Rural Municipality of Harrison Park
Sandy Lake
Water Level Control Project
2015

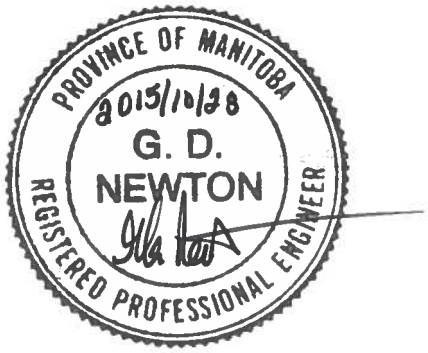

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Table of Contents

EXECUTIVE SUMMARY

This document is written on behalf of the Rural Municipality of Harrison Park. This document is written to present relevant technical information relating to an Environment Act Proposal.

The purpose of the Environment Act Proposal is to allow the diversion of water from Sandy Lake into the Little Saskatchewan River at a flow rate up to 0.5 m^3/s. This is intended to assist in regulating the maximum water level on Sandy Lake. Over the past several years, high water levels on Sandy Lake have caused damage to cabins around the Lake and limited recreational use of the Lake.

Based on Province of Manitoba Environment Act Classes of Development Regulation, this project is a Class 2 project based on the following criteria:

- Interbasin water transfers with diversion rates of not less than 0.5 m^3/s and not greater than 10m^3/s
- Modification to lake or river levels and affecting a water surface area of not less than 2 km^2 but not greater than 200 km^2

It is proposed that a historical outlet from the Lake be re-opened to allow regular outflow from the Lake. The intent of the outlet is to lower the recent high water levels on the Lake to approximately 0.1m (4") below the top of the main pier. To achieve this goal, a 1200 x 600mm concrete box culvert complete with a control gate would be installed at a historical point of outlet from the Lake. The primary change resulting from the discharge of water from Sandy Lake will be the duration of flow, and not the peak flow rate. Peak flow rates along the drainage route will not increase. Operating restrictions proposed in this document require that the culvert only be operated when the drainage system downstream is not under peak flow conditions. During or after storm events, water levels will be monitored at the outlet from Beaufort Lake. This will be the main control point for the drainage system. If water levels at the outlet culvert for Beaufort Lake outlet are observed to rise above the crown of the existing culvert, the outflow from Sandy Lake must be throttled or suspended by partially or fully closing the slide gate. This is required to ensure that the channel and downstream culverts will not be overloaded as a result of the outflow from Sandy Lake and to assure that damage does not occur to the land surrounding Beaufort Lake. The closure would only be necessary until the runoff resulting from the storm has largely subsided.

The impact of the proposed works on neighboring lands, vegetation, wetlands, fisheries and aquatic life is expected to be minimal. These items are discussed in detail within the report.

There are 16 property owners along the proposed drainage route from Sandy Lake to the Little Saskatchewan River. These properties are within the Rural Municipality of Harrison Park, Rural Municipality of Yellowhead and the Keeseekoowenin Indian Reserve. The landowners were sent an information package in 2012 outlining the proposed water level control project, along with a request for comments or concerns. Responses were received from three landowners and their concerns have been addressed within this report.

BACKGROUND

This document is written on behalf of the Rural Municipality (RM) of Harrison Park. It is written to present relevant technical information relating to an Environment Act Proposal. The purpose of the proposal is to address the regulatory requirements which govern the ability to control the water levels on Sandy Lake.

Sandy Lake is a naturally occurring lake located within the RM of Harrison Park. Specifically it is located in parts of Sections 9, 10, 15, 16, 21, 22, 27 and 28 Township 18 Range 20. It can also be described as being approximately located at latitude 50^0 33' north and longitude 100^0 9' west.

Sandy Lake has experienced high water levels over the past several years which has caused major damage to cabins and has limited the recreational use of the Lake. The RM of Harrison Park is requesting the ability to lower the high water level of the Lake to closer to a long term average water level. This long term average level has been described by the Municipal Council to be approximately **0.1m (4")** below the top of the main pier at the Community of Sandy Lake.

Figure 1: Main Pier

Based on the Province of Manitoba Environment Act Classes of Development Regulation, a drainage project with the following characteristics is deemed to be a Class 2 project.

- Interbasin water transfers with diversion rates of not less than 0.5 m^3/s and not greater than 10 m^3/s
- Works resulting in modification to lake or river levels and affecting a water surface area of not less than 2 km^2 but not greater than 200 km^2

This project, as presently designed, meets these criteria. Therefore, Section 11 of the Environment Act is applicable. A copy of Section 11 of the Environment Act is contained in Appendix B.

Areas of flooding

Pictures shown in Appendix A illustrate the high water levels at the cabins on the east side of Sandy Lake.

The effect on the cabins is the primary driver for initiating the request to lower the water levels. The high water levels have caused problems for the shore along the front of the cabins due to an increase in erosion. The water levels have reduced the area between the cabins and the water to virtually zero in several locations.

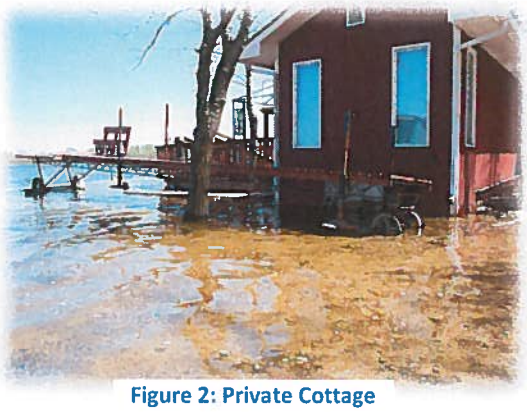

Figure 2: Private Cottage

Partially due to the high water level and partially due to wave action, there is potential to de-stabilize the foundations for the cabins and create structural damage. Several cabins have had their crawl spaces below the cabins flooded. This has increased the potential for both rot and mold to form in the lower areas of the cabins.

The effect of high water on the main pier has rendered it unusable. Since 2011, the pier has been under water for a majority of the time.

Figure 3: Lower Area of Cabin

Lowering the water level is intended to prevent damage to the cabins around the Lake and restore a portion of the previous beach area in front of the cabins.

There is no data available regarding water level fluctuations for Sandy Lake. However, shown in Appendix E are the variations in water levels for Thomas Lake that have occurred since 1986. Thomas Lake is located approximately 5.5 km northwest of Sandy Lake. Due to Thomas Lake's proximity to Sandy Lake and its general drainage basin having similar characteristics to that of Sandy Lake, it is believed that the variations in water levels for Thomas Lake provide a good indication of the high volume of runoff from this area in recent years. The data used for this Figure was obtained from Manitoba Water Stewardship. A water level monitoring point is established each year and recordings are taken at varying intervals by a local resident. It should be noted that there are minimal or no readings taken on some years.

Existing outlet

In the past, Sandy Lake had an outlet that led to a natural drainage channel. During low water levels on Sandy Lake, this outlet was blocked by the construction of a road within the Ed-Venture Bay Campground. No culvert was installed through the road at the time of construction to allow any outflow from Sandy Lake.

Figure 4: Existing Provisional Outlet

Due to rising lake levels, a temporary or provisional outlet from the Lake was created. This temporary outlet consisted of a 600mm corrugated metal pipe with a control gate. It was operated on an emergency basis and was annually reviewed by Manitoba Water Stewardship. This outlet was only permitted to operate on a month-to-month basis.

The RM is requesting to be able to control the water levels within the Lake with a permanent outlet and keep the water level of the Lake to approximately 0.1m (4") below the top of the main pier. There were three options presented by the author to the RM which would allow this goal to be met. The options are as follows:

Option 1: Use the existing outfall

The existing 600mm CMP is proposed to be used as the permanent outlet. The only proposed modifications to the existing outlet are to:

i) Clean out the gravel immediately in front of the culvert's inlet and re-grade the channel that leads to the inlet. This will allow better inflow to the culvert.
ii) Place riprap in front of the inlet to prevent erosion.
iii) Minimal cleanout/re-grading of the channel downstream of the culvert may be required.

Option 2: Lower the existing outfall

The existing 600mm CMP is proposed to be lowered by 0.3m to increase the head at the inlet. This will require substantial cleanout of the channel downstream of the culvert in order to allow unobstructed flow along the channel. The modifications listed for Option 1 above are also required to be performed for this Option.

Option 3: Install a box culvert

The existing 600mm CMP is proposed to be replaced with a 1200mm x 600mm concrete box culvert. The proposed culvert will have the same slope as the existing culvert. The larger capacity of the proposed culvert will allow for more consistent outflow from the lake. Outflow rates will drop substantially in Options 1 and 2 as the water level in the lake drops. With Option 3, the use of a box culvert will allow for higher outflow rates from the lake when the water levels near the desired water level.

The outflow from the lake would be controlled by a gate on the culvert. The modifications listed for Option 1 are also required to be performed for this Option.

The three options produce different flow rates and lengths of time to lower the high water level to the desired level (0.1m below the main pier). Option 3 would allow for the most consistent flow rates among the 3 options proposed and therefore, achieve the desired water level in the least amount of time.

A comparison of the flow rates and the lengths of time it would take to reach the target water level are shown on Table 1. Starting at a high water level of 0.1m ABOVE the main pier, it would take 38 days for the lake level to be lowered to the desired level using Option 3. Using Option 2 would take 45 days and using Option 1 would take 96 days.

Table 1: Flow rates and Number of Days to Achieve Desired Water Level

Option	Flow Rate	Number of Days
1 -Use the existing outfall	0.2 m^3/s (after removal of gravel)	96
2 -Lower the existing outfall by 0.3m	0.4 m^3/s	45
3- Install a box culvert	0.5 m^3/s	38

After discussions with the Municipal Council, **Option 3** has been selected as the preferred Option. Based on this option, the approximate volume of water that will be drained from the Lake is 1,683,000 cubic meters.

PROPOSED OUTLET DESIGN

Details of the design of the proposed outlet are shown on Drawings 2, 3 and 4.

The proposed Sandy Lake Water Level Control Project consists of replacing the existing 600mm culvert with a 1200 x 600mm concrete box culvert. The culvert would extend from the Lake through Ed-Venture Bay Campground to an existing drainage channel. The design parameters for this outlet are as follows:

- The box culvert will be installed at the same grade as the existing culvert.
- The existing inlet requires a small amount of cleanout and dredging to allow flow to the inlet of the culvert. The slope of the inlet dredged channel is to be 1%.
- The channel downstream of the outlet must be cleaned out for at least 100m to achieve a minimum grade of 0.1% from the outlet structure. Minor cleaning of the channel with no re-shaping may be required for an additional 100m.
- Place rip rap along the culvert's inlet and outlet.
- A slide gate will be installed at the inlet to the box culvert. This will be used to control the flow rate from the Lake into the culvert.

The outflow from the Lake needs to be controlled so as not to exceed the capacity of the channel and existing downstream culverts along the discharge route. The downstream culverts may be at risk of becoming overloaded if outflow from Sandy Lake is combined with runoff from major storm events. Therefore the outlet will only be operated when the drainage system downstream is not under peak flow conditions.

Flow through the drainage route should be assessed at set monitoring points during and after storm events to determine whether or not the slide gate must be closed to suspend outflow from the lake. Closure of the gate would only be necessary until the runoff resulting from the storm has largely subsided. The locations of these monitoring points and the criteria required to assess whether or not the culvert's gate should be closed will be discussed in a later section within the report.

RUNOFF BASIN

Sandy Lake receives runoff water from the area immediately surrounding the lake. An aerial photo of the Lake is shown in Drawing 5. Its date is not known. At the water levels shown in this photo the water surface covers an area of approximately 561 hectares. This is the surface area of the Lake that has been used for calculations later in this report.

The hydrology surrounding the recharge of Sandy Lake has not been studied in a detailed manner. However, it is clear that it receives runoff from the surrounding land. Underground recharge of the Lake has not been reviewed. According to a topographical map of the area, the approximate boundary of the drainage basin encompasses the land immediately around the Lake and for several miles to the north and east from the Lake. The topographical map was obtained from the arcgis* website.

There are no significant creeks or rivers that contribute water to the Lake. This is consistent with numerous other bodies of water in this region, albeit most of the other bodies of water are much smaller. This entire region is commonly referred to as "pothole country". In this area a large portion of the land drains to small potholes or sloughs that normally have no natural outlet.

Located approximately 8.5km to the west of Sandy Lake is the Little Saskatchewan River. This River commences in the Riding Mountains and flows south to where it joins the Assiniboine River west of Brandon.

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* Website: arcgis.com

DRAINAGE ROUTE

See Drawing 6 for a drawing of the drainage route from Sandy Lake to the Little Saskatchewan River.

The drainage route proposed for the Sandy Lake Water Level Control Project is the natural drainage route from Sandy Lake to the Little Saskatchewan River. Historically water was allowed to flow unrestricted from the lake once the water level in the lake reached the entrance elevation to the drainage route. The restriction to the natural outflow from the lake commenced with the installation of a roadway within Ed-Venture Campground. Based on examination of the site, the historical entrance elevation will be similar to the proposed invert elevation of the outlet structure.

Alterations to the existing route have not been examined.

The primary change resulting from the discharge of water from Sandy Lake will be the duration of flow, not the peak rate of flow. Peak flow rates along the drainage route will not increase as the culvert will not be operated under peak flow/storm conditions. During high water periods, the flow of water will be continuous for extended periods of time. Depending upon the frequency and magnitude of rainfall events, the flow from Sandy Lake could continue uninterrupted through an entire spring, summer and fall season. The potential for the flow to continue through all or part of a winter season is possible. This would depend upon the magnitude of late fall rains and the frequency of mid-winter thaws. This would also depend upon how much inflow to Sandy Lake occurs as a result of groundwater. This item has not been studied. However, this is not believed to be necessary considering the minimal flow rates that would be expected during a winter period.

Existing Culverts along the Drainage Route

There are 10 crossings between Sandy Lake and the Little Saskatchewan River. Each crossing either has one culvert, two culverts or a weir. The location of each crossing is depicted in Figure 5. Elevations of these crossings are shown in Drawing 7.

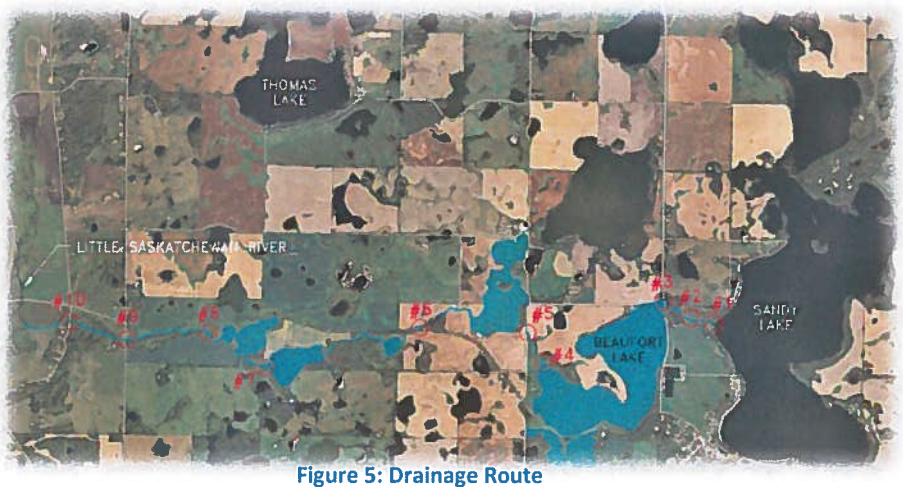


Figure 5: Drainage Route

The sizes of the culverts along the drainage route vary from 0.45m (18") to 1.2m (4').

The capacities of these existing culverts range from 0.6 m^3/s to 4.1 m^3/s.

Based on the proposed discharge rate from Sandy Lake of 0.5m^3/s, all crossings appear to have adequate capacity.

PROPOSED MONITORING AND OPERATING CONDITIONS

As previously mentioned, the flow rates along the drainage route are to be monitored during and after storm events to ensure that the existing culverts will not be overloaded from the combination of lake outflow and stormwater flow. The existing culverts that are proposed to be monitored are crossings #4 and #9.

Crossing #4 is located at the outlet of Beaufort Lake. The outlet is a 750mm CMP culvert. This is proposed to be the main control point for the drainage system.

Figure 6: Beaufort Lake Outlet (Crossing #4)

Water levels at this culvert should be monitored during and after storm events. If water levels rise above the crown of the pipe, outflow from Sandy Lake should be throttled or suspended by closing the slide gate at the Sandy Lake outlet until the water level at the control point is back within the prescribed tolerance. After the majority of the water from the storm event has drained from the system and the water levels at the culvert have lowered again, then the slide gate can be re-opened to resume outflow from Sandy Lake.

Crossing #9 is located at the mile road on the east side of the Keeseekoowenin Indian Reserve. The culvert is quite deep, with the invert being 7.4m below the top of the road. In the past, this culvert has been obstructed with sticks and branches, which can impede the flow of water. The culvert can also become easily blocked with snow and ice during winter time. If water levels at the culvert rise significantly due to blockages, the slide should be stopped until the blockage is removed.

Figure 7: Culvert East Side of Keeseekoowenin Reserve (Crossing #9)

Because the culvert is quite deep, removing any blockages will be difficult once water has already started to back up in front of the culvert. Therefore, it is recommended that this culvert be monitored and maintained periodically. This maintenance could include removal of ice during the winter and thawing of the culvert with steam in the spring.

FISHERIES AND AQUATIC LIFE

Bruno Bruederlin, the Regional Fisheries Biologist for Manitoba Conservation and Water Stewardship, was contacted to provide comments and concerns about the proposed Sandy Lake Water Level Control Project. According to Bruno there is the potential that fish could leave Sandy Lake during overflow conditions and become stranded in the sloughs and potholes along the drainage route. The fish could then perish within the sloughs and potholes during dry conditions.

A way to prevent fish from Sandy Lake from leaving is to install a screen on the lake side of the outlet. However, this will require constant maintenance to prevent debris from clogging the screen and stopping the outflow of water. For this reason, using a screen is not proposed at this time.

According to Bruno, there are no known invasive species found in Sandy Lake or the Little Saskatchewan River, so there are no threats of transferring invasive species from one body of water to another as a result of re-opening the Sandy Lake outlet.

PROPERTY OWNERS ALONG DRAINAGE ROUTE

See Drawing 8 for an illustration of land ownership along the drainage route.

There are 16 property owners along the proposed drainage route from Sandy Lake to the Little Saskatchewan River. These properties are within the Rural Municipality of Harrison Park, Rural Municipality of Yellowhead and the Keeseekoowenin Indian Reserve.

An information package regarding the proposed Sandy Lake Water Level Control Project was prepared by the author and sent out to the affected landowners in August 2012. The information package contained information about the proposed re-opening of the historical outlet and the plan to install a box culvert with a control gate to limit flow rates. It also requested the landowners to respond with any comments or concerns. Signatures of approval from the landowners were not requested as part of the information package.

Comments were received from a landowner (Misanchuk) who had concerns about drainage around his property. The concerns were resolved between the landowner and the Municipality, and the landowner provided his signed consent regarding the proposed works.

Comments were received from 3 other landowners: Iris Treichel, Stephen Nechwediuk and Ducks Unlimited. These concerns along with the author's reponses are outlined as follows.

- Comments from Iris Treichel and Stephen Nechwediuk:
    - Stated that the water levels in Beaufort Lake are already very high and have created flooding around the lake. This has rendered some land around the lake to be unusable and has resulted in the death of many trees.
    - They are concerned that water levels in Beaufort Lake would continue to rise and cause more damage if the outflow from Sandy Lake exceeds the outflow from Beaufort Lake. They have no concerns if the outflow from Sandy Lake will equal the outflow from Beaufort Lake.

  Author's response:

    - The outlet at Beaufort Lake (crossing #4) will be a control point. If water levels at the Beaufort outlet rise higher than the crown of the culvert, the slide gate at the Sandy Lake outlet will be closed or throttled. This will ensure that the outflow from Sandy Lake will not increase the high water level on Beaufort Lake above previous maximum levels. Limiting the water level to the crown of the outlet is believed to alleviate the concerns over further damage around Beaufort Lake.

- Comments from Ducks Unlimited:
  - Additional flow along the drainage route from Sandy Lake may cause flooding on adjacent private and agricultural lands.
  - There may also be increased beaver activity associated with prolonged flows that may exacerbate the flooding. Ducks Unlimited will not accept responsibility for cleaning beaver debris and maintaining flow.
  - Nutrients and sediments draining to Sandy Lake will be transferred downstream to Beaufort Lake, downstream wetlands and the Little Saskatchewan River and beyond which will contribute to deteriorating water quality and algal blooms downstream.

Author's response:

- The outlet is intended to operate during non-peak flow periods. This will prevent the water level in the drainage system from operating above the channel capacity as a result of the outflow from Sandy Lake. Therefore, the drainage route should not experience flows that would cause flooding to occur on the neighboring lands due to the outflow from Sandy Lake.
- If an increase in beaver activity were to occur, increased maintenance by the municipality or by other may be required.
- There is a potential for nutrients to be transferred from Sandy Lake downstream. However, the entire drainage basin drains from agricultural land so nutrients enter the water system from all points along the drainage route. There is no reason to believe that the nutrient levels in Sandy Lake would be higher than at any other point in the drainage basin. However, no monitoring has been done to confirm the contaminant levels in Sandy Lake versus the remainder of the drainage system.

DOWNSTREAM IMPACTS

It is believed that the proposed water level control project will have minimal implications on the downstream environment, due to the following reasons:

- Since outflow from Sandy Lake will not be permitted under storm conditions, there will not be any increase in peak flow rates through the drainage route. Minimizing the increase in flow rates protects the existing culverts from becoming overloaded.

- The existing drainage channels are well defined with only minimal flooding along the channels. Therefore, limiting the increase in peak flow rates as proposed will ensure that the water will not spread out from the confines of the drainage channel to destroy wildlife habitats or native flora along the drainage route. For this reason, animal populations are not expected to be impacted and thus were not studied as part of this report.

- The drainage route has naturally established vegetation along the route that provides protection from erosion due to the flow of water. The slightly increased flow rate of water through the channel due to the draining of Sandy Lake is not likely to increase the rate or type of erosion along the route.

- There is significant and commonly several hundred meters of buffer between the drainage channels and any farmland. Therefore, no farmlands will be negatively affected by the continuous flow of water along the drainage route over extended periods of time.

- The wetlands along the drainage route are well established. This project in not intended to increase the elevation of the peak flows in the drainage system and therefore, the wetlands will likely not be affected by the additional flow from Sandy Lake.

- As part of the project, 100m of the existing drainage channel between Sandy Lake and Beaufort Lake will be cleaned out, graded and shaped. This will involve the removal of some black poplar trees and spruce trees. However, the number of trees that will be removed will be kept to a minimum. The great majority of spruce trees within the area to be shaped will be salvaged. An additional 100m of channel may require further cleaning which would involve the removal of sand bars and minor blockages without affecting the channel banks.

- There are no known invasive aquatic species in Sandy Lake or the Little Saskatchewan River. Therefore, there is no threat of introducing invasive species from one body of water to another.

- If an increase in beaver activity were to occur due to prolonged water flow along the drainage route, increased maintenance from the municipality will be required. Maintenance will prevent flooding due to beaver dams.

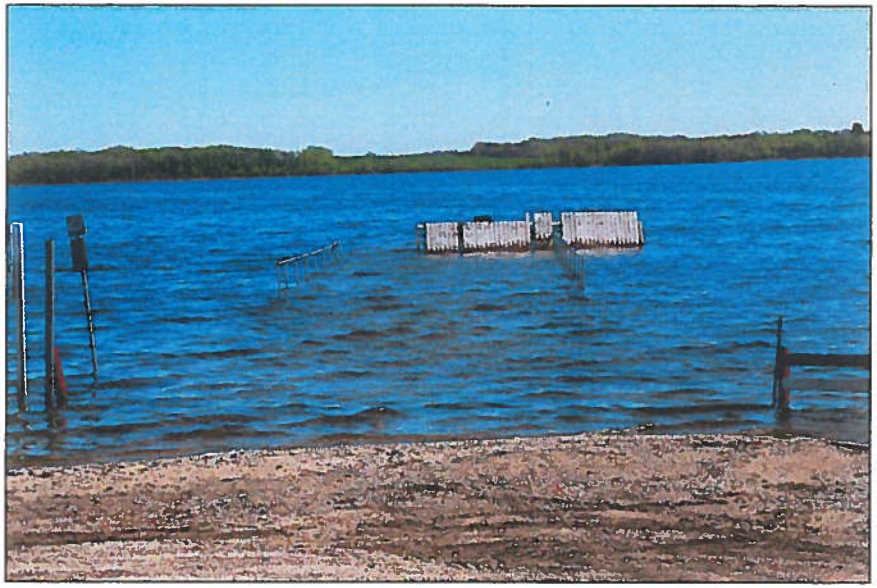
- Fish from Sandy Lake may leave Sandy Lake and get stranded in downstream sloughs or potholes. The only way to prevent this from occurring is to install a screen on the outlet of the proposed culvert.

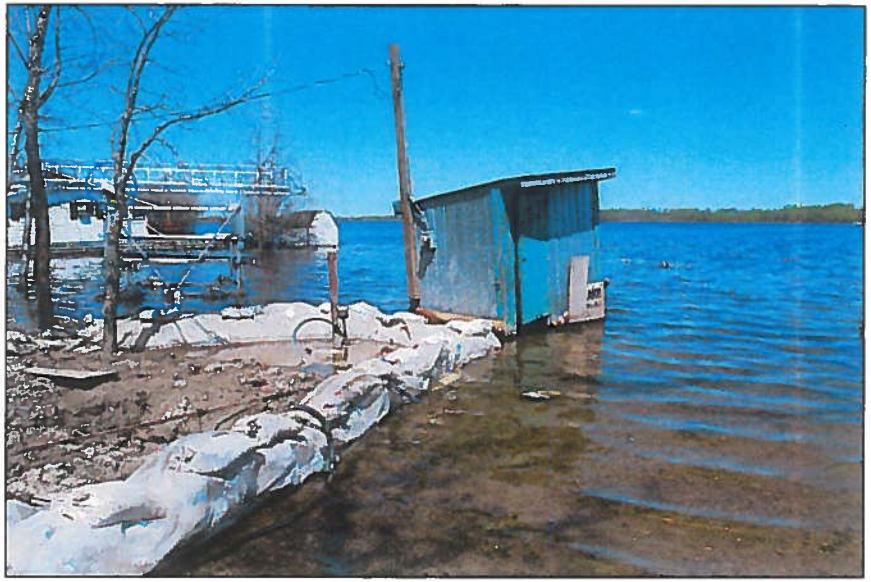
APPENDIX A

PHOTOS

MAIN PIER

BOAT SHED





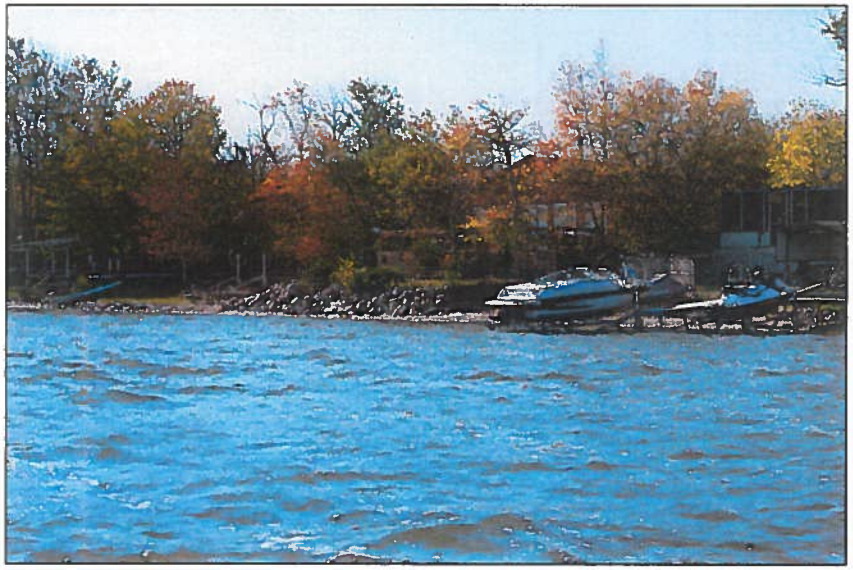
PRIVATE PUMPHOUSE

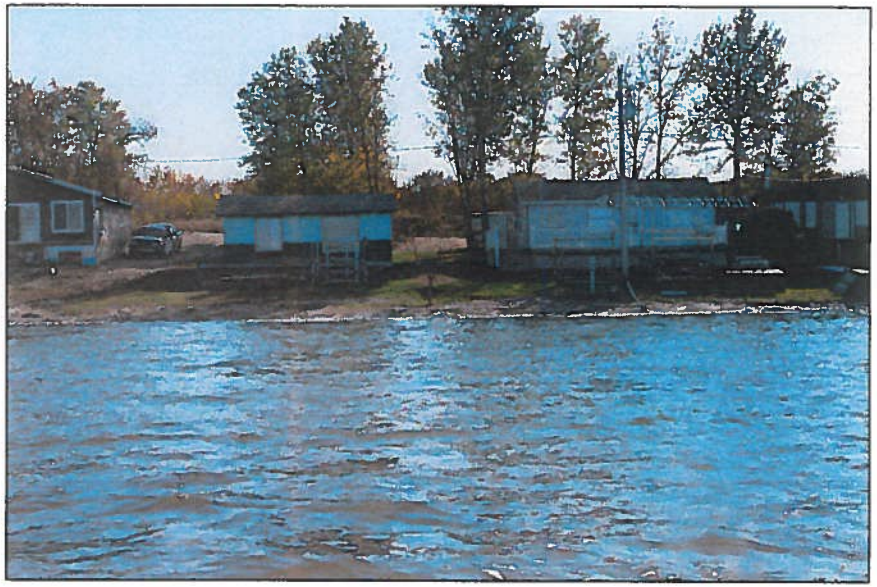
G.D. NEWTON AND ASSOCIATES INC.
727A 10TH STREET
BRANDON, MANITOBA
R7A 4G7

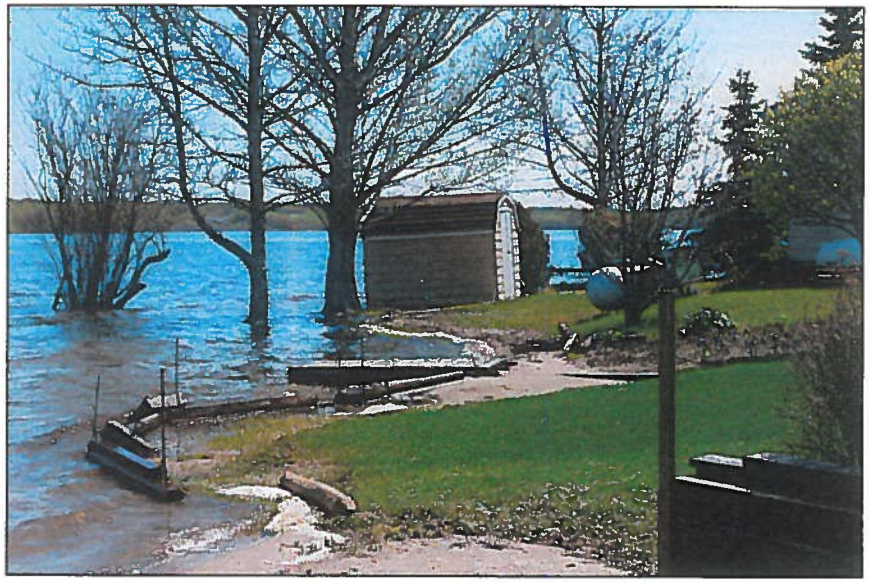
SANDY LAKE
DAMAGE DUE TO FLOODING

G.D. NEWTON AND ASSOCIATES INC.
727A 10TH STREET
BRANDON, MANITOBA
R7A 4G7

SANDY LAKE
TYPICAL CABINS BY THE LAKE





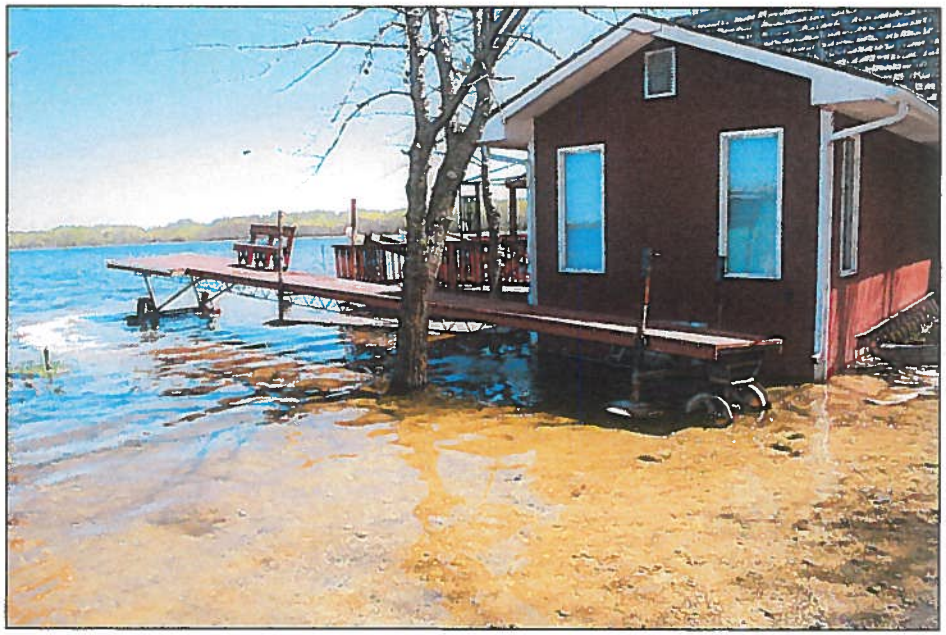


G.D. NEWTON AND ASSOCIATES INC.
727A 10TH STREET
BRANDON, MANITOBA
R7A 4G7

SANDY LAKE
TYPICAL CABINS BY THE LAKE

G.D. NEWTON AND ASSOCIATES INC.
727A 10TH STREET
BRANDON, MANITOBA
R7A 4G7

SANDY LAKE
LOWER AREA OF CABIN



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SANDY LAKE
PRIVATE COTTAGE

APPENDIX B

ENVIRONMENT ACT INFORMATION

THE ENVIRONMENT ACT
(C.C.S.M. c. E125)

Classes of Development Regulation

LOI SUR L'ENVIRONNEMENT
(c. E125 de la C.P.L.M.)

Règlement sur les diverses catégories d'exploitations

Regulation 164/88
Registered March 31, 1988

Règlement 164/88
Date d'enregistrement : le 31 mars 1988

TABLE OF CONTENTS

TABLE DES MATIÈRES

Definitions

1 In this regulation,

"**asphalt plant**" means a plant where aggregate materials and asphalt are heated, mixed and combined to produce a paving mix; (« groupe malaxeur d'asphalte »)

"**biofuel**" means fuel from biologically renewable resources, including but not limited to biodiesel and ethanol; (« biocarburant »)

"**biosolids application**" means the addition to soil of nutrient-rich organic material resulting from biological wastewater treatment; (« application de biosolides »)

Définitions

1 Les définitions qui suivent s'appliquent au présent règlement.

« **affinerie** » Usine où les produits d'une fonderie ou d'une usine de broyage sont affinés davantage afin que d'autres impuretés soient retirées de ces produits. ("refinery")

« **application de biosolides** » L'ajout, à la terre, de matières organiques riches en nutriments provenant du traitement biologique de l'eau usée. ("biosolids treatment")

« **ballastière** » Excavation permettant de se procurer les terres ou matériaux destinés à servir de remblai. ("borrow pit")

"**borrow pit**" means an excavation dug to provide material (borrow) for fill elsewhere; (« ballastière »)

"**bulk materials handling facility**" means a facility operated for commercial purposes for the blending, handling, sorting, storage, treatment, transfer or sale of bulk materials such as sand, gravel, crushed rock, top soil, fertilizer, pesticides or other crop protection products, but does not include a pit or quarry or bulk materials handling on a farm for the sole purpose of serving that farm; (« établissement de manutention des matériaux en vrac »)

"**cement plant**" means a plant where cement is manufactured from aggregate materials; (« cimenterie »)

"**Class 1 waste disposal ground**" means a disposal ground serving a population in excess of 5,000 persons that is constructed or expanded on or after July 9, 1991; (« décharge de catégorie 1 »)

"**combined sewer overflow**" means the overflow from a wastewater collection system that collects wastewater combined with storm water or surface runoff; (« déversoir combiné d'eaux usées »)

"**concrete batch plant**" means a plant where the ingredients for making concrete are stored, conveyed, measured and discharged for use by mixing or transportation equipment; (« centrale de dosage du béton »)

"**controlled burn**" means the burning of forest land within a confined area for the purpose of encouraging reforestation, improving wildlife management or reducing a fire hazard; (« brûlage dirigé »)

"**dairy plant**" means a plant where milk is processed to produce dairy products; (« usine laitière »)

"**feedmill**" means a plant operated for commercial purposes

(a) where grains are combined with vitamins and minerals to produce animal feeds, and

« **biocarburant** » Combustible provenant d'une ressource biologiquement renouvelable, y compris le biodiésel et l'éthanol. ("biofuel")

« **brûlage dirigé** » Brûlage de combustibles forestiers à l'intérieur d'une étendue prédéterminée effectué à des fins de reboisement, d'amélioration de l'aménagement faunique et de réduction des dangers d'incendie. ("controlled burn")

« **carrière** » Mine à ciel ouvert exploitée pour l'extraction de minerai de carrière consolidé. ("quarry")

« **centrale de dosage du béton** » Usine où les constituants du béton sont entreposés, déplacés, mesurés et déversés dans des bétonnières ou des véhicules de transport. ("concrete batch plant")

« **centrale thermique (électricité ou chauffage)** Centrale où du charbon ou des déchets sont brûlés et produisent de la vapeur utilisée pour le chauffage ou la production d'électricité. ("steam plant (power or heating)")

« **centre de vacances à usages multiples** » Exploitation commerciale offrant diverses activités récréatives telles que le golf, le ski de randonnée ou le ski alpin, la motoneige et les activités nautiques et périnautiques, ainsi que l'hébergement sur les lieux mêmes du centre. ("multi-purpose resort")

« **cimenterie** » Usine où du ciment est fabriqué au moyen d'agrégats. ("cement plant")

« **décharge de catégorie 1** » Décharge servant à une population de plus de 5 000 personnes et construite ou agrandie à compter du 9 juillet 1991. ("Class 1 waste disposal ground")

« **déversoir combiné d'eaux usées** » Déversoir d'un réseau collecteur d'eaux usées qui collecte à la fois les eaux usées et les précipitations ou l'écoulement direct de surface. ("combined sewer overflow")

« **déversoir d'eaux d'égout** » Déversoir d'un réseau collecteur d'eaux usées. ("sanitary sewer overflow")

(b) which is located 0.5 km or less from a private residence, other than the residence of the feedmill owner, or from any place where the public is ordinarily permitted access,

but does not include a feedmill located on a farm which is used solely for purposes connected with that farm; (« moulin d'aliments »)

"**food processing plant**" means a plant where agricultural products are processed into food; (« usine de transformation des produits alimentaires »)

"**forest land**" has the same meaning as in *The Forest Act*; (« forêt »)

"**foundry**" means a plant where metal products are recycled by melting and casting into new products; (« fonderie de recyclage »)

"**gasification plant**" means a plant where solid or liquid material is converted into gas for use as fuel; (« usine de gazéification »)

"**grain elevator**" means a facility where grain materials are received, stored or transferred which is located 0.5 km or less from a private residence, other than the residence of the owner of the grain elevator, or from any place where the public is ordinarily permitted access; (« silo à céréales »)

"**manufacturing and industrial plant**" means a plant which manufactures, handles or processes a product and which causes the discharge of a pollutant into the air, water or soil; (« usine de fabrication et établissement industriel »)

"**meat processing and slaughter plant**" means a plant where livestock is slaughtered or meat products are produced or both; (« établissement d'abattage et de traitement des viandes »)

"**milling facility**" means a facility where minerals or mineral bearing substances from a mine are processed to produce a concentrate, and includes an associated refinery; (« établissement de broyage »)

"**mine**" means an opening or excavation in the ground used to remove a mineral or mineral bearing substance, and include an associated milling facility; (« mine »)

« **eaux d'égout** » Les eaux usées d'une collectivité ou d'une industrie qui contiennent des matières dissoutes et des matières en suspension. ("waste water")

« **établissement d'abattage et de traitement des viandes** » Établissement où s'effectue l'abattage des bestiaux ou le traitement des viandes ou les deux. ("meat processing and slaughter plant")

« **établissement de broyage** » Établissement où des minerais ou des substances minéralifères provenant d'une mine sont traitées en vue de la production d'un concentré, y compris une affinerie faisant partie du même complexe. ("milling facility")

« **établissement de ferraille** » Établissement où de vieux matériaux, y compris des automobiles, sont entreposés, traités et vendus. ("scrap processing and auto wrecking facility")

« **établissement de manutention des matériaux en vrac** » À l'exception des puits, des carrières et de la manutention des matériaux en vrac dans une exploitation agricole uniquement pour les besoins de l'exploitation, établissement exploité à des fins commerciales et servant au mélange, à la manutention, au triage, à l'entreposage, au traitement, au transfert ou à la vente de matériaux en vrac tels que le sable, le gravier, la pierre concassée, la terre végétale, les engrais, les pesticides ou d'autres produits servant à la protection des récoltes. ("bulk materials handling facility")

« **étang d'épuration de l'eau usée** » Réservoir de retenue dans lequel l'eau usée est emmagasinée et épurée, y compris les constructions, le matériel, les procédés, les déversoirs combinés d'eaux usées, les déversoirs d'eaux d'égout, les réseaux collecteurs d'eaux usées et les systèmes de rejet d'effluents. ("wastewater treatment lagoon")

« **fonderie** » Usine où des matières premières ou un concentré, ou les deux, provenant d'un établissement de broyage sont utilisés pour la fabrication d'un minéral, et s'entend également d'une affinerie faisant partie du même complexe. ("smelter")

« **fonderie de recyclage** » Usine où des objets métalliques sont recyclés par fusion et moulage afin que de nouveaux produits soient fabriqués. ("foundry")

"**mineral**" means all non-living substances formed by the processes of nature which occur on or under the surface of the ground irrespective of chemical or physical state, and includes peat and peat moss, but does not include agricultural soil, surface water or ground water; (« minéral »)

"**multi-purpose resort**" means a commercial development providing a variety of recreational activities such as golf, cross-country or downhill skiing, snowmobiling and water related activities, which is operated in conjunction with on-site overnight accommodation; (« centre de vacances à usages multiples »)

"**pipe line**" means a pipe line used for the transportation of oil, natural gas, manufactured gas or liquified petroleum gas, but does not include an inter-provincial pipe line; (« pipeline »)

"**pit**" means a mine established or operated by surface excavation for the purpose of removing unconsolidated quarry mineral; (« puits »)

"**plant**" means a factory or workshop where products are manufactured and includes associated land, buildings, machinery and apparatus; (« usine »)

"**plywood and particle board plant**" means a plant where plywood or particle board is manufactured from wood products; (« usine de contreplaqué et de panneaux de particules dérivés du bois »)

"**provincial park lands**" means lands designated as provincial park lands under *The Provincial Park Lands Act*; (« parcs provinciaux »)

"**pulp and paper mill**" means a facility where wood products are processed into paper products; (« usine de pâtes et papiers »)

"**quarry**" means a mine established or operated by surface excavation for the purpose of removing consolidated quarry mineral; (« carrière »)

« **forêt** » Forêt au sens de la *Loi sur les forêts*. ("forest land")

« **groupe malaxeur d'asphalte** » Installation où des agrégats et de l'asphalte sont chauffés, mélangés et fusionnés de manière à produire un revêtement bitumineux. ("asphalt plant")

« **mine** » Ouverture ou excavation pratiquée dans le sol et servant à l'exptraction d'un minerai ou d'une substance minéralifère. Est assimilée à une mine une usine de broyage faisant partie du même complexe. ("mine")

« **minerai de carrière** » Schiste argileux, kaolin, bentonite, gypse, argile, sable, gravier, sel, charbon, ambre, tourbe ou tourbe mousseuse extraite à des fins non commerciales et roche ou pierre utilisés à une fin autre que l'extraction d'amiante métallique, de potasse, de pétrole ou de gaz naturel. ("quarry mineral")

« **minéral** » Toutes les substances inorganiques naturelles présentes à la surface ou dans le sous-sol, indépendamment de leur état physique ou chimique, y compris la tourbe et la tourbe mousseuse. Ne sont visées ni les terres de culture, ni les eaux de surface, ni les eaux souterraines. ("mineral")

« **moulin d'aliments** » À l'exclusion des moulins situés dans une exploitation agricole et servant uniquement pour les besoins de l'exploitation, moulin exploité à des fins commerciales et :

a) servant à mélanger les grains avec des vitamines et des minéraux afin de produire des aliments pour les animaux;

b) situé à 0,5 km au plus d'une habitation privée, autre que celle occupée par le propriétaire du moulin, ou de tout endroit auquel le public a ordinairement accès. ("feedmill")

« **parcs provinciaux** » Biens-fonds classés parcs provinciaux en vertu de la *Loi sur les parcs provinciaux*. ("provincial parc lands")

"**quarry mineral**" means shale, kaolin, bentonite, gypsum, clay, sand, gravel, salt, coal, amber, peat or peat moss removed for non-commercial purposes, rock or stone used for any purpose other than as a source of metal asbestos, potash, oil or natural gas; (« minerai de carrière »)

"**refinery**" means a plant where products from a smelter or milling facility are processed to further remove impurities from the final mineral product; (« affinerie »)

"**rendering plant**" means a plant where dead animals and inedible animal products are rendered for use in the production of other products; (« usine d'équarrissage »)

"**sanitary sewer overflow**" means the overflow from a wastewater collection system that collects wastewater; (« déversoir d'eaux d'égout »)

"**scrap processing and auto wrecking facility**" means a facility where scrap materials including automobiles are collected, processed and sold; (« établissement de ferraille »)

"**seed cleaning plant**" means a plant operated for commercial purposes

(a) where seeds are cleaned, sized, packaged or otherwise processed, and

(b) which is located 0.5 km or less from a private residence, other than the residence of the plant owner, or from any place where the public is ordinarily permitted access,

but does not include a plant located on a farm which is used solely for purposes connected with that farm; (« usine de nettoyage de semences »)

"**sewage treatment plant**" means a facility, other than a wastewater treatment lagoon, where wastewater is collected and treated, including any associated structures, equipment and processes, combined sewer overflows, sanitary sewer overflows, wastewater collection systems and effluent discharge systems; (« usine d'épuration des eaux d'égout »)

"**smelter**" means a plant where raw materials or concentrate or both from a milling facility are used in the manufacture of a mineral product, and includes an associated mine or refinery; (« fonderie »)

« **pipeline** » À l'exception d'un pipeline interprovincial, pipeline utilisé pour le transport du pétrole, du gaz naturel, du gaz manufacturé ou du gaz de pétrole liquéfié. ("pipeline")

« **puits** » Mine à ciel ouvert exploitée pour l'extraction de minerai de carrière non consolidé. ("pit")

« **réseau collecteur d'eaux usées** » Réseau d'égout et de pompage utilisé pour la collecte et le transport des eaux usées. ("wastewater collection system")

« **scierie fixe** » Installation non portable qui sert à la transformation du bois en bois de charpente. ("stationary sawmill")

« **silo à céréales** » Établissement où des céréales sont reçues, entreposées ou transférées, lequel établissement est situé à 0,5 km au plus d'une habitation, autre que celle occupée par le propriétaire du silo, ou de tout autre endroit auquel le public a ordinairement accès. ("grain elevator")

« **station de traitement de l'eau (eau usée)** » Établissement où l'eau usée provenant d'une station de traitement de l'eau est traitée. ("water treatment plant (wastewater)")

« **usine** » Usine, fabrique ou atelier, y compris les biens-fonds, les bâtiments, les machines et les appareils, où des produits sont fabriqués. ("plant")

« **usine de contreplaqué et de panneaux de particules dérivés du bois** » Usine où du contreplaqué ou des panneaux de particules dérivés du bois sont fabriqués. ("plywood and particle board plant")

« **usine d'épuration des eaux d'égout** » À l'exception des étangs d'épuration de l'eau usée, installation où les eaux usées sont collectées et épurées, y compris les constructions, le matériel, les procédés, les déversoirs combinés d'eaux usées, les déversoirs d'eau d'égout, les réseaux collecteurs d'eaux usées et les systèmes de rejet d'effluents. ("sewage treatment plant")

« **usine d'équarrissage** » Usine où les carcasses d'animaux et les viandes non comestibles sont équarries pour la production d'autres produits. ("rendering plant")

"**stationary sawmill**" means a facility for processing wood into lumber products that is not portable; (« scierie fixe »)

"**steam plant (power or heating)**" means a plant where coal or waste products are burned to produce steam for use in heating or electric power generation; (« centrale thermique (électricité ou chauffage) »)

"**wastewater**" means the spent or used water of a community or industry which contains dissolved and suspended matter; (« eaux d'égout »)

"**wastewater collection system**" means the sewer and pumping system used for the collection and conveyance of wastewater; (« réseau collecteur d'eaux usées »)

"**wastewater treatment lagoon**" means an impoundment into which wastewater is discharged for storage and treatment, including any associated structures, equipment and processes, combined sewer overflows and sanitary sewer overflows, wastewater collection systems and effluent discharge systems; (« étang d'épuration de l'eau usée »)

"**water treatment plant (wastewater)**" means a facility where wastewater from a water treatment plant is disposed of and treated; (« station de traitement de l'eau (eau usée) »)

"**wood treatment plant**" means a plant where wood products are treated with preservatives. (« usine de traitement du bois »)

M.R. 44/94; 74/2007

« **usine de fabrication et établissement industriel** » Usine où la fabrication, la manutention ou le traitement d'un produit entraîne le déversement d'un polluant dans l'air, dans l'eau ou dans le sol. ("manufacturing and industrial plant")

« **usine de gazéification** » Usine où des matières solides ou liquides sont transformées en combustibles gazeux. ("gasification plant")

« **usine de nettoyage de semences** » À l'exception d'une usine située dans une exploitation agricole et servant uniquement aux besoins de l'exploitation, usine exploitée à des fins commerciales :

a) où des semences sont nettoyées, classées selon leur grosseur, emballées ou traitées d'une autre façon;

b) qui est située à 0,5 km au plus d'une habitation, autre que celle occupée par le propriétaire de l'usine, ou d'un endroit auquel le public a ordinairement accès. ("seed cleaning plant")

« **usine de pâtes et papiers** » Établissement où des produits forestiers sont transformés en produits du papier. ("pulp and paper mill")

« **usine de traitement du bois** » Établissement où les produits du bois sont traités au moyen de préservatifs. ("wood treatment plant")

« **usine de transformation des produits alimentaires** » Usine où des produits agricoles sont transformés en aliments. ("food processing plant")

« **usine laitière** » Usine où s'effectue le traitement du lait en vue de la production de produits laitiers. ("dairy plant")

R.M. 44/94; 74/2007

Class 1 developments

2 For the purposes of section 10 of the Act, the following are Class 1 developments:

1. AGRICULTURAL

Dairy plants
Feedmills
Food processing plants
Grain elevators
Meat processing and slaughter plants
Rendering plants
Seed cleaning plants

2. ENERGY PRODUCTION

Commercial biofuel plants
Gasification plants
Steam plants

3. FISHERIES

Fish hatcheries

4. FORESTRY

Plywood and particle wood plants
Stationary sawmills
Wood treatment plants

5. MANUFACTURING

Bulk materials handling facilities
Cement plants
Concrete batch plants
Foundries
Manufacturing and industrial plants

6. TRANSPORTATION

Asphalt plants

7. WASTE DISPOSAL

Biosolids application
Class 1 waste disposal grounds
Scrap processing and auto wrecking facilities
Water treatment plants (wastewater)

M.R. 74/2007

Exploitations de catégorie 1

2 Pour l'application de l'article 10 de la *Loi*, sont classées exploitations de catégorie 1 :

1. EXPLOITATIONS AGRICOLES

Établissements d'abattage et de traitement des viandes
Moulins d'aliments
Silos à céréales
Usines d'équarrissage
Usines de nettoyage de semences
Usines de transformation des produits alimentaires
Usines laitières

2. PRODUCTION D'ÉNERGIE

Centrales thermiques
Usines commerciales de biocarburant
Usines de gazéification

3. PÊCHES

Écloseries

4. FORÊTS

Scieries fixes
Usines de contreplaqué et de panneaux de particules dérivés du bois
Usines de traitement du bois

5. FABRICATION

Centrales de dosage du béton
Cimenteries
Établissements de manutention des matériaux en vrac
Fonderies de recyclage
Usines de fabrication et établissements industriels

6. TRANSPORT

Groupes malaxeurs d'asphalte

7. ÉVACUATION DES EAUX

Application de biosolides
Décharges de catégorie 1
Établissements de ferraille
Stations de traitement de l'eau (eau usée)

R.M. 74/2007

Class 2 developments

3 For the purposes of section 11 of the Act, the following are Class 2 developments:

1. ENERGY PRODUCTION

Major operational changes or modifications to existing electrical generating facilities

Electrical generating facilities with a generating capacity less than or equal to 100 megawatts

2. FORESTRY

Pulp and paper mills

The following activities associated with forest management of forest land:

(a) main and secondary haul roads, including stream crossings

(b) timber cutting where the amount of timber cut is 300 cubic metres or more in any year

(c) site preparation of forest land for forest renewal

3. HABITAT MODIFICATION

Controlled burns of 100 hectares of land or more

4. MINING

Mines, other than pits and quarries
Milling facilities
Refineries
Smelters

5. RECREATION

Recreation and tourist developments, including but not limited to the following:

(a) multi-purpose resorts

(b) marinas

(c) golf courses

Exploitations de catégorie 2

3 Pour l'application de l'article 11 de la *Loi*, sont classées exploitations de catégorie 2 :

1. PRODUCTION D'ÉNERGIE

Changements ou modifications d'envergure apportées au mode d'exploitation des installations électriques existantes

Installations électriques dont la capacité de production ne dépasse pas

2. FORÊTS

Usines de pâtes et papiers

Sont considérées comme des exploitations de catégorie 2 les activités qui suivent se rapportant à la gestion des forêts :

a) les chemins d'exploitation principaux et secondaires, y compris les passages de cours d'eau

b) les coupes de bois, lorsque la quantité de bois coupé dans une année est d'au moins 300 m^3

c) les travaux de préparation en vue du reboisement des forêts

3. MODIFICATION DE L'HABITAT

Brûlage dirigé de 100 hectares ou plus

4. MINES

Affineries
Établissements de broyage
Mines, à l'exception des puits et des carrières
Fonderies

5. LOISIRS

Loisirs et exploitations touristiques, y compris notamment :

a) centres de vacances à usages multiples

b) ports de plaisance

c) terrains de golf

(d) ski hills

(e) areas designated for all terrain vehicle use under *The Provincial Parks Act*

Developments within provincial park lands referred to in a park management plan prepared by the Parks and Natural Areas Branch of Manitoba Conservation

6. TRANSPORTATION AND TRANSMISSION

Transmission lines of 115 kV and over but not exceeding 230 kV

Transformer stations of 115 kV and over but not exceeding 230 kV

Conversion or replacement of transmission lines in existing rights-of-way if the lines converted or replaced are equal to or exceed 230 kV

Pipe lines which are greater than 10 km in length or which are located in areas sensitive to environmental disturbance, and associated facilities

Two lane roads at new locations, other than roads approved in a plan of subdivision or in conjunction with a development for which a proposal has been submitted, and including

(a) associated facilities and borrow pits; and

(b) widenings of existing roads in areas sensitive to environmental disturbance

Roads at new locations which are capable of being used only in winter

7. WASTE TREATMENT AND STORAGE

Wastewater treatment lagoons
Sewage treatment plants

d) stations de ski

e) zones réservées aux véhicules tous terrains en vertu de la *Loi sur les parc provinciaux*

Exploitations établies dans les parcs provinciaux conformément à un programme de gestion des parcs élaboré par la Direction des parcs et des réserves naturelles du ministère de la Conservation du Manitoba

6. TRANSPORT ET TRANSMISSION

Lignes de transport d'énergie à des tensions entre 115 kV et 230 kV

Sous-stations de transformation pour des tensions entre 115 kV et 230 kV

Conversion ou remplacement de lignes de transport d'énergie dans les emprises existantes, lorsque la tension est de 230 kV ou plus

Pipelines de plus de 10 km de longueur ou qui sont situés dans des zones vulnérables, y compris les installations

À l'exception des routes approuvées dans le cadre d'un plan de lotissement ou d'une exploitation dont le projet a déjà été présenté, les routes à deux voies construites dans une nouvelle région, y compris :

a) les installations connexes et les ballastières

b) l'élargissement de routes existantes dans les zones vulnérables

Routes construites dans de nouvelles régions et ne pouvant être utilisées qu'en hiver

7. TRAITEMENT ET ENTREPOSAGE DES DÉCHETS

Établissements de ferraille
Étangs d'épuration de l'eau usée

8. WATER DEVELOPMENT AND CONTROL

Inter basin water transfers with diversion rates of not less than 0.5 m^3/s (cubic metres per second) and not greater than 10 m^3/s

Flood control projects protecting areas not less than 1 km^2 (square kilometres) and not greater than 100 km^2

Water supply impoundments of not less than 50 dam^3* and not greater than 50,000 dam^3

Land drainage projects draining areas not less than 50 km^2 and not greater than 500 km^2

Irrigation projects withdrawing not less than 200 dam^3 but not greater than 10,000 dam^3 per year

Works resulting in modification to lake or river levels and affecting a water surface area of not less than 2 km^2 but not greater than 200 km^2

Alterations to stream channels which affect fish mobility and fish habitat

Withdrawal of water from any body of water of not less than 200 dam^3 but not greater than 10,000 dam^3 per year, including non-consumptive closed systems where water is returned to its source and the flow rate is 25 l/s and over but does not exceed 250 l/s, but not including non-consumptive closed systems where the flow rate is less than 25 l/s (litres per second)

Aquifer recharge with a closed system where water is returned to the aquifer from which it is taken with no change in quality other than temperature and a flow rate not less than 25 l/s but not greater than 250 l/s

M.R. 44/94; 74/2007

* one dam^3 = 1,000 cubic metres

8. AMÉNAGEMENT ET RÉGULARISATION DES EAUX

Déversement de l'eau d'un bassin à l'autre, lorsque le taux de dérivation n'est ni inférieur à 0,5 m^3/s (mètres cubes par seconde), ni supérieur à 10 m^3/s

Projets de lutte contre les inondations visant la protection des zones d'au moins 1 km^2 (un kilomètre carré) et d'au plus 100 km^2

Réservoirs de retenue d'eau pouvant retenir entre 50 dam^3* et 50 000 dam^3 d'eau

Projets de drainage des terres permettant le drainage des zones ayant une superficie entre 50 km^2 et 500 km^2

Projets d'irrigation visant le retrait d'un volume d'eau d'au moins 200 dam^3 et d'au plus 10 000 dam^3 par année

Travaux ayant pour résultat le changement de niveau d'un lac ou d'une rivière et touchant une masse d'eau dont la superficie est d'au moins 2 km^2 et d'au plus 200 km^2

Modifications apportées aux canaux des cours d'eau et susceptibles d'avoir un effet sur la mobilité et l'habitat des poissons

Extraction d'un volume d'eau égal ou supérieur à 200 dam^3 mais n'excédant pas 10 000 dam^3 par année de toute masse d'eau, y compris les systèmes fermés ne donnant pas lieu à l'évapotranspiration et dans lesquels l'eau revient à sa source à un débit d'au moins 25 l/s mais n'excédant pas 250 l/s. Font exception les systèmes fermés ne donnant pas lieu à l'évapotranspiration et dans lesquels l'eau revient à sa source à un débit inférieur à 25 l/s (litres par seconde)

Alimentation d'une nappe souterraine faisant partie d'un système fermé dans lequel l'eau revient à la formation aquifère d'où elle a été tirée sans que sa qualité soit altérée, si ce n'est sa température, et dont le débit se situe entre 25 l/s et 250 l/s

R.M. 44/94; 74/2007

* un dam^3 = 1 000 m^3 (1 décamètre cube)

Class 3 developments

4 For the purposes of section 12 of the Act, the following are Class 3 developments:

1. ENERGY PRODUCTION

Electrical generating facilities with a generating capacity greater than 100 megawatts

2. MINING

Potash mines and milling facilities

3. TRANSPORTATION AND TRANSMISSION

Electrical transmission lines greater than 230 kV, and associated facilities

Transformer stations greater than 230 kV

Roads of four lanes or more at new locations, and associated facilities including borrow pits

4. WATER DEVELOPMENT

Inter basin water transfers with diversion rates greater than 10 m^3/s

Flood control projects protecting areas greater than 100 km^2

Water supply impoundments greater than 50,000 dam^3

Land drainage projects draining areas greater than 500 km^2

Irrigation projects withdrawing greater than 10,000 dam^3 per year

Works resulting in modification to lake or river levels and affecting a water surface area greater than 200 km^2

Exploitations de catégorie 3

4 Pour l'application de l'article 12 de la *Loi*, sont classées exploitations de catégorie 3 :

1. PRODUCTION D'ÉNERGIE

Installations électriques dont la capacité de production est supérieure à 100 mégawatts

2. MINES

Mines de potasse et établissements de broyage

3. TRANSPORT ET TRANSMISSION

Lignes de transport d'énergie à des tensions supérieures à 230 kV

Sous-stations de transformation pour des tensions supérieures à 230 kV

Routes à quatre voies construites dans une nouvelle région, y compris les installations connexes et les ballastières

4. AMÉNAGEMENT DES EAUX

Circulation de l'eau entre basins, lorsque le taux de dérivation est supérieur à 10 m^3/s

Projets de lutte contre les inondations visant la protection des zones d'au moins 100 km^2

Réservoirs de retenue d'eau pouvant retenir plus de 50 000 dam^3 d'eau

Projets de drainage des terres permettant le drainage des zones ayant une superficie supérieure à 500 km^2

Projets d'irrigation visant le retrait d'un volume d'eau supérieur à 10 000 dam^3 par année

Travaux ayant pour résultat le changement de niveau d'un lac ou d'une rivière et touchant une masse d'eau dont la superficie est supérieure à 200 km^2

Withdrawal of water of more than 10,000 dam^3 per year including non-consumptive closed systems where water is returned to its source and the flow rate is greater than 250 l/s

Aquifer recharge with a closed system where water is returned to the aquifer from which it is taken with no change in quality other than temperature and flow rates greater than 250 L/S

M.R. 74/2007

Developments in municipalities

5(1) Despite sections 3 and 4, where a municipality intends to construct, alter or operate

(a) a Class 2 development; or

(b) a Class 3 development which is a road described in Item 3 of section 4;

which, in the opinion of the minister,

(c) will not have an environmental impact beyond the municipality;

(d) will not result in the direct discharge of pollutants to the air, water or soil; and

(e) has been or will be the subject of an appropriate environmental assessment by the municipality that includes public consultation and addresses environmental issues;

the development is exempted from the requirements of section. 11 or 12 of the Act, whichever is applicable.

5(2) Subsection (1) does not apply

(a) where in the minister's opinion a significant portion of the funding for the construction, alteration or operation of a development is provided by the Government of Manitoba; or

Extraction d'un volume d'eau supérieur à 10 000 dam^3 par année, y compris les systèmes fermés ne donnant pas lieu à l'évapotranspiration et dans lesquels l'eau revient à sa source et le débit est supérieur à 25 l/s (litres par seconde)

Alimentation d'une nappe souterraine faisant partie d'un système fermé dans lequel l'eau revient à la formation aquifère d'où elle a été tirée sans que sa qualité soit altérée, si ce n'est sa température, et dont le débit est supérieur à 250 l/s

R.M. 74/2007

Exploitations dans les municipalités

5(1) Par dérogation au articles 3 et 4, une exploitation n'est pas assujettie aux exigences de l'article 11 ou 12 de la *Loi*, selon le cas, s'il s'agit :

a) d'une exploitation de catégorie 2;

b) d'une exploitation de catégorie 3, s'il s'agit d'une route mentionnée au point 3 de l'article 4;

qu'une municipalité se propose de construire, de modifier ou de mettre en service, pourvu que, de l'avis du ministre,

c) les retombées environnementales de l'exploitation seront contenues dans les limites de la municipalité;

d) l'exploitation ne produira aucun polluant susceptible d'être déversé directement dans l'air, dans l'eau ou dans le sol;

e) l'exploitation a fait ou fera l'objet d'une évaluation du milieu satisfaisante effectuée par la municipalité, dans le cadre de laquelle le public est invité à donner son opinion et des question environnementales sont étudiées.

5(2) Le paragraphe (1) ne s'applique pas dans les cas suivants :

a) lorsque, de l'avis du ministre, une proportion importante des fonds servant à financer la construction, la modification ou la mise en fonctionnement de l'exploitation sont fournis par le gouvernement du Manitoba;

(b) where the municipality chooses to file a proposal under the Act.

b) lorsque la municipalité décide de déposer le projet aux termes de la *Loi*.

The Queen's Printer
for the Province of Manitoba

L'Imprimeur de la Reine
du Manitoba

APPENDIX C

COMMENTS FROM LAND OWNERS

Delivered via Fax: (204) 849-2190

August 30, 2012

RM of Harrison
Box 220
Newdale, MB
R0J 1J0

Attention: Councillors of RM of Harrison

Re: **Sandy Lake**
Water Level Control Project

On behalf of my family, Stephen Nechwediuk, Alan and Sandra Nechwediuk and myself, we thank you for notification of the Sandy Lake Water Level Control Project dated August 17, 2012, received from G.D. Newton and Associates Inc.

As I'm sure you're aware the water level on Beaufort Lake was also very high for the last several years and has created some flooding which has killed hundreds of treas around the lake and some land that was previously usable is no longer so.

According to the information in the letter received, the flow from Sandy Lake would be controlled by a gate on the box culvert and the flow rate would be adjusted periodically so as not to exceed the capacity of any of the culverts along the discharge route. It also indicates that the proposed control point on the drainage route for monitoring the flow rate would be the outlet from Beaufort Lake.

Providing that the inflow from Sandy Lake is matched by the outflow from Beaufort Lake, we will have no concerns with this project. Should the inflow from Sandy Lake exceed the outflow from Beaufort Lake, we would indeed be concerned as the water level in Beaufort would again rise and cause problems to trees, soil erosion and possibly buildings on our property.

We thank you for the opportunity to respond in this matter and to voice our concerns.

Yours truly,

Iris Treichel

Iris Treichel
64 Wyndstone Circle
East St. Paul, MB R3E 0L8

Cc: Stephen Nechwediuk
Alan & Sandra Nechwediuk

Donna Memryk

From: "Robert Grant" <b_grant@ducks.ca>
Date: August-24-12 1:50 PM
To: <rmharris@inetbiz.ca>
Cc: <strathrm@inetbiz.ca>; <lsrcd.mgr@inetlink.ca>; <dwight.williamson@gov.mb.ca>
Subject: Sandy Lake outlet proposal

Re: Proposed Sandy Lake outlet

Dear Council,

G.D Newton and Associates requested Ducks Unlimited Canada's input to a proposed water level management development on Sandy Lake, presumably because we own land and hold agreements to manage two wetland basins on private land downstream of the proposed development. Although the impact of an increased water release on the DUC wetland project located at NW 12, S W 13 and SE 14-19-21W in the RM of Strathclair would not be significant to the structural integrity of the weirs located at the outlets of two basins identified on the drainage route, adding water to the system has the potential to increase local flooding on the adjacent private lands during and after the release period. The added inflow will increase and sustain surcharge beyond the original design and may cause flooding damage to the adjacent agricultural lands. As well, there may be additional beaver activity associated with prolonged flows that may exacerbate the flooding and result in a need for action, and should your project proceed, DUC would not accept responsibility for cleaning beaver debris and maintaining flow.

Also of concern is the addition of nutrients, sediments and water that would be transported from Sandy Lake to Beaufort Lake, the downstream wetlands, Little Saskatchewan River, Lake Wahtopanah (Rivers reservoir) and beyond. Given the history of wetland drainage in the area, it is likely that this drainage has not only increased water inflow to Sandy Lake and added to the flooding damage of rainfall and snowmelt events, it has increased the nutrients and sediments entering the lake and has contributed to deteriorating water quality and algae blooms. Our research in the RM of Blanshard has shown that for every acre of wetland drained, an additional 5 acres of land is added to the effective drainage area, bringing farm and field runoff water and the associated fertilizer and sediments with it. A review of aerial photography of the Sandy Lake watershed reveals a great number of wetlands that have been drained to the lake, and now simply transfer water and nutrients directly to it.

I respectfully suggest that a flood protection plan for Sandy Lake should incorporate elements of wetland protection in the surrounding watershed though a drainage moratorium, or no net loss of wetlands policy, and a wetland restoration initiative. Ducks Unlimited Canada, and likely other conservation organizations, would be pleased to participate in the development and implementation of such an initiative.

Thank you for the opportunity to comment.

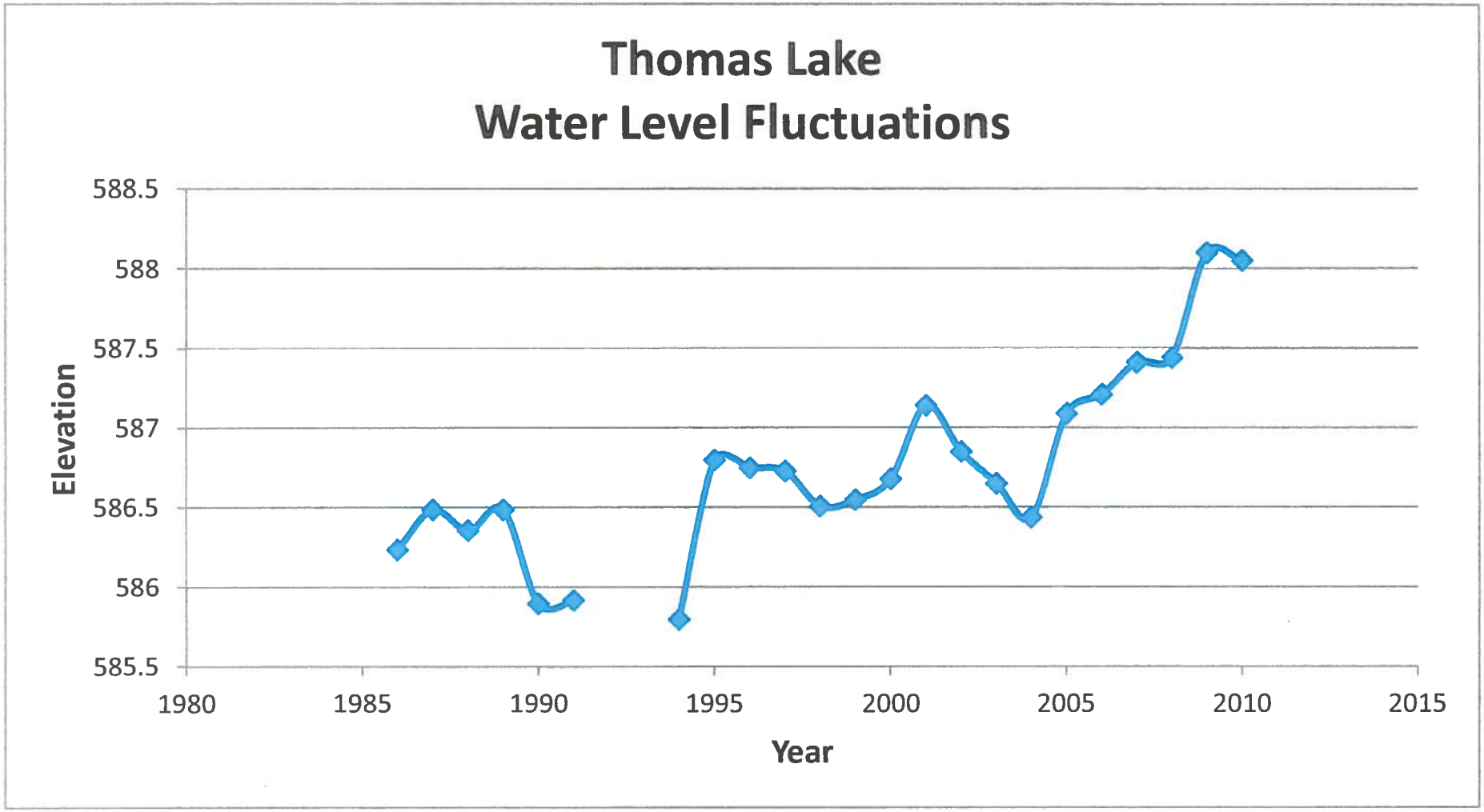
Sincerely,

Bob Grant
Manager of Provincial Operations
Ducks Unlimited Canada

Cc RM Strathclair, LSRCD, Dwight Williamson

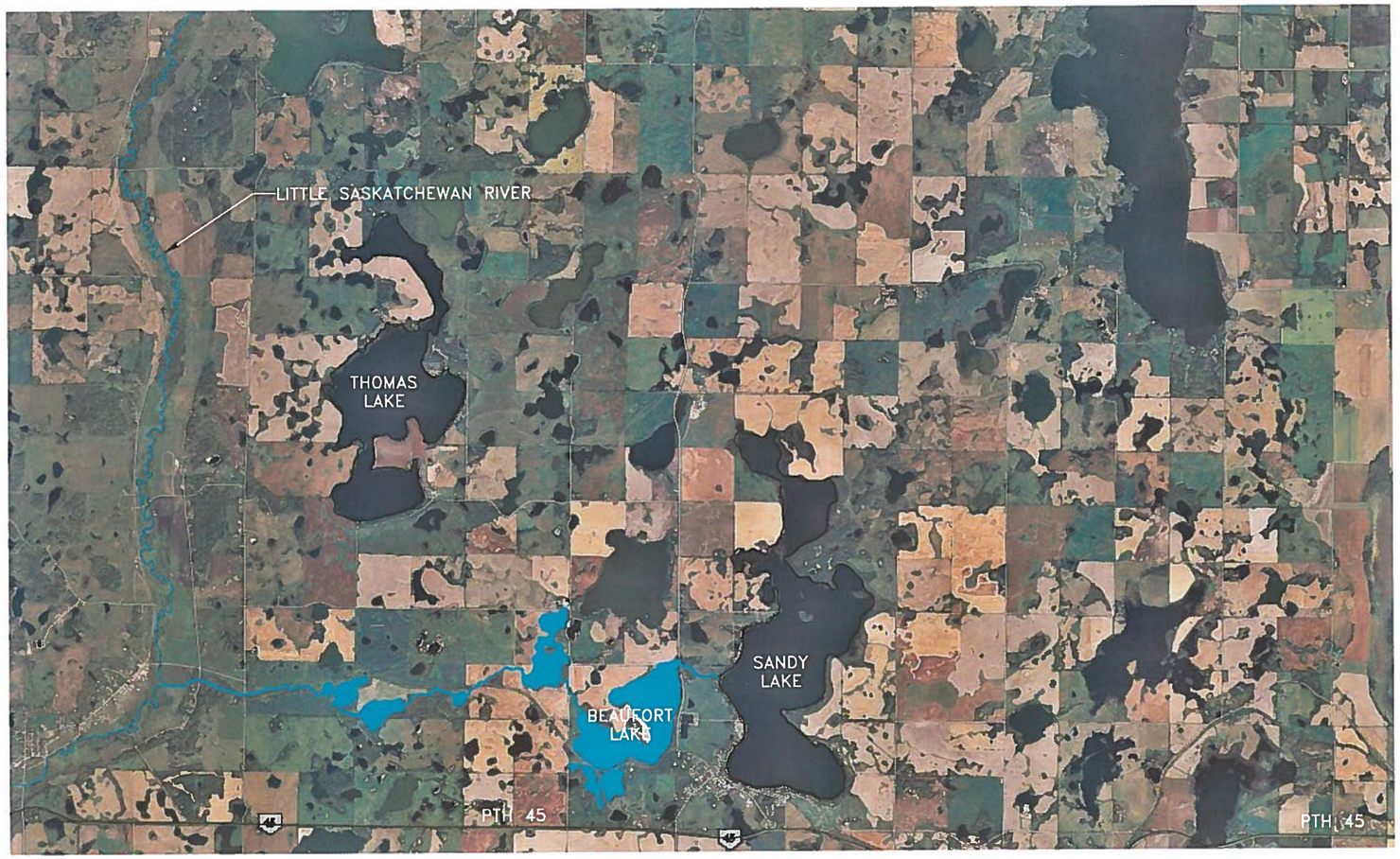
APPENDIX D

WATER LEVEL DATA


Thomas Lake
Water Level Fluctuations
588.5
588
587.5
587
586.5
586
585.5
Elevation
1980
1985
1990
1995
2000
2005
2010
2015
Year

R.M. OF HARRISON
WATER LEVEL CONTROL PROJECT
SANDY LAKE, MANITOBA

OCTOBER 2015



G.D. NEWTON & ASSOCIATES INC.
727A 10TH STREET
BRANDON, MB
R7A 4G7

PHONE (204) 725 1688

BENCHMARK NW CORNER OF TOP OF MAIN PIER 97.00

ALL DIMENSIONS ARE IN METRES
ALL ELEVATIONS ARE BASED ON A LOCAL DATUM

APEGM
Certificate of Authorization
G.D. Newton & Associates Inc.
No. 4633 Date: APRIL 30, 2016

PROVINCE OF MANITOBA
2015/10/28
G.D. NEWTON
REGISTERED PROFESSIONAL ENGINEER

LOCATION OF UNDERGROUND STRUCTURES ARE APPROXIMATE ONLY. EXACT LOCATION MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES PRIOR TO CONSTRUCTION.

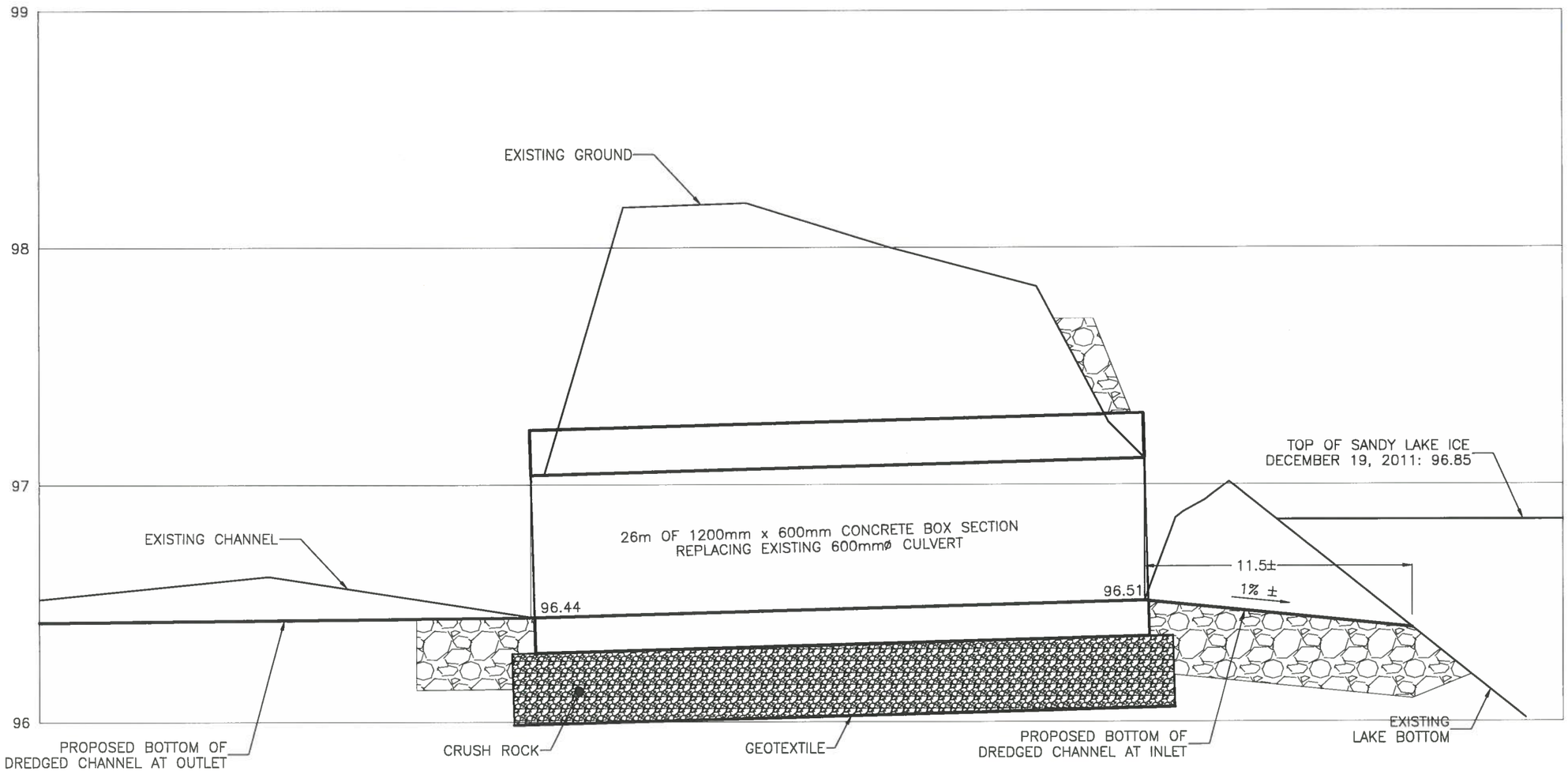
REVISIONS

G.D. NEWTON AND ASSOCIATES INC.
727A 10TH STREET
BRANDON, MANITOBA
R7A 4G7

DATE: OCTOBER 2015 SCALE: N.T.S.

R.M. OF HARRISON: SANDY LAKE WATER LEVEL CONTROL PROJECT SITE PLAN

DRAWING 1



BENCHMARK NW CORNER OF TOP OF MAIN PIER 97.00

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NEWTON
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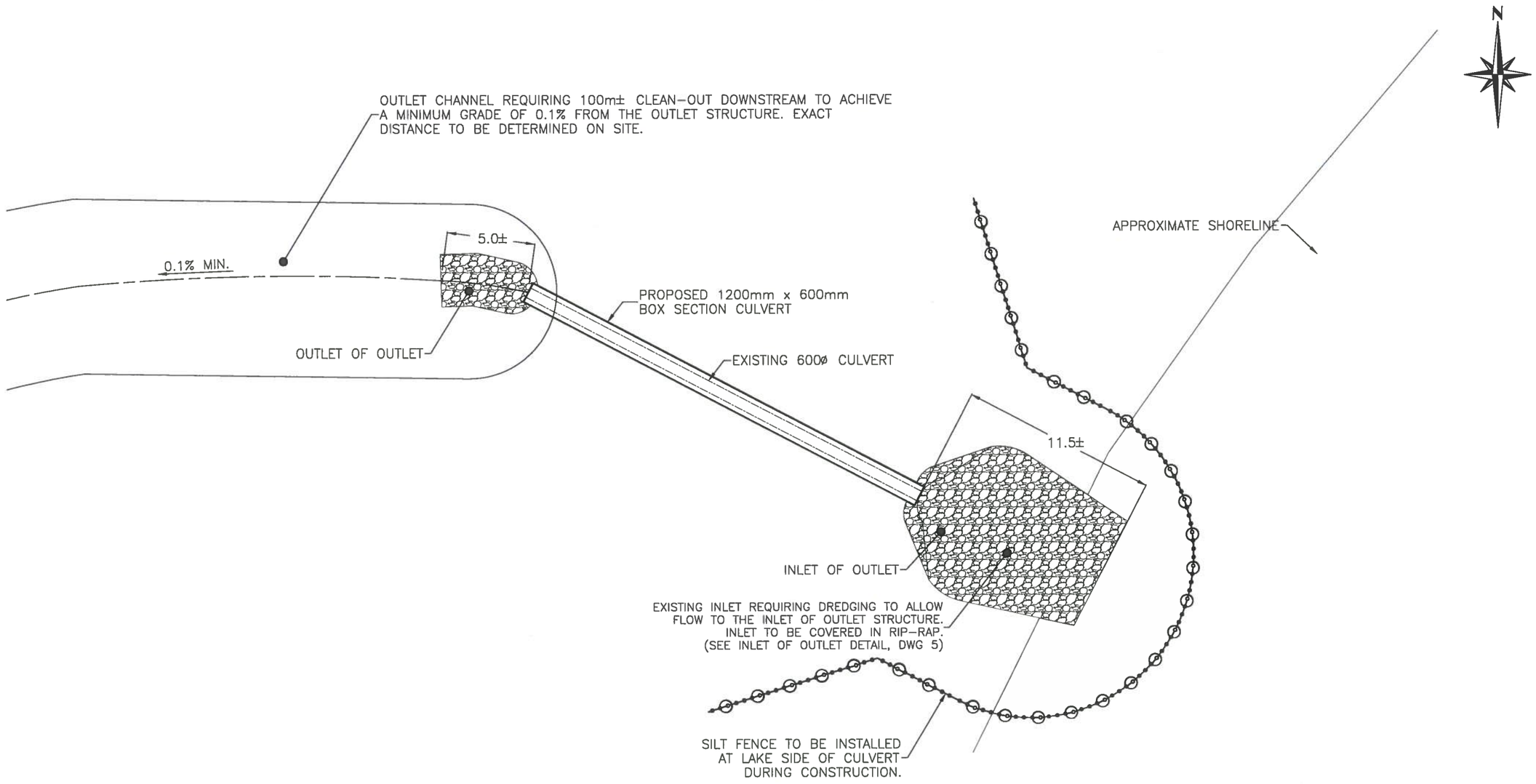
R7A 4G7

DATE: OCTOBER 2015 SCALE: (H) 1:200 (V) 1:20

R.M. OF HARRISON: SANDY LAKE WATER LEVEL CONTROL PROJECT OUTLET SECTION

DRAWING 2



BENCHMARK NW CORNER OF TOP OF MAIN PIER 97.00

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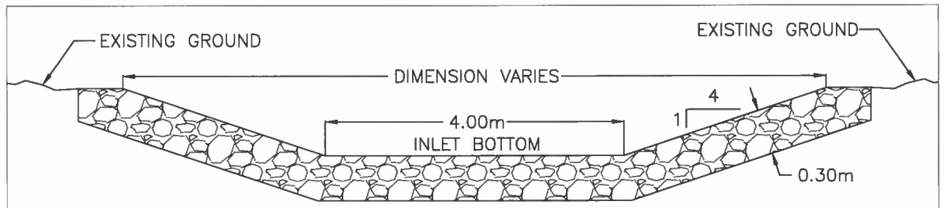
DATE: OCTOBER 2015 SCALE: 1:250

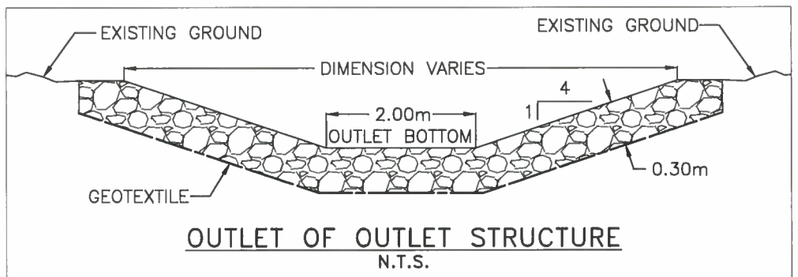
R.M. OF HARRISON: SANDY LAKE WATER LEVEL CONTROL PROJECT OUTLET SITE PLAN

DRAWING 3



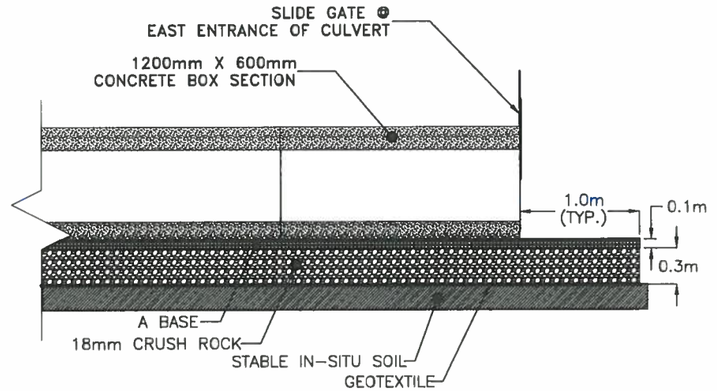
INLET OF OUTLET STRUCTURE
N.T.S.

– RIP–RAP A MINIMUM OF 200mm IN DIAMETER



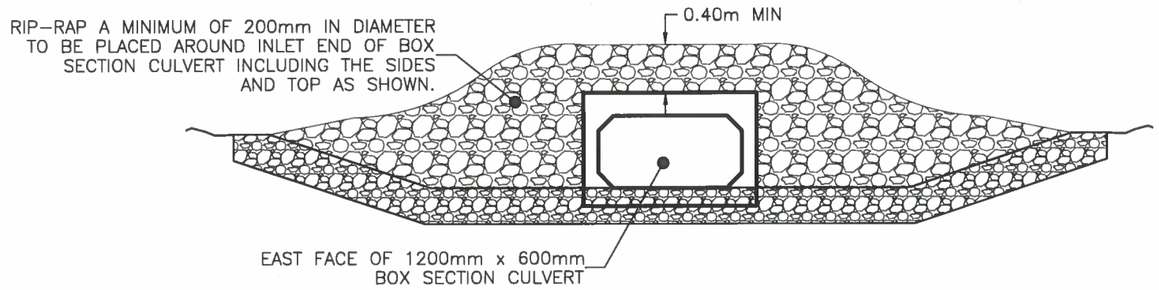
OUTLET OF OUTLET STRUCTURE
N.T.S.

– RIP–RAP A MINIMUM OF 200mm IN DIAMETER AND PLACED ON GEOTEXTILE



BOX SECTION INSTALLATION DETAIL
N.T.S.

- THE SURFACE PREPARED TO SUPPORT THE BOX SECTION SHALL HAVE A 0.1m MINIMUM THICKNESS TOP LEVELLING COURSE OF A BASE GRAVEL OR AN APPROVED EQUIVALENT.
- BACKFILL AND COVER TO BE FREE OF BOULDERS HAVING A DIAMETER GREATER THAN 100mm, DEBRIS, ORGANIC MATTER OR FROZEN MATERIALS
- BACKFILL AND COVER TO BE PLACED IN LIFTS NO GREATER THAN 200mm IN THICKNESS WITH COMPACTION AT EACH LIFT.
- **MINIMUM COVER OF 0.6m REQUIRED OVER TOP OF CULVERT..?**



INLET OF OUTLET SECTION
N.T.S.

– RIP–RAP A MINIMUM OF 200mm IN DIAMETER

BENCHMARK NW CORNER OF TOP OF MAIN PIER 97.00

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2015/10/28
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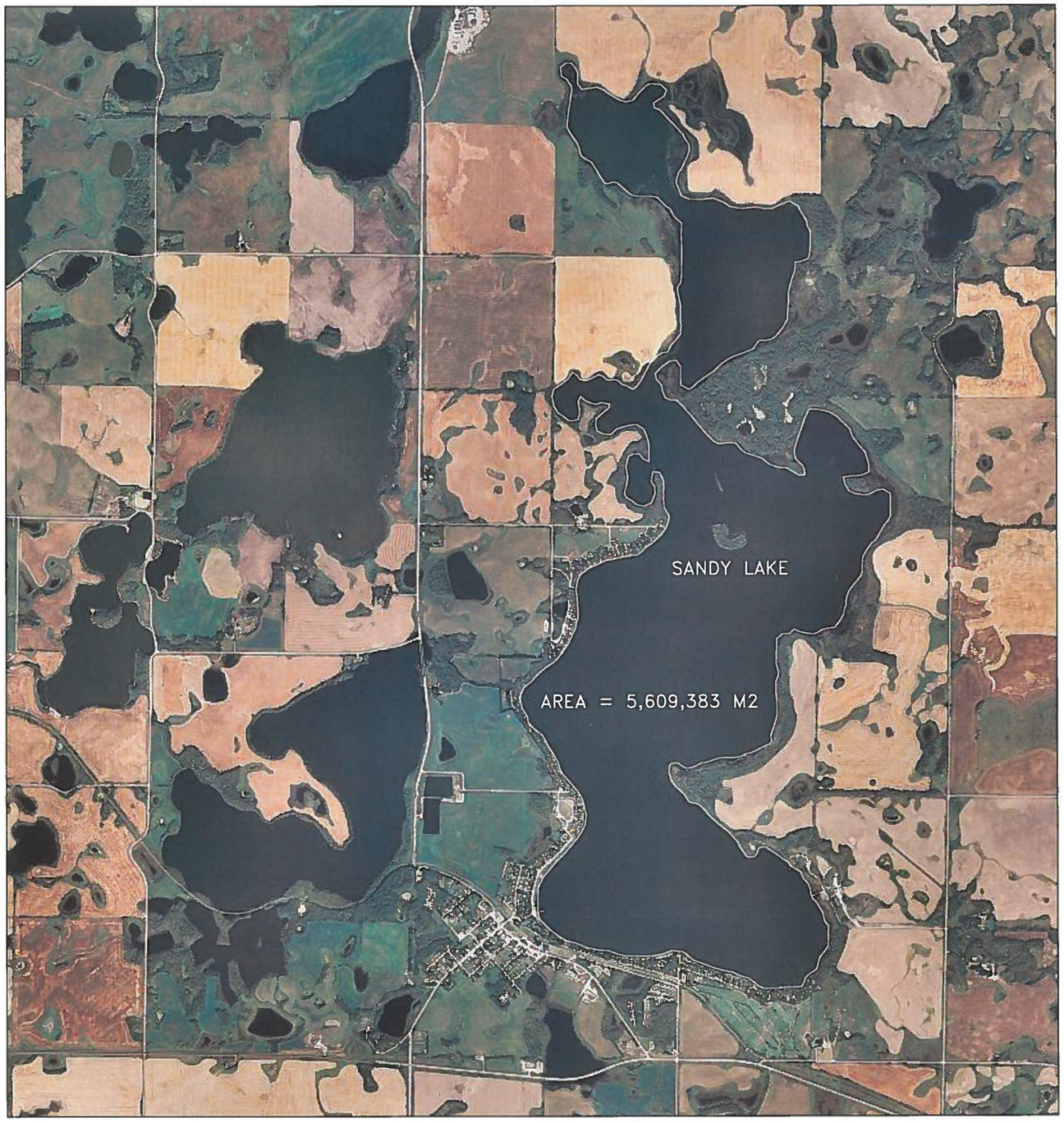
REVISIONS

G.D. NEWTON AND ASSOCIATES INC.
727A 10TH STREET
BRANDON, MANITOBA
R7A 4G7

DATE: OCTOBER 2015 SCALE: AS SHOWN

R.M. OF HARRISON: SANDY LAKE WATER LEVEL CONTROL PROJECT
OUTLET INSTALLATION DETAILS

DRAWING 4



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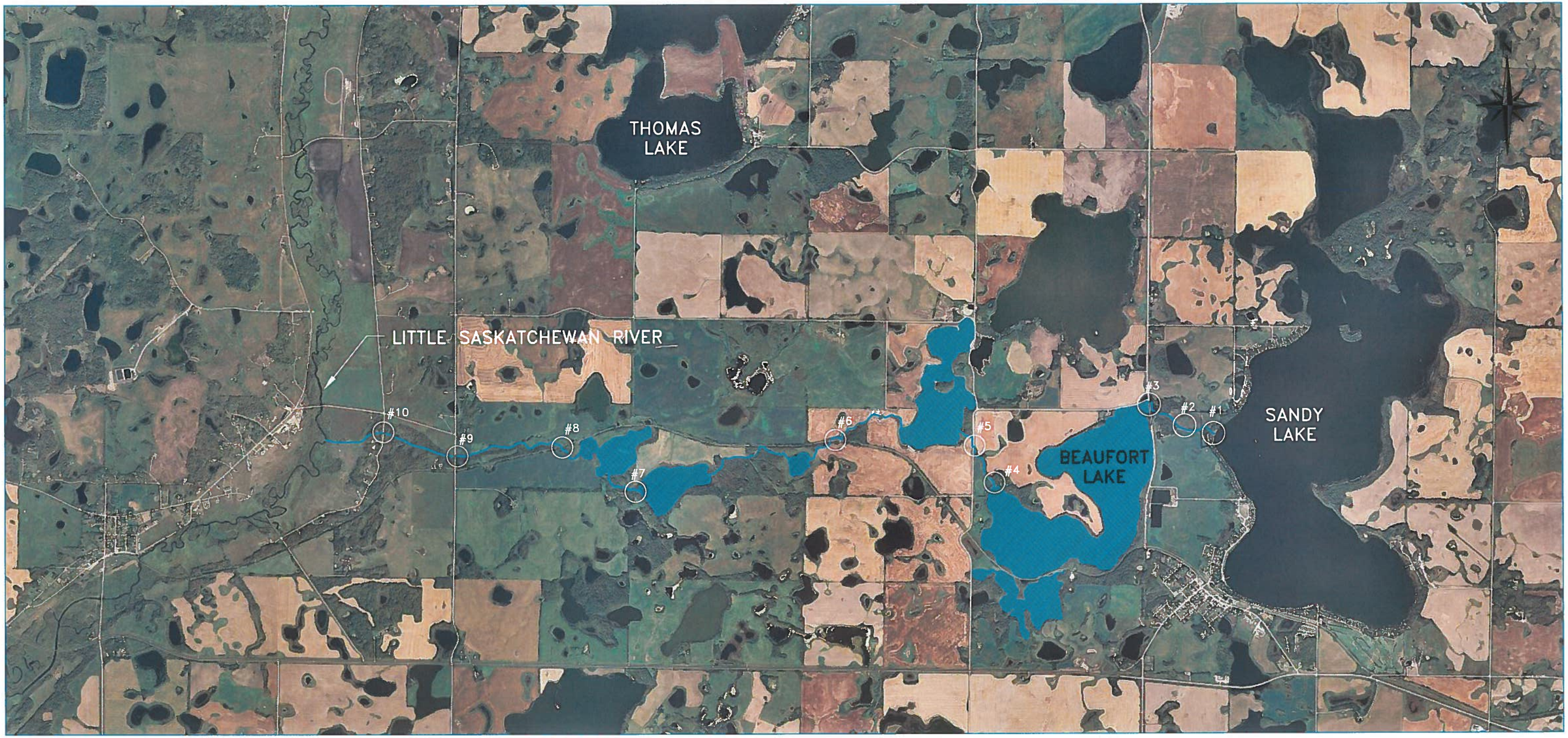
R7A 4G7

DATE: OCTOBER 2015

RM OF HARRISON: SANDY LAKE WATER LEVEL CONTROL PROJECT

LAKE AREA

DRAWING 5



CROSSING DESCRIPTIONS:

CROSSING #1 – SANDY LAKE OUTLET

CROSSING #2 – DOWNSTREAM OF SANDY LAKE OUTLET

CROSSING #3 – PR 250 CROSSING; INLET TO BEAUFORT LAKE

CROSSING #4 – BEAUFORT LAKE OUTLET

CROSSING #5 – MILE ROAD CROSSING; DOUBLE CULVERTS

CROSSING #6 – RAILROAD CROSSING

CROSSING #7 – WEIR AT DUCKS UNLIMITED PROPERTY

CROSSING #8 – RAILROAD CROSSING; TWO CULVERTS

CROSSING #9 – MILE ROAD CROSSING; EAST SIDE OF KEESEEKOOWENIN INDIAN RESERVE

CROSSING #10 – LAST CULVERT BEFORE LITTLE SASKATCHEWAN RIVER

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No. 4633 Date: APRIL 30, 2016

PROVINCE OF MANITOBA 2015 G.D. NEWTON REGISTERED PROFESSIONAL ENGINEER

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REVISIONS

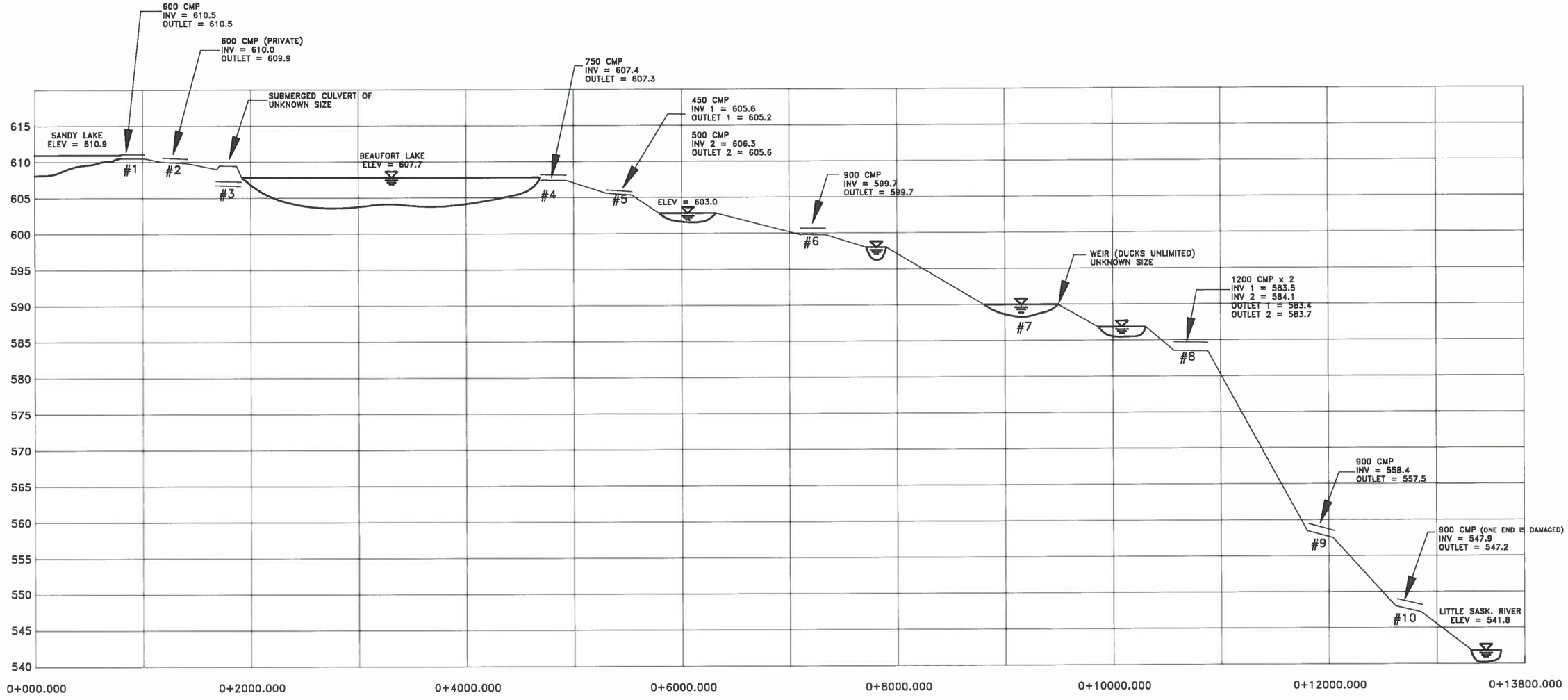
G.D. NEWTON AND ASSOCIATES INC.
727A 10TH STREET
BRANDON, MANITOBA
R7A 4G7

DATE: OCTOBER 2015

RM OF HARRISON: SANDY LAKE WATER LEVEL CONTROL PROJECT

DRAINAGE ROUTE AND CROSSINGS

DRAWING 6



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No. 4633 Date: APRIL 30, 2016

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2016/04/30
G.D. NEWTON
REGISTERED PROFESSIONAL ENGINEER

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REVISIONS

G.D. NEWTON AND ASSOCIATES INC.
727A 10TH STREET
BRANDON, MANITOBA
R7A 4G7

DATE: OCTOBER 2015

RM OF HARRISON: SANDY LAKE WATER LEVEL CONTROL PROJECT

DRAINAGE PATH ELEVATIONS

DRAWING 7

KEESEEKOOWENIN INDIAN RESERVE NO 61

RONALD S. & JANICE G. GAWIUK

RICHARD W. LEWANDOSKI

DUCKS UNLIMITIED

RAY L. LEWANDOSKI

MERILL & DIANE ZACHARY

DWAYNE F. WASYLENKO

STEPHEN P. NECHWEDIUK

IRIS TREICHEL

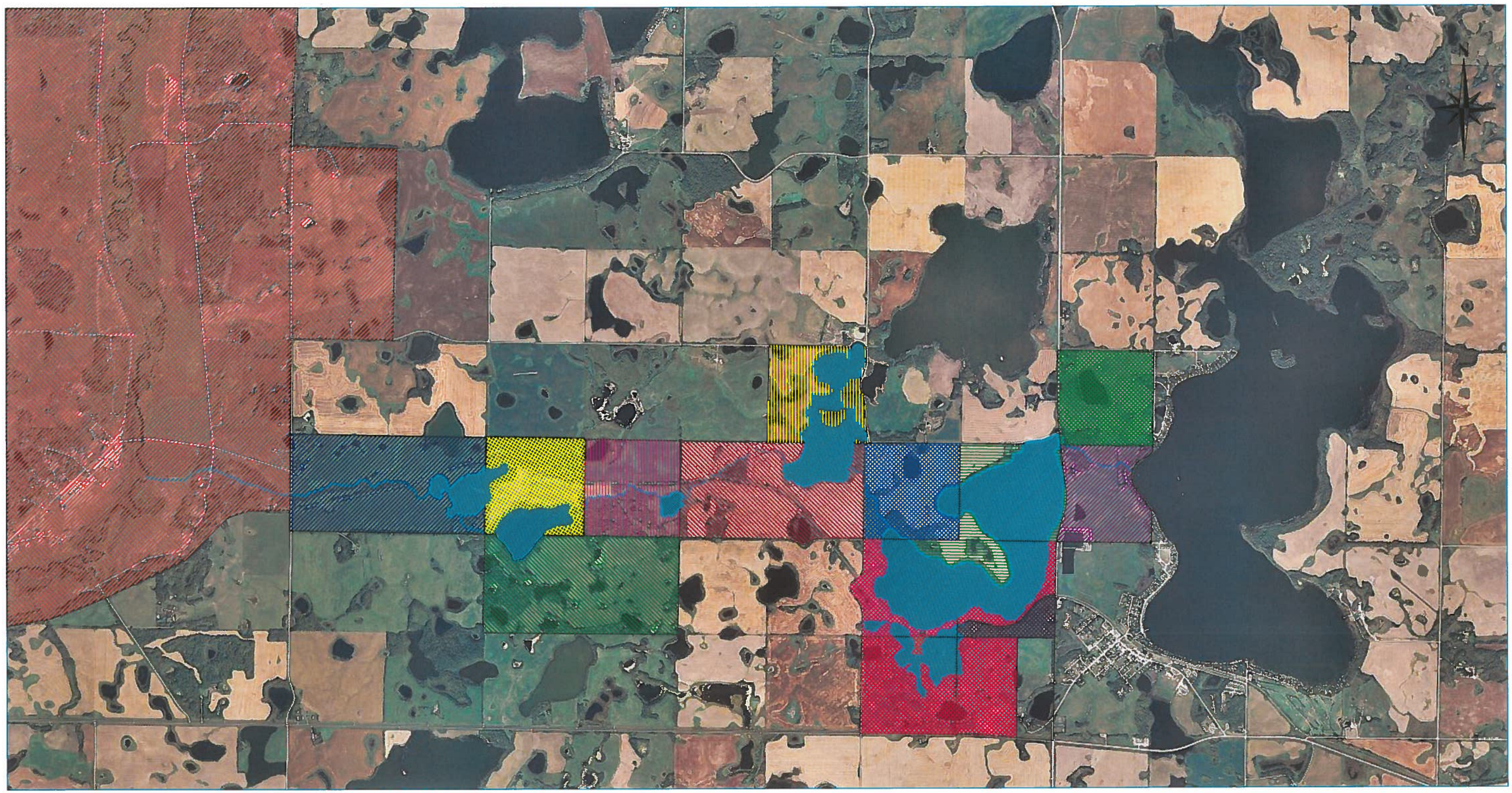
SADLEY YARYCH

DENNIS & KATHLEEN SLASHINSKY

EDWARD P. MISANCHUK

ROBERT L. & LINDA A. LEWANDOSKI

MAURICE KOWALCHUK



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R7A 4G7

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RM OF HARRISON: SANDY LAKE WATER LEVEL CONTROL PROJECT

LAND OWNERSHIP

DRAWING 8