Deer	Female	1	
	November 1, 2020	6:54am	-11	Coyote	Unknown	1	
	November 1, 2020	5:21pm	11	WT Deer	Female	2	
	November 2, 2020	4:36am	-5	Coyote	Unknown	1	
	November 2, 2020	9:58pm	0	Coyote	Unknown	1	
	November 4, 2020	1:57am	-2	Coyote	Unknown	1	
	November 6, 2020	5:54pm	2	WT Deer	Male	1	
	November 7, 2020	5:11pm	-2	Deer	Female	1	
	November 11, 2020	1:01pm	-9	Mule Deer	Female	3	With two young
	November 11, 2020	7:02pm	-15	Mule Deer	Female	2	
	November 12, 2020	9:06am	-24	WT Deer	Female	1	
	November 12, 2020	9:07am	-24	WT Deer	Male	1	
	November 12, 2020	1:22pm	-10	Deer	Female		
	November 12, 2020	6:07pm	-15	Deer	Female	1	
	November 12, 2020	6:15pm	-15	WT Deer	Male	1	
	November 12, 2020	6:40	-15	WT Deer	Male and Female	2	
	November 12, 2020	7:04	-14	WT Deer	Female	1	

Table B-III 11. Maple Grove Wildlife Camera Records. Meewasin. Recorded Nov-Dec 2020. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	November 12, 2020	7:07pm	-15	WT Deer	Male	1	
	November 13, 2020	2:59am	-20	WT Deer	Female	1	
	November 13, 2020	8:15am	-17	WT Deer	Male	1	
	November 13, 2020	1:36pm	1	WT Deer	Female	1	
	November 13, 2020	3:37pm	1	WT Deer	Female	1	
	November 13, 2020	4:27pm	1	WT Deer	Female	1	
	November 13, 2020	4:30pm	-2	Mule Deer	Female	3	
	November 14, 2020	12:39	-5	Deer	Female	1	
	November 14, 2020	11:58am	-3	WT Deer	Female	1	
	November 14, 2020	5:30pm	-6	WT Deer	Female		
	November 15, 2020	4:47am	-8	WT Deer	Male	1	
	November 15, 2020	5:04am	-8	WT Deer	Male and Female	2	
	November 15, 2020	6:32am	-8	Mule Deer	Male	1	
	November 15, 2020	10:45am	-7	WT Deer	Female	2	
	November 15, 2020	10:51am	-7	WT Deer	Male	1	
	November 15, 2020	2:36pm	-4	Mule Deer	Male	1	
	November 15, 2020	7:57pm	-9	Coyote	unknown	1	
	November 16, 2020	6:45am	-8	Coyote	Unknown	1	
	November 16, 2020	12:54pm	-5	Mule Deer	Female	1	
	November 16, 2020	10:16pm	-8	Mule Deer	Male	1	
	November 17, 2020	8:41am	-8	Coyote	Unknown	1	
	November 18, 2020	9:27am	-1	Deer	Female	1	
	November 18, 2020	10:01pm	-5	WT Deer	Male	1	
	November 19, 2020	6:58am	-7	WT Deer	Female	1	
	November 20, 2020	9:11pm	-19	WT Deer	Male	1	
	November 24, 2020	10:05am	-6	Magpie	Unknown	1	
	November 25, 2020	7:46pm	-2	Coyote	Unknown	1	
	November 28, 2020	1:47pm	-1	Magpie	unknown		
	December 1, 2020	4:30pm	0	Deer	Female	1	
	December 1, 2020	4:33pm	0	Mule Deer	Male	1	
	December 2, 2020	9:31am	-15	Mule Deer	Male	1	
	December 2, 2020	4:29pm	-4	Deer	Female	1	
	December 4, 2020	4:22am	-12	Deer	Male	1	
	December 6, 2020	11:55pm	-14	Fox or coyote?	Unknown	1	Blurry and dark
	December 8, 2020	2:43pm	1	Mule Deer	Female	1	
	December 12, 2020	11:29pm		Fox or coyote	Unknown	1	

Table B-III 12. Maple Grove Wildlife Camera Records. Meewasin. Recorded Dec-Feb 2021. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	December 14, 2020	5:37pm	-18	coyote	Unknown	1	
	December 15, 2020	7:11am	-22	Coyote?	Unknown	1	dark
	December 17, 2020	10:58am	-10	Coyote	Unknown	1	
	December 19, 2020	10:31pm	-14	Coyote?	Unknown	1	dark
	December 21, 2020	6:01pm	-9	Coyote	Unknown	1	
	December 22, 2020	10:19pm	-15	Coyote	Unknown	1	
	December 23, 2020	10:49pm	-12	Coyote	Unknown	1	
	December 24, 2020	12:44pm	-3	Coyote	Unknown	1	
	December 24, 2020	11:47pm	-13	Coyote	Unknown	1	
	December 28, 2020	11:08pm	-10	Magpie	Unknown	1	
	December 29, 2020	2:18am	-17	Coyote	Unknown	1	
	December 29, 2020	7:37pm	-10	Coyote	unknown	1	
	December 31, 2020	2:06pm	-11	Magpie	Unknown	1	
	January 1, 2020	2:52am	-18	Coyote	Unknown	1	
	January 1, 2020	5:05am	-19	Coyote	Unknown	1	
	January 1, 2020	8:41am	-19	coyote	unknown	1	
	January 1, 2020	9:15pm	-14	coyote	Unknown	1	
	January 2, 2020	5:39pm	-4	Coyote	Unknown	1	
	January 5, 2020	12:46am	-14	Coyote	unknown	1	
	January 6, 2020	7:46pm	-8	Coyote	Unknown	1	
	January 7, 2020	5:23pm	-10	fox	Unknown	1	
	January 8, 2021	12:14	-10	Magpie	Unknown	1	
	January 9, 2021	7:11am	-20	Coyote?	Unknown	1	dark
	January 11, 2021	7:21am	-19	Coyote	Unknown	1	
	January 12, 2021	12:08am	-14	Coyote	Unknown	1	
	January 12, 2021	8:10am	-17	Coyote?	Unknown	1	dark
	January 15, 2021	7:40am	-19	Fox?	Unknown	1	dark
	January 16, 2021	6:53pm	-7	Coyote?	Unknown	1	dark
	January 21, 2021	7:37pm	-10	Coyote?	Unknown	1	dark
	January 21, 2021	9:23pm	-10	Coyote?	Unknown	1	dark
	January 26, 2021	6:08am	-30	Coyote?	Unknown	1	dark
	January 31, 2021	4:02am	-13	Coyote?	Unknown	1	dark
	February 3, 2021	10:22pm	-20	Coyote?	Unknown	1	Dark
	February 4, 2021	6:56am	-19	Coyote?	Unknown	1	dark
	February 4, 2021	11:24am	-14	Fox	Unknown	1	
	February 4, 2021	12:21pm	-14	Fox	Unknown	1	

Table B-III 13. Maple Grove Wildlife Camera Records. Meewasin. Recorded Feb-Aug 2021. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	February 11, 2021	6:32am	5	Snowshoe Hare	unknown	1	
	February 13, 2021	8:12am	5	Snowshoe Hare	unknown	1	
	February 13, 2021	6:05pm	-31	Fox	Unknown	1	
	February 14, 2021	5:17pm	-21	Snowshoe Hare	unknown	1	
	February 14, 2021	6:48pm	-28	coyote	unknown	1	
	February 17, 2021	3:42am	-21	Coyote?	Unknown	1	dark
	February 19, 2021	1:26am	-31	Coyote?	Unknown	1	dark
	February 20, 2021	1:27am	-13	Coyote?	Unknown	1	dark
	February 21, 2021	9:07pm	1	coyote	Unknown	1	
	February 22, 2021	10:15pm	-4	Coyote?	Unknown	1	dark
	February 24, 2021	3:34am	-9	Snowshoe Hare	Unknown	1	
	February 25, 2021	2:51pm	3	Coyote	unknown	1	
	February 25, 2021	11:26pm	-5	Snowshoe Hare	Unknown	1	
	February 26, 2021	11:57pm	-19	Moose		1	No antlers
	March 1, 2021	4:31am	-14	Fox?	unknown	1	dark
	March 1, 2021	5:17am	-14	Fox?	unknown	1	dark
	March 5, 2021	2:36am	-9	Snowshoe Hare	Unknown	1	
	March 5, 2021	4:06am	-10	Coyote	Unknown	1	
	March 5, 2021	7:25am	-13	Coyote	Unknown	3	
	March 7, 2021	8:59pm	-4	Fox	Unknown	1	
	March 12, 2021	10:49pm	-7	Snowshoe Hare	unknown		
	March 13, 2021	5:52am	-10	Snowshoe Hare	Unknown	1	
	March 25, 2021	6:00am	-1	Fox?	Unknown	1	dark
	March 25, 2021	6:02am	-1	WT Deer	Female	2	
	March 26, 2021	2:32am	-12	Fox?	Unknown	1	dark
	March 27, 2021	4:51am	-14	Fox?	unknown	1	Blurry, dark
	March 27, 2021	8:09pm	-2	coyote	Unknown	1	
	March 28, 2021	5:11am	1	WT Deer	Female	1	
	March 28, 2021	1:44pm	22	Coyote	Unknown	1	
	March 28, 2021	6:35pm	14	Coyote	Unknown	1	
	March 28, 2021	10:05pm	8	WT Deer	Female	1	
	March 29, 2021	6:40am	2	WT Deer	Female	2	
	March 30, 2021	8:46pm	-15	Coyote	Unknown	1	
	March 31, 2021	9:02am	-2	coyote	Unknown	1	
	April 2, 2021	2:32am	2	Coyote	Unknown	1	
	April 2, 2021	6:31am	-2	Coyote	unknown	1	
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	April 3, 2021	6:18am	3	WT Deer	Male and female	2	
	April 3, 2021	6:49am	1	Fox	Unknown	1	
	April 4, 2021	7:18am	2	coyote	Unknown	1	
	April 6, 2021	1:15pm	20	WT Deer	Female	2	
	May 19, 2021	10:42	7	WT Deer	Unknown	1	Head not in photo
	May 20, 2021	9:08	2	Fox	Unknown	1	
	May 21, 2021	5:59pm	8	WT Deer	Female	1	
	May 22, 2021	9:51pm	10	WT Deer	Female	1	
	May 23, 2021	4:26am	7	Mule Deer	Female	1	
	May 23, 2021	7:09am	9	WT Deer	Female	1	
	May 25, 2021	5:03pm	9	Mule Deer	Female	4	
	May 26, 2021	8:07am	16	WT Deer	Female	1	
	May 27, 2021	7:30am	17	WT Deer	Female	1	
	May 27, 2021	6:15pm	24	Mule Deer	Female	1	
	May 28, 2021	8:07pm	17	WT Deer	Female	1	
	May 28, 2021	9:05pm	15	WT Deer	Female	1	
	June 1, 2021	5:01pm	29	WT Deer	Female	1	
	June 1, 2021	11:24pm	15	Coyote	Unknown	1	
	June 2, 2021	12:34am	13	WT Deer	Female	1	
	June 3, 2021	6:27am	13	WT Deer	Male	1	
	June 4, 2021	2:28am	18	WT Deer	Female	1	

	June 5, 2021	7:35pm	19	WT Deer	Female	1	
	June 6, 2021	7:26am	14	WT Deer	Male	1	
	June 6, 2021	9:34pm	13	WT Deer	Female	1	
	June 7, 2021	8:57am	17	WT Deer	Unknown	1	
	June 8, 2021	3:00am	3	WT Deer	Female	1	
	June 8, 2021	11:23am	25	Deer	Fawn	1	
	June 8, 2021	5:38pm	25	WT Deer	Female	1	
	June 8, 2021	9:20pm	17	WT Deer	Female	1	
	June 9, 2021	8:01pm	20	WT Deer	Male	1	
	June 10, 2021	8:45am	17	WT Deer	Female	1	
	June 10, 2021	5:01pm	22	WT Deer	Unknown	1	Head not in shot
	June 11, 2021	11:56pm	11	Deer	female	1	
	June 13, 2021	9:03am	25	WT Deer	female	1	
	June 14, 2021	7:33pm	29	WT Deer	Female	1	
	June 14, 2021	8:25pm	29	WT Deer	Female	1	
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	June 17, 2021	2:22am	7	WT Deer	Female	1	
	June 17, 2021	12:05pm	25	Coyote	Unknown	1	
	June 17, 2021	6:06pm	23	WT Deer	Female	1	
	June 17, 2021	3:25pm	25	WT Deer	Female	1	
	June 20, 2021	1:53am	10	WT Deer	Female	1	
	June 22, 2021	8:55am	25	WT Deer	female		
	June 23, 2021	9:33pm	18	WT Deer	Female	1	
	June 24, 2021	10:32pm	14	Fox/coyote?	Unknown	1	Dark/blurry
	June 25, 2021	5:13am	6	WT Deer	Male	1	
	June 26, 2021	8:19pm	25	WT Deer	Male	1	
	June 26, 2021	10:39pm	21	WT Deer	female	1	
	June 29, 2021	8:17pm	29	WT Deer	Female	1	
	June 30, 2021	5:06am	13	WT Deer	Male	1	young
	June 30, 2021	5:08am	14	Mule Deer	Female	1	
	July 2, 2021	10:22am	34	WT Deer	Female with Fawn	2	
	July 2, 2021	11:51pm	27	WT Deer	Male	1	
	July 3, 2021	12:10am	27	WT Deer	Male	1	
	July 3, 2021	10:02pm	23	WT Deer	Female	1	
	July 4, 2021	8:49pm	23	WT Deer	Female	1	
	July 5, 2021	12:46am	17	WT Deer	Female	1	
	July 5, 2021	4:00am	16	WT Deer	Female	1	
	July 5, 2021	6:37am	20	WT Deer	Mom and Fawns	3	
	July 5, 2021	1:01pm	26	WT Deer	Male	1	
	July 6, 2021	4:05am	12	WT Deer	Female	1	
	July 6, 2021	8:31pm	20	WT Deer	Female	1	
	July 7, 2021	5:38am	13	WT Deer	Female and fawn	2	
	July 7, 2021	7:38pm	28	WT Deer	Female	1	
	July 7, 2021	7:40pm	28	WT Deer	Female and fawn	2	
	July 7, 2021	9:09pm	25	WT Deer	Female	1	
	July 7, 2021	9:27pm	25	Coyote	Unknown	1	
	July 8, 2021	5:12am	11	WT Deer	Female	1	
	July 8, 2021	9:41am	28	WT Deer	Female	1	
	July 9, 2021	5:33am	11	WT Deer	Male	1	
	July 9, 2021	6:21am	16	WT Deer	Male	1	
	July 10, 2021	9:37am	29	WT Deer	Male	1	
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	July 10, 2021	8:34pm	29	WT Deer	Female	1	
	July 10, 2021	9:45pm	25	WT Deer	Female	1	
	July 11, 2021	8:02pm	25	WT Deer	Female	1	
	July 12, 2021	11:23pm	14	WT Deer	Female	1	
	July 13, 2021	8:51pm	25	WT Deer	Female	1	
	July 14, 2021	5:36am	10	WT Deer	Female and Fawn	2	

	July 15, 2021	3:30am	11	WT Deer	Female	1	
	July 15, 2021	7:08am	16	WT Deer	Female	1	
	July 15, 2021	8:44pm	28	WT Deer	Female	1	
	July 16, 2021	1:30pm	29	WT Deer	Female and Fawn	2	
	July 17, 2021	2:18am	19	WT Deer	Female	1	
	July 17, 2021	10:51am	28	WT Deer	Female and Fawn	2	
	July 17, 2021	11:02pm	22	WT Deer	Female	1	
	July 20, 2021	3:15am	15	WT Deer	Female	1	
	July 21, 2021	4:15am	15	Coyote	Unknown	1	
	July 21, 2021	4:50	14	WT Deer	Female	1	
	July 23, 2021	8:35am	22	WT Deer	Unknown	1	Head not in shot
	July 23, 2021	9:24pm	23	WT Deer	Female	1	
	July 24, 2021	6:02am	10	WT Deer	Female	1	
	July 25, 2021	11:02am	27	WT Deer	Female and Fawn	2	
	July 26, 2021	6:31am	13	WT Deer	Female	1	
	July 26, 2021	7:34pm	27	Coyote	Unknown	1	
	July 27, 2021	3:41am	11	Coyote?	unknown	1	Dark and blurry
	July 27, 2021	9:52am	27	WT Deer	Female	1	
	July 28, 2021	2:45am	14	Coyote	Unknown	1	
	July 28, 2021	6:07am	12	WT Deer	Female	1	
	July 28, 2021	9:39pm	20	Moose	Female	1	
	July 30, 2021	8:19am	25	WT Deer	Female	1	
	July 31, 2021	6:04am	9	WT Deer	Female	2	
	Aug 1, 2021	3:26am	11	Coyote	Unknown	1	
	Aug 1, 2021	11:43pm	17	WT Deer	Female	1	
	Aug 3, 2021	12:48am	20	WT Deer	Female	1	
	Aug 5, 2021	6:59am	11	WT Deer	Female	1	
	Aug 5, 2021	7:02am	12	WT Deer	Fawns	2	
	Aug 9, 2021	3:53am	15	WT Deer	Female	1	
	Aug 10, 2021	12:28am	10	Coyote?	Unknown	1	

Table B-III 14. Maple Grove Wildlife Camera Records. Meewasin. Recorded Various 2020, 2021. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	Aug 10, 2021	7:53pm	23	WT Deer	Female	1	
	Aug 11, 2021	1:47am	12	WT Deer	Unknown	1	No head in shot
	Aug 11, 2021	8:10pm	20	WT Deer	Female	1	
	Aug 11, 2021	8:56pm	17	WT Deer	Female and Fawn	2	
	Aug 13, 2021	5:29	8	WT Deer	Female and Fawn	2	
	Aug 13, 2021	7:17AM	10	WT Deer	Female	1	
	Aug 13, 2021	9:40pm	19	Coyote	Unknown	1	
	Aug 15, 2021	1:50am	14	WT Deer	Female	1	
	Aug 16, 2021	1:13am	15	WT Deer	Female	1	
	Aug 17, 2021	4:22am	14	WT Deer	Female	1	
	Aug 18, 2021	7:25pm	20	Fawn	unknown	1	
	Aug 19, 2021	3:21am	7	Coyote?	unknown	1	Dark and blurry
	Aug 19, 2021	6:41am	6	WT Deer	Female	1	
	Aug 19, 2021	6:09pm	24	WT Deer	Female	1	
	Aug 20, 2021	9:27am	14	WT Deer	Female and Fawn	2	
	Aug 21, 2021	8:01am	11	WT Deer	Female	1	
	Aug 23, 2021	5:47am	6	Fawn		1	
	Aug 25, 2021	6:58am	4	WT Deer	Female and Fawn	2	
	Aug 26, 2021	5:15am	4	WT Deer	Female	1	
	Aug 26, 2021	5:38am	4	WT Deer	Female	1	
	Aug 28, 2021	6:17pm	22	WT Deer	Female	1	
	Aug 28, 2021	11:41pm	9	Coyote	Unknown	1	
	Aug 30, 2021	1:24am	8	Coyote	Unknown	1	
	Aug 30, 2021	6:27am	7	WT Deer	Female	1	
	Aug 31, 2021	12:49pm	29	WT Deer	Female and Fawn	2	
	Aug 31, 2021	8:32pm	15	Coyote	Unknown	1	
	Sept 1, 2021	6:50am	9	WT Deer	Female	1	
	Sept 1, 2021	7:11am	9	WT Deer	Male	1	
	Sept 1, 2021	7:25pm	19	WT Deer	Male	1	
	Sept 3, 2021	6:20pm	21	WT Deer	Female and Fawn	2	
	Sept 3, 2021	6:21pm	21	WT Deer	Female	1	
	Sept 3, 2021	6:22pm	22	WT Deer	Fawn	1	
	Sept 5, 2021	12:40am	7	Moose	male	1	
	Sept 5, 2021	6:05pm	27	Fawn	Unknown	1	
	Sept 8, 2021	7:42am	4	WT Deer	Female	1	
	Sept 8, 2021	8:02am	6	WT Deer	Female and Fawn	2	
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	Sept 9, 2021	11:29am	24	WT Deer	Fawn	1	
	Sept 9, 2021	6:05pm	27	WT Deer	Female	2	
	Sept 11, 2021	8:32am	6	WT Deer	Male	1	
	Sept 11, 2021	10:07am	10	Coyotes	Unknown	2	
	Sept 13, 2021	4:02am	10	WT Deer	Female	1	
	Sept 17, 2021	7:06am	-4	WT Deer	Female	1	
	Sept 17, 2021	8:35am	3	WT Deer	Female	1	
	Sept 17, 2021	4:21pm	19	WT Deer	Female	2	
	Sept 19, 2021	12:26pm	21	Coyote	Unknown	1	
	Sept 19, 2021	10:44pm	6	Coyote	Unknown	1	
	Sept 20, 2021	8:27am	5	WT Deer	Female	1	
	Sept 21, 2021	9:23am	6	WT Deer	Female	1	
	Sept 21, 2021	9:24am	7	WT Deer	Female	1	
	Jan 3, 2017	11:41pm	21	WT Deer	Female	1	*wrong dates

Plot1_10_15 2020	Jan 7, 2017	3:42pm	13	WT Deer	Unknown	1	No head in shot
	Jan7, 2017	5:01pm	18	WT Deer	Female	1	
	Jan 7, 2017	6:57pm	20	WT Deer	Male	1	
	Jan 8, 2017	3:13am	25	WT Deer	Male	1	
	Jan 8, 2017	4:15am	21	WT Deer	Female	1	
	Jan 8, 2017	4:39pm	11	WT Deer	Male	1	
	Jan 9, 2017	12:22pm	6	WT Deer	Male	1	
	Jan 10, 2017	12:41am	13	WT Deer	Male	1	
	Jan 11, 2017	4:13am	17	WT Deer	Female	1	
	Jan 12, 2017	5:33am	14	WT Deer	Female	1	
	Jan 14, 2017	3:44am	16	WT Deer	Male and female	2	
	Jan 15, 2017	7:19am	11	WT Deer	Female	1	
	Jan15, 2017	6:25pm	10	WT Deer	Male	2	
	Jan, 16, 2017	1:12am	16	WT Deer	Male	1	
	Jan 17, 2017	2:02am	21	WT Deer	Female	1	
	Jan 17, 2017	5:24pm	10	WT Deer	Female	1	
	Jan 18, 2017	4:50pm	11	WT Deer	Female and fawn	2	
	Jan 21, 2017	4:18pm	-4	WT Deer	Female and Fawn	2	
	Jan 21, 2017	7:07pm	9	WT Deer	Female	1	
	Jan 29, 2017	4:44pm	1	WT Deer	Male	1	
	Jan 29, 2017	5:04pm	4	WT Deer	Female and fawn	3	
	Jan 31, 2017	4:14pm	-1	WT Deer	Female	1	
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	Feb 1, 2017	4:29pm	5	WT Deer	Female	1	
	Feb 1, 2017	8:39pm	26	Maggie	Unknown	1	
	Feb 4, 2017	2:33am	22	WT Deer	Unknown	1	
	Feb 5, 2017	1:55pm	9	WT Deer	Female	1	
	Feb 5, 2017	10:52pm	25	WT Deer	Male	1	
	Feb 10, 2017	2:25pm	-1	WT Deer	Female	2	
	Feb 11, 2017	3:15am	21	WT Deer	Female	1	
	Feb 13, 2017	4:20pm	-6	WT Deer	Female	2	
	Feb 17, 2017	3:28am	18	WT Deer	Female	1	
	Feb 18, 2017	2:18pm	7	WT Deer	Female	1	
	Feb 19, 2017	4:29am	10	WT Deer	Female	1	
	Feb 21, 2017	3:42am	14	WT Deer	Female	1	
	Feb 22, 2017	2:02am	9	WT Deer	Female	1	
	Feb 22, 2017	3:05am	4	Mule Deer	Male	1	
	Feb 22, 2017	3:46pm	2	WT Deer	Female	1	
	Feb 24, 2017	8:48am	1	WT Deer	Female	1	
	Feb 24, 2017	12:01pm	-1	WT Deer	Female with young	2	
	Feb 24, 2017	12:58pm	-2	WT Deer	Male	1	
	Feb 25, 2017	3:32pm	0	WT Deer	Female	1	
	Feb 26, 2017	2:38am	7	WT Deer	Female	1	
	Feb 26, 2017	6:33am	1	WT Deer	Female	1	
	Feb 26, 2017	11:01pm	1	Coyote	Unknown	1	
	Feb 27, 2017	2:57am	1	WT Deer	Male	1	
	Feb 27, 2017	1:31pm	-7	WT Deer	Female	1	
	Feb 27, 2017	4:37pm	-5	Mule Deer	Female	2	
Plot 2 5/18 2021	Oct 19 2020	10:03am	-4	WT Deer	Female	3	
	Oct 19 2020	3:52pm	3	WT Deer	Female	1	
	Oct 22 2020	7:09am	-16	Mule Deer	Female	4	
	Oct 23 2020	4:56am	-16	Coyote	Unknown	1	
	Oct 23 2020	1:52pm	-2	WT Deer	Female	1	
	Oct 23 2020	9:23pm	-8	Coyote	Unknown	1	
	Oct 24 2020	8:50am	-8	Mule Deer	Female	3	
	Oct 25 2020	8:32am	-7	Coyote	unknown	1	
	Oct 27 2020	7:15am	2	Deer	Female	1	
	Oct 27 2020	6:45pm	6	WT Deer	Male	1	
	Oct 27 2020	6:46	6	WT Deer	Male	1	young

Table B-III 15. Maple Grove Wildlife Camera Records. Meewasin. Recorded Aug2020-Jun2021. Browning Dark OPS HD 26LC Units.

Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	Oct 30 2020	5:39	-1	WT Deer	Male	1	One antler missing
	Oct 30 2020	4:43pm	8	WT Deer	Female	1	
	Oct 30 2020	11:18pm	-1	WT Deer	Male	1	
	Oct 31 2020	11:22am	1	WT Deer	Female	2	
	Nov 2 2020	4:08am	-4	WT Deer	Male	1	young
	Nov 4 2020	2:31am	-2	Coyote	Unknown	1	
	Nov 5 2020	7:32am	1	WT Deer	Male	1	
	Nov 6 2020	2:54am	0	WT Deer	Male	1	
	Nov 8 2020	7:04am	-8	WT Deer	Female	1	
	Nov 8 2020	2:07pm	-8	Mule Deer	Female	1	
	Nov 10 2020	11:34am	-6	Mule Deer	Male	1	
	Nov 11 2020	2:00am	-9	Mule Deer	Male	1	One antler
	Nov 14 2020	6:30am	-5	Mule Deer	Male	1	
	Nov 15 2020	5:16pm	-8	WT Deer	Male	1	
	Nov 17 2020	4:50pm	-5	Mule Deer	Male	1	One antler
	Nov 18 2020	4:32pm	-3	Mule Deer	Male	1	
	Nov 19 2020	2:44am	-6	WT Deer	Female	1	
	Nov 25 2020	5:52pm	-2	WT Deer	Female	2	
	Nov 27 2020	3:07pm	11	Mule Deer	Male	1	
	Dec 02 2020	6:00am	-13	Mule Deer	Male	1	
	Dec 8 2020	10:02am	-3	Mule Deer	Male	1	
Plot 9/21 2021	Jan 3 2021	9:35pm	-7	Fox	Unknown	1	dark
	Feb 4 2021	8:30am	-20	Fox	Unknown	1	
	Feb 4 2021	10:11am	-15	Fox	Unknown	1	
	May 19 2021	5:40am		WT Deer	Female	2	
	May 19 2021	11:28am	7	WT Deer	Female	3	
	May 19 2021	3:30pm	26	WT Deer	Female	2	
	May 20 2021	8:58am	2	WT Deer	Female	1	
	May 20 2021	9:33pm	2	WT Deer	Female	1	
	May 21 2021	4:49am	0	WT Deer	Female	4	
	May 21 2021	3:17pm	12	WT Deer	Female	3	
	May 22 2021	7:51pm	12	WT Deer	Male	2	
	May 22 2021	10:13pm	11	WT Deer	Male	1	
	May 23 2021	6:47am	9	WT Deer	Female	1	
	May 24 2021	3:26pm	10	WT Deer	Female	1	
	May 24 2021	9:47pm	9	WT Deer	Female		
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	May 25 2021	4:42am	8	WT Deer	Female	1	
	May 25 2021	7:57pm	9	WT Deer	Female	1	
	May 26 2021	9:53pm	7	WT Deer	Female	1	
	May 27 2021	5:25am	-1	WT Deer	Female	1	
	May 27 2021	6:34am	0	Coyote	Unknown	1	
	May 28 2021	5:42am	8	WT Deer	Female	1	
	May 28 2021	10:22am	8	WT Deer	Male	1	
	May 28 2021	8:07pm	16	WT Deer	Male	1	
	May 30 2021	12:12am	8	WT Deer	Female	2	
	May 30 2021	5:32am	-1	WT Deer	Male	1	
	May 30 2021	8:08am	11	WT Deer	Female	1	
	May 30 2021	7:11pm	26	WT Deer	Female	3	
	May 31 2021	10:52pm	15	WT Deer	Female	2	
	Jun 1 2021	4:50am	6	WT Deer	Female	1	
	Jun 1 2021	8:12am	18	WT Deer	Female	1	
	Jun 1 2021	8:18am	20	WT Deer	Female	2	
	Jun 1 2021	5:12pm	29	WT Deer	Male	1	
	Jun 1 2021	5:19pm	29	WT Deer	Female	1	
	Jun 1 2021	9:05pm	25	WT Deer	Female	3	
	Jun 2 2021	1:08am	13	Skunk	unknown	1	
	Jun 2 2021	4:03am	10	WT Deer	Male	1	
	Jun 2 2021	9:29pm	25	WT Deer	Female	1	
	Jun 3 2021	12:43am	15	WT Deer	Female	1	

	Jun 3 2021	7:41am	16	WT Deer	Male	1	
	Jun 3 2021	7:27pm	32	Crow	Unknown	4	
	Jun 3 2021	8:07pm	31	coyote	Unknown	1	
	Jun 4 2021	5:41pm	33	WT Deer	Female	1	
	Jun 4 2021	8:23pm	25	WT Deer	Female	3	
	Jun 5 2021	4:17am	18	WT Deer	Female	1	
	Jun 5 2021	7:39am	18	WT Deer	Female	1	
	Jun 5 2021	8:38pm	16	WT Deer	Male	1	
	Jun 6 2021	11:31am	25	WT Deer	Male	2	
	Jun 6 2021	7:22pm	21	WT Deer	Female	2	
	Jun 7 2021	7:36pm	22	WT Deer	Female	1	
	Jun 8 2021	5:51am	4	WT Deer	Female	1	
	Jun 8 2021	7:29am	9	WT Deer	Female	2	
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	Jun 8 2021	6:54pm	21	WT Deer	Female	2	
	Jun 9 2021	4:39pm	22	WT Deer	Female	1	
	Jun 9 2021	6:09pm	21	WT Deer	Male	1	
	Jun 9 2021	7:00pm	20	WT Deer	Female	1	
	Jun 9 2021	7:23pm	20	WT Deer	Male	1	
	Jun 10 2021	12:11am	16	WT Deer	Female	1	
	Jun 10 2021	10:53am	22	WT Deer	Male	1	
	Jun 10 2021	8:24pm	16	WT Deer	Female	1	
	Jun 10 2021	9:03pm	16	WT Deer	Female and fawn	2	
	Jun 10 2021	9:47pm	16	WT Deer	Female	1	
	Jun 10 2021	10:24pm	16	WT Deer	Female	1	
	Jun 11 2021	4:47am	15	WT Deer	Female	1	
	Jun 12 2021	12:05am	10	WT Deer	Female	1	
	Jun 12 2021	5:20am	6	WT Deer	Male	2	
	Jun 12 2021	6:08am	6	WT Deer	Female	1	
	Jun 12 2021	8:01pm	23	WT Deer	Male	1	
	Jun 13 2021	7:08am	8	Snowshoe Hare	Unknown	1	
	Jun 13 2021	11:57pm	15	WT Deer	Female	1	
	Jun 14 2021	12:52am	16	WT Deer	Female and Fawn	2	
	Jun 14 2021	1:01am	17	WT Deer	Male	1	
Plot 10_15-2020	Aug 19 2020	6:31pm	31	WT Deer	Male	1	
	Aug 20 2020	7:34pm	27	WT Deer	Female and fawn	2	
	Aug 21 2020	10:43am	26	WT Deer	Male	1	
	Aug 21 2020	8:00pm	21	WT Deer	Female and fawn	2	
	Aug 25, 2020	6:43am	13	WT Deer	Female	1	
	Aug 25, 2020	5:52pm	28	Black-capped Chickadee	Unknown	1	
	Aug 26 2020	4:03am	9	WT Deer	Female	1	
	Aug 26 2020	6:31am	9	WT Deer	Female	1	
	Aug 27 2020	3:55pm	15	WT Deer	Male	2	
	Aug 27 2020	8:11pm	11	WT Deer	Female	3	
	Aug 28 2020	5:41am	5	WT Deer	Male	1	
	Aug 29 2020	5:35pm	25	WT Deer	Female	1	
	Aug 30 2020	5:48am	6	WT Deer	Females and male	4	
	Aug 30 2020	5:09pm	19	WT Deer	Female and fawn	2	
	Aug 2020	3:10am	6	WT Deer	Female	2	
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	Sept 2 2020	8:57am	9	WT Deer	Male	2	
	Sept 2 2020	7:04pm	16	WT Deer	Male	1	
	Sept 3 2020	5:26am	5	WT Deer	Female	1	
	Sept 3 2020	7:51pm	13	Fawn	Unknown	1	
	Sept 3 2020	9:28pm	11	WT Deer	Female	1	
	Sept 4 2020	4:34pm	28	Dragonfly	Unknown	1	

		Sept 6 2020	6:51am	9	WT Deer	Female	1	
		Sept 6 2020	4:22pm	25	Bird	Unknown	1	
		Sept 7 2020	6:01pm	11	WT Deer	Female and fawn	2	
		Sept 8 2020	6:49am	-6	WT Deer	Female	2	
		Sept 8 2020	10:06pm	11	WT Deer	Male	1	
		Sept 122020	7:25am	9	WT Deer	Male	1	
		Sept 12 2020	4:41pm	12	WT Deer	Male	1	
		Sept 13 2020	9:57am	8	WT Deer	Female	1	
		Sept 14 2020	12:13pm	20	WT Deer	Female	1	
		Sept 14 2020	6:31pm	15	WT Deer	Female and fawn	2	
		Sept 15 2020	7:58am	5	WT Deer	Male	3	Beautiful photo
		Sept 16 2020	1:03pm	20	WT Deer	Female and fawn	2	
		Sept 16 2020	1:38pm	17	WT Deer	Male	1	
		Sept 16 2020	5:33pm	13	WT Deer	Male	1	one side of antlers missing
		Sept 17 2020	6:31pm	16	WT Deer	Male	1	Young
		Sept 19 2020	7:27am	19	WT Deer	Male	1	Young
		Sept 19 2020	7:45 am	5	WT Deer	Male	2	One missing one side of antlers
		Sept 19 2020	7:55am	6	WT Deer	Male	3	
		Sept 19 2020	11:26am	26	WT Deer	Male	1	
		Sept 19 2020	6:53pm	24	WT Deer	Male	2	
		Sept 22 2020	6:35pm	18	WT Deer	Female	1	
		Sept 23 2020	7:43am	10	WT Deer	Male	1	
		Sept 23 2020	8:28pm	15	WT Deer	Female	1	
		Sept 27 2020	5:29am	5	WT Deer	Male	1	
		Sept 27 2020	6:44am	5	WT Deer	Female	1	
	Sept 27 2020	6:22pm	12	WT Deer	Male	1		
	Oct 3 2020	6:07am	-3	WT Deer	Female	1		
	Oct 6 2020	7:15am	6	WT Deer	Female and Male	2		
	Oct 6 2020	6:24pm	15	WT Deer	Male	1		
	Oct 7 2020	4:44pm	22	WT Deer	Male	1		
Camera ID	Date	Time	Temperature (°C)	Species				
				Type	Gender	Number	Comments	
Plot 4 5_18-21 (100)	Oct 10 2020	6:40am	1	WT Deer	Male	1		
	Oct 11 2020	5:05pm	9	WT Deer	Male	1		
	Oct 11 2020	6:44pm	7	WT Deer	Female	1		
	Oct 13 2020	7:09am	0	WT Deer	Female	1		
	Oct 29 2020	3:15pm	5	Magpie	Unknown	1		
	Nov 13 2020	4:55am	-22	WT Deer	Male	1		
	Nov 23 2020	2:32pm	-2	Magpie	Unknown	1		
	Nov 28 2020	4:09pm	-3	Magpie	Unknown	1		
	Dec 7 2020	4:44pm	-4	Magpie	Unknown	1		
	Feb 10 2021	1:00pm	-25	Red Fox	Unknown	1		
	Mar 1 2021	1:15pm	3	Magpie	Unknown	1		
	Mar 5 2021	3:11pm	12	Magpie	Unknown	1		
	Mar 13 2021	6:37pm	2	Magpie	Unknown	1		
	Mar 16 2021	11:21am	0	Magpie	Unknown	1		
	Apr 5 2021	5:00pm	18	Magpie	Unknown	1		
Plot 4 6_14 21	Apr 23	11:26am	20	Magpie	Unknown	1		
	June 1 2021	9:45pm	17	WT Deer	Female	1		
	June 11 2021	12:30pm	18	WT Deer	Female			
	June 11 2021	12:49pm	22	WT Deer	Female			
Plot 4 6_24 21	June 6 2021	6:20am	10	WT Deer	Female			
	June 6 2021	8:38am	13	WT Deer	Female			
	June 6 2021	1:55pm	14	WT Deer	Female			
	June 6 2021	7:45pm	17	WT Deer	Female			
	June 8 2021	9:53pm	15	WT Deer	Female			
	June 10 2021	2:30pm	23	WT Deer	Male			
	June 11 2021	5:13am	15	WT Deer	Female			
	June 14 2021	2:53am	13	WT Deer	Female			
	June 17 2021	2:49am	8	Deer	Female	1		
	June 17 2021	8:56am	28	Mule Deer	Female	1		

	June 17 2021	8:15 pm	19	WT Deer	Female	1	
	June 19 2021	4:34pm	23	WT Deer	Female	1	
	June 20 2021	6:24am	12	WT Deer	Male	1	
Plot 4	May 23 2021	11:26am	20	Magpie	Unknown	1	
9_21 21	June 11 2021	12:30	18	Deer	Female	2	
Plot 5	April 9 2021	5:51am	-9	Coyote	Unknown	1	
5/18 100							
101	Oct 18 2020	2:04am	-7	WT Deer	Female	1	
Camera ID	Date	Time	Temperature (°C)	Species			
				Type	Gender	Number	Comments
	Oct 18 2020	5:31am	-7	Weasel?	Unknown	1	
	Oct 21 2020	11:33pm	-6	WT Deer	Female	1	
	Oct 24 2020	8:43pm	-9	Red Fox	Unknown	1	
	Oct 25 2020	8:34am	-9	Red Fox	Unknown	1	
	Oct 26 2020	11:07am	-5	WT Deer	Female	1	
	Oct 26 2020	5:55pm	-4	WT Deer	Female	1	
	Oct 27 2020	6:19pm	5	WT Deer	Female	1	
	Oct 27 2020	8:18pm	2	WT Deer	Female	4	
	Oct 30 2020	7:24pm	1	Fox?	Unknown	1	
	Apr 10 2020	1:31pm	16	Red Fox	Unknown	1	
	Nov 2 2020	7:26pm	3	WT Deer	Female	2	
	Nov 3 2020	11:27	6	WT Deer	Unknown	1	Unknown, shot of hindquarters
	Nov 3 2020	11:13pm	0	WT Deer	Male	1	
	Nov 5 2020	4:54am	-1	WT Deer	Female	2	
	Nov 5 2020	2:44pm	2	Red Fox	Unknown	1	
	Nov 6 2020	5:43pm	0	Red Fox	Unknown	1	
	Nov 7 2020	7:19am	-2	Red Fox	Unknown	1	
	Nov 7 2020	9:35pm	-4	WT Deer	Male	1	
	Nov 12 2020	8:44pm	-17	Red Fox	Unknown	1	
	Nov 13 2020	4:47am	-17	WT Deer	Male	1	
	Nov 20 2020	6:32pm	-16	Red Fox	Unknown	1	
	Nov 26 2020	12:19am	-11	Red Fox	Unknown	1	
	Nov 29 2020	9:04pm	-11	Red Fox	Unknown	1	
	Dec 3 2020	10:40am	-10	Magpie	Unknown	1	
	Dec 5 2020	9:36am	-11	Magpie	Unknown	1	
	Feb 1 2021	8:58pm	-14	Porcupine	Unknown	1	
	Feb 2 2021	9:47pm	-11	Red Fox	Unknown	1	
	Feb 4 2021	11:17am	-16	Red Fox	Unknown	1	
	Feb 11 2021	3:54pm	-27	Red Fox	Unknown	1	
	Feb 20 2021	2:23am	-12	Red Fox	Unknown	1	
	Mar 9 2021	12:20am	-5	Snowshoe Hare	Unknown	1	
	Mar 11 2021	10:43pm	-14	Red Fox	Unknown	1	
	Mar 12 2021	6:29am	-16	Red Fox	Unknown	1	
	Mar 16 2021	10:42	-3	Red Fox	Unknown	1	
	Mar 28 2021	4:18am	-1	Red Fox	Unknown	1	
	Mar 30 2021	8:38pm	-15	Coyote	Unknown	1	

Series B-IV: External Report References

This section contains table summaries of relevant external report reference materials that support various discussion points in the baseline inventory report.

Meewasin-Affiliated Relevant Maple Grove Background Documents

The following table contains a summary of Meewasin-affiliated background documents and studies cited within the contents of this report which reference the Maple Grove and Yorath Island properties.

Table B-IV 1. Summary of Meewasin-affiliated background studies relevant to the Maple Grove site region.

Study Title	Year	Credited Author(s)	Document's Purpose & Major Findings (Related to Maple Grove)
<i>The Meewasin Valley Project</i>	1978	Raymond Moriyama Architects and Planners	Purpose: 100 year conceptual master plan of the South Saskatchewan River Environment in the Rural Municipality of Corman Park and the City of Saskatoon. Yorath Island and Maple Grove identified as significant areas – highlighted for ecology and situated within the 'Sand Dune and Islands Node'.
<i>Yorath Island Working Paper</i>	1980	Meewasin	Purpose: initiate a discussion on the potential use and development of the area. The study suggests facilities for picnicking and day camping, an interpretive centre, overnight camping areas, and support facilities at Maple Grove. The document suggests developing a link from Maple Grove to Yorath Island and the implementation of various nature trails for low-impact exploration. (See Appendix C for proposal map).
<i>Meewasin Valley Archaeological Resource Management Project</i>	1987	Ernest G. Walker, David L. Kelly, & Richard Gorre (USask)	Purpose: document all known archaeological resources in and around the Meewasin Valley. Establish a regional archaeological resource database with an associated model for assessing heritage potential given specific environmental parameters. Archaeological assessment and findings documented for the Maple Grove property and surrounding area have been summarized in Section 2.1.
<i>Meewasin Valley Trail System Plan</i>	1990	HILDERMAN WITTY CROSBY HANNA & ASSOCIATES Landscape Architects and Planners	Purpose: summarize evaluation of existing Meewasin trail system, define an ideal model trail system for Meewasin, and propose guidelines and recommendations for future area planning. The Trail System Plan proposes a new major entry in the vicinity of Yorath Island at the terminus of a proposed southerly extension of the primary trail. The entry would include parking, washrooms / shelter, bicycle racks, drinking fountain, picnicking areas and trail information.
<i>West Bank Development South Study: Strategic Concept Development Plan</i>	1992	UMA Engineering Ltd.	Purpose: identification of constraints, opportunities, and fundamental principles associated with the southwest bank region of the South Saskatchewan River within the Meewasin Valley Authority area. The study highlights opportunities for recreation and interpretation activities on Yorath Island and the adjacent west bank mainland. Various river channel-crossing structures are noted as potential construction options for facilitating access onto Yorath Island from the west bank mainland area.
<i>Complete Summary Appraisal of Leisureland</i>	1996	Johnson Appraisals LTD.	Purpose: provide unbiased estimate of market value for the subject Maple Grove property.

<i>Property in the Rural Municipality of Corman Park #344 Province of Saskatchewan</i>			Assessment and inventory of land parcel, buildings, and improvements on site area. Includes details on the condition of amenities found at the site at time of survey and ascribes associated cost value estimates.
<i>Vegetation and Wildlife Survey of Maple Grove and Yorath Island</i>	2000	Luc Delanoy (Meewasin)	Purpose: provide quantitative inventory on vegetation and qualitative information of the general ecology for Maple Grove and Yorath Island. Detailed vegetation inventories associated with this study have been used to inform this baseline inventory. Data from this report has been mapped and discussed in Section 4.4.
<i>Environmental Site Assessment: Leisure Land Sewage Lagoon Near Saskatoon, Saskatchewan</i>	2002	AMEC Earth & Environmental Limited	<p>Purpose: environmental site assessment of the existing 'Sewage Lagoon' at the Leisureland Trailer Court, authorized by Meewasin on July 29, 2002. Report to describe subsurface soil profile and groundwater conditions with respect to risks associated with operating the lagoon.</p> <p>Test holes drilled at locations surrounding the sewage waste disposal area to determine soil conditions and groundwater level. Monitors installed for long-term groundwater monitoring and samples sent for laboratory analysis to determine constituents in the water that may indicate impacts from the lagoon. Based on available data, the report deemed level of impact from the lagoon to be negligible. Findings suggest small horizontal hydraulic gradients, presence of groundwater recharge and radial flow patterns in immediate lagoon facility. Report noted that the lagoon may have impacted the quality of groundwater in the shallow sand horizon. (See Appendix B Figure 4 for 'Sewage Lagoon' location map).</p>
<i>Low Input Food Forest Design and Case Study</i>	2021	Lynnae Ylioja (University of Saskatchewan, Master of Sustainable Environmental Management Program)	<p>Purpose: Final project report associated with University of Saskatchewan's Environmental Science 992 course offered in the School of Environment and Sustainability's Master of Sustainable Environmental Management program. Conducted under faculty advisory Dr. Vladimir Kricsfalussy.</p> <p>Report explores the possibilities and logistics associated with the potential implementation of a low-input food forest design. The remnant hayfields at the Maple Grove site are used as a hypothetical case study location for a food forest design with in the report. Various field work and desktop surveying was conducted in associated with the Maple Grove site and the southwest hayfield location for this project. On-site Maple Grove field work activities included forest health assessment, forest vegetation inventory, soil sampling and soil pit classification. A set of recommended design considerations and management activities for food forest implementation was submitted through the project report. (See Appendix B Figures 5 & 6 for Maple grove hayfield CSSC soil pit classification field work data).</p>

Maple Grove Land Cover Vegetation Type Comparative Analysis Full Results

The following table contains the full results from the comparative land cover vegetation type data analysis described in section 4.4 of the report. This table contains data from the 2014-2018 Meewasin State of the Valley Report Land Cover Land Use Classification (Hooey, 2021) and the comprehensive 2000 Meewasin Wildlife and Vegetation Inventory Survey conducted at Maple Grove and Yorath Island (Delanoy, 2000). Information from these respective datasets has been dissolved to the boundaries of the Maple Grove mainland site area.

Table B-IV 2. Maple Grove Land Cover Changes identified between 2000 Vegetation Type (Delanoy, 2000) and the 2018 State of the Valley Land Use Land Cover Classifications (Hooey, 2021).

2000 Maple Grove Vegetation Community Classification Type (Delanoy, 2000)	2018 State of the Valley Land Use Land Cover Classifications (Hooey, 2021)						Land Cover Change	
	2018 Category	2018 Sub1	2018 Sub2	2018 Sub3	2018 Sub4	2018 Sub5	Area (ha)	Area (ac)
Brome/Alfalfa	Not Classed						0.06	0.15
Not Classed	Built	Exposed & Barren	Informal Road & Trail				0.05	0.13
Ash-Upland Shrub	Built	Exposed & Barren	Informal Road & Trail				0.01	0.03
Ash/Maple-No Shrub	Built	Exposed & Barren	Informal Road & Trail				0.00	0.01
Ash/Maple-Upland Shrub	Built	Exposed & Barren	Informal Road & Trail				0.00	0.00
Ash/Yellow Willow-Floodplain Shrub	Built	Exposed & Barren	Informal Road & Trail				0.09	0.22
Balsam Poplar/Ash/Maple-No Shrub	Built	Exposed & Barren	Informal Road & Trail				0.00	0.00
Balsam Poplar/Ash/Maple-Upland Shrub	Built	Exposed & Barren	Informal Road & Trail				0.02	0.05
Exotic Grass	Built	Exposed & Barren	Informal Road & Trail				0.05	0.12
Not Classed	Built Environment	Road & Rail					0.44	1.09
Ash-Upland Shrub	Built Environment	Road & Rail					0.00	0.00
Ash/Maple-No Shrub	Built Environment	Road & Rail					0.00	0.00
Ash/Maple-Upland Shrub	Built Environment	Road & Rail					0.03	0.07
Ash/Maple/Yellow Willow-Floodplain Shrub and Exotic?	Built Environment	Road & Rail					0.00	0.01
Brome/Alfalfa	Built Environment	Road & Rail					0.01	0.03
Exotic Grass	Built Environment	Road & Rail					0.04	0.09
Snowberry	Built Environment	Road & Rail					0.00	0.01
Not Classed	Built Environment	Urban & Rural Development					0.70	1.73
Ash/Maple-No Shrub	Built Environment	Urban & Rural Development					0.25	0.62

Ash/Yellow Willow-Floodplain Shrub	Built Environment	Urban & Rural Development					0.01	0.02
Balsam Poplar-Floodplain Shrub	Built Environment	Urban & Rural Development					0.02	0.05
Balsam Poplar/Ash-Floodplain Shrub	Built Environment	Urban & Rural Development					0.15	0.36
Balsam Poplar/Ash-Upland Shrub	Built Environment	Urban & Rural Development					0.03	0.06
Balsam Poplar/Ash/Maple-No Shrub	Built Environment	Urban & Rural Development					0.60	1.49
Balsam Poplar/Ash/Maple-Upland Shrub	Built Environment	Urban & Rural Development					0.02	0.06
Cottonwood-Floodplain Shrub	Built Environment	Urban & Rural Development					0.06	0.15
River Birch/Willow	Built Environment	Urban & Rural Development					0.08	0.19
Ash-Upland Shrub	Ecological Environment	Green Space	Informal Green Space	Verge			0.00	0.00
Exotic Grass	Ecological Environment	Green Space	Informal Green Space	Verge			0.00	0.00
Snowberry	Ecological Environment	Green Space	Informal Green Space	Verge			0.00	0.00
Not Classed	Ecological Environment	Native & Naturalized Environment	Aquatic Systems	River			0.00	0.01
Ash/Yellow Willow-Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Aquatic Systems	River			0.12	0.30
Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Aquatic Systems	River			0.00	0.00
River Birch/Willow	Ecological Environment	Native & Naturalized Environment	Aquatic Systems	River			0.01	0.02
Sandbar Willow	Ecological Environment	Native & Naturalized Environment	Aquatic Systems	River			0.00	0.00
Yellow Willow/Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Aquatic Systems	River			0.00	0.01
Not Classed	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.68	1.67
Ash-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.90	2.24
Ash-Upland Shrub/Buckthorn	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.12	0.30
Ash/Aspen-Mixed Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.12	0.30
Ash/Maple-No Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			1.28	3.16
Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			1.77	4.38
Ash/Maple/Yellow Willow-Floodplain Shrub and Exotic?	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.01	0.02
Ash/Upland Shrub-Exotic Grass	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.05	0.12

Ash/Yellow Willow-Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			2.21	5.46
Aspen-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.07	0.18
Balsam Poplar-Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.33	0.81
Balsam Poplar/Ash-Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.37	0.90
Balsam Poplar/Ash-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.41	1.00
Balsam Poplar/Ash/Maple-No Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.47	1.15
Balsam Poplar/Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.45	1.12
Brome/Alfalfa	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.10	0.25
Chokecherry/Saskatoon	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.11	0.28
Chokecherry/Saskatoon-Exotic Herb	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.04	0.10
Cottonwood-Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.23	0.57
Cottonwood-No Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.02	0.05
Dogwood/Other Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.09	0.22
Exotic Grass	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.42	1.03
Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.35	0.87
Pond	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.00	0.00
River Birch/Willow	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.62	1.52
Sandbar Willow	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.12	0.30
Sedge Meadow	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.02	0.04
Snowberry	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.00	0.01
Snowberry-Exotic Grass	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.06	0.16
Snowberry-Exotic Herb	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.04	0.10
Snowberry/Rose	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.01	0.02
Snowberry/Upland Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.04	0.10

Upland Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			0.13	0.32
Yellow Willow/Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Forested & Shrubland Systems	Native & Naturalized			1.24	3.05
Not Classed	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.18	0.44
Ash-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.01	0.03
Ash/Maple-No Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.05	0.11
Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.03	0.08
Ash/Yellow Willow-Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.00	0.01
Brome/Alfalfa	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.10	0.25
Chokecherry/Saskatoon	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.00	0.00
Cottonwood-Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.05	0.14
Exotic Grass	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.06	0.16
Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.00	0.01
Pond	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.01	0.02
Sandbar Willow	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.01	0.02
Snowberry-Exotic Grass	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.02	0.05
Snowberry-Exotic Herb	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.01	0.01
Snowberry/Rose	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.02	0.05
Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass			0.00	0.00
Not Classed	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.00	0.01
Ash-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.02	0.05
Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.03	0.07
Balsam Poplar/Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.05	0.12
Chokecherry/Saskatoon	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.00	0.00
Exotic Grass	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.15	0.38

Snowberry/Rose	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.01	0.02
Snowberry/Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.05	0.13
Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Agricultural Production	Old Field	0.02	0.05
Not Classed	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.16	0.39
Ash-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.01	0.02
Ash/Maple-No Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.01	0.03
Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.02	0.05
Ash/Maple/Yellow Willow-Floodplain Shrub and Exotic?	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.03	0.06
Cottonwood-Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.02	0.05
Cottonwood-No Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.02	0.06
Dogwood/Other Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.05	0.12
Exotic Grass	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.34	0.83
River Birch/Willow	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.13	0.32
Sedge Meadow	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.12	0.30
Snowberry	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.01	0.01
Yellow Willow/Floodplain Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Naturalized Green Space		0.10	0.24
Not Classed	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Vegetated Margin	Field Edge	0.04	0.11
Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Vegetated Margin	Field Edge	0.03	0.07
Brome/Alfalfa	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Vegetated Margin	Field Edge	0.09	0.22
Chokecherry/Saskatoon	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Vegetated Margin	Field Edge	0.00	0.01
Exotic Grass	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Naturalized Grass	Vegetated Margin	Field Edge	0.02	0.05
Ash-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.00	0.01
Ash/Aspen-Mixed Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.00	0.00
Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.02	0.06

Aspen-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.03	0.07
Balsam Poplar/Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.00	0.00
Brome/Alfalfa	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	2.10	5.19
Chokecherry/Saskatoon	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.01	0.03
Exotic Grass	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	2.38	5.87
Snowberry-Exotic Grass	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.01	0.02
Snowberry-Exotic Herb	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.00	0.00
Snowberry/Rose	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.01	0.02
Snowberry/Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.03	0.07
Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Agricultural Production	Forage Crop	0.00	0.00
Not Classed	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Vegetated Margin	Field Edge	0.01	0.02
Ash/Maple-Upland Shrub	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Vegetated Margin	Field Edge	0.01	0.03
Brome/Alfalfa	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Vegetated Margin	Field Edge	0.22	0.55
Snowberry/Rose	Ecological Environment	Native & Naturalized Environment	Grassland Systems	Tame Forage	Vegetated Margin	Field Edge	0.01	0.03
TOTALS							22.66	55.99