

Sandy Lake Water Protection Working Group Inc. (SL-WPWG) 2019 Planning Document

2018 Accomplishments

SL-WPWG achieved the following during the 2018 open water season:

1. Conducted a successful Aquatic Invasive Species (AIS) awareness campaign with volunteers;
2. Received donations from Friends of Sandy Lake (\$8,000) & Heritage Coop (\$1,000);
3. Incorporated a not-for-profit company named Sandy Lake Water Protection Working Group Inc. in order to apply for grants and hire summer students;
4. Constructed an off-grid Watercraft Inspection Office located at the Main Street boat launch at Sandy Lake (with volunteer labour and \$5,800 of in-kind material donations);
5. Installed lockable gates at three public locations where a trailered watercraft could be launched and put up signs directing them to the Main Street boat launch in order to be inspected before they are launched (40% discount of \$1,790);
6. Inspected watercraft at the Main Street boat launch with the help of a summer student paid for by Riding Mountain Biosphere Reserve.
(4 high risk watercraft were sent to RMNP to be decontaminated.)
7. Installed Provincial "Stop AIS" and our "Can I Launch Here?" signs at a number of locations where trailered watercraft can be launched. The "Can I Launch Here?" signs and posts were supplied by the Municipality and volunteers have installed the signs as follows:
 - Sandy Lake (5 installed, 5 more to be installed)
 - Little Jackfish Lake (1)
 - Gull Lake (1)
 - Beauford Lake (1)
 - Pybus Lake (1)
 - Corstophine Lake (1)
 - Stuart Lake (2)
 - Wargatie Lake (1)
 - Seech Lake (1)
 - Imire Lake (2)
 - Crawford Lake (1)

Watercraft Inspection Office



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2019 Open Water Season Plans

The Town of Sandy Lake's most precious asset is the lake! Without it, the Town would decline slowly and most of the businesses would eventually close.

All of the cottagers' and the Sandy Lake campgrounds depend on the lake. It attracts families that want to enjoy fishing, boating, tubing, waterskiing, swimming and the beach.

For the 2019 open water season, SL-WPWG is committed to:

1. Protecting our lake from the threat of Zebra Mussels by:
 - a. Inspecting watercraft at the Main Street boat launch
 - b. Installing additional AIS signs around the lake
 - c. Installing additional posts to prevent trailered watercraft from launching in other public areas.
2. Improving our lake's water quality by:
 - a. Conducting a water quality awareness campaign.
 - b. Installing an aerator at the Main Street boat launch and beach. This will:
 - i. Reduce the algae blooms at the beach and hopefully eliminate the warning signs posted at the beach and
 - ii. Improve habitat for fish at the Main Street dock and boat launch area.
 - c. Determining if taking water out of the lake to irrigate the golf course from a deeper water will remove more nutrients. If it will, we will assist the golf course extend a pipe to achieve this.
 - d. Installing at least two Floating Treatment Wetlands (FTWs) to remove nutrients from the lake and determine the feasibility of doing FTWs on a larger scale.



Water Circulation



Floating Treatment Wetlands (FTWs)

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2019 Fund Raising Activities (as at March 18, 2019)

Municipality of Harrison Park

1. \$9,000 for inspectors to conduct Watercraft Inspections in the 2019 open water season. **(\$6,000 Confirmed)**
2. \$7,000 grant application to fund an aeration / water circulation unit at Sandy Lake's Main Street dock and beach area. **(not funded)**
3. In-kind contributions to the project such as materials and use of equipment (operated by municipal staff). **(pending)**

Lake Winnipeg Foundation (\$10,000 confirmed)

We have requested and received an in-kind donation of \$10,000 for testing water samples for phosphorus.

Sandy Lake Lions Club (\$2,500 confirmed)

\$2,500 to upgrade the security camera system at the Watercraft Inspection Office and to pay for signs informing the public of the new fines regarding AIS.

Provincial and Federal summer employment programs:

1. Manitoba Green Team (\$24,000 requested, **\$3,200 confirmed**)
2. Canada Summer Employment (\$31,000 requested, **\$14,744 confirmed**)

Lake Winnipeg Basin Program (\$40,000 pending)

The Conservation Trust (\$40,000 requested, not funded)

Other requests we plan to make:

1. Sandy Lake Endowment Fund
2. Sandy Lake Drop-in Centre
3. Friends of Sandy Lake
4. Heritage Coop
5. Sunrise Credit Union
6. Chase-the-ace fund raiser
7. Volunteers to assist with:
 - a. Watercraft inspections
 - b. The water quality public awareness campaign
 - c. Construction Floating Treatment Wetlands (FTWs)

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2018-19 Winter Planning Activities

SL-WPWG has been working on two main initiatives since November 2018:

1. Protecting our waters from Aquatic Invasive Species (AIS) specifically Zebra Mussels
2. Improving water quality (reducing / eliminating blue-green algae blooms)

Aquatic Invasive Species (AIS) Initiative

We have submitted applications to the provincial and federal summer employment programs:

- Manitoba Green Team
- Canada Summer Employment

The summer jobs are for conducting watercraft inspections at the Main Street boat launch at Sandy Lake. The summer students will be working from the Watercraft Inspection Office located there. If our applications are successful, these programs will fund wages and employment costs up to the Manitoba minimum wage (\$11.35/hour). In order to attract workers, we will be paying \$13.50/hour.

In the 2019 open water season we plan to:

1. Install additional signs at Sandy Lake and other lakes as indicated by the Municipality;
2. Install additional posts to prevent trailered watercraft from getting around our lockable gates with the LUD;
3. Request Parks Canada (RMNP) allow our local watercraft inspectors to be allowed to send high risk watercraft to them for decontamination;
4. Request Manitoba Sustainable Development train our volunteers and summer students how to properly inspect watercraft for AIS; and
5. Continue to lobby the Manitoba government for a Watercraft Inspection / Decontamination Station to be located within a reasonable driving distance from the Municipality of Harrison Park.

DON'T MOVE A MUSSEL

WHAT MUSSELS?
Zebra Mussels. They originally came from lakes in Eurasia and are not native to North America. They live in freshwater lakes and rivers and are an Aquatic Invasive Species (AIS). Adult Zebra Mussels are known to encrust and corrode hard surfaces and cause serious harm to waters where they become established.
Unfortunately, to the best of our knowledge, the waters in our area are still free from invasive mussels.

HAVE "THE TALK!"

PREVENT THE SPREAD OF ZEBRA MUSSELS
It's not always easy to talk with neighbors, friends or family, but if you love our waters... it's OK to have "THE TALK!"
If you have a boat, please, overlap a nozzle with their watercraft with them for the water, or a hand bringing their water toys out from the Lake Winnipeg or Red River area.

"TALK!"

Make sure they are aware of Zebra Mussels and the need to "CLEAN+DRAIN+DRY+DISPOSE, and if necessary, DECONTAMINATE" as required by law "their watercraft, and other water-related equipment to prevent our lakes. Talk with them about the importance of stopping at watercraft inspection stations. And to plan their travels when the stations are open.

Decontamination is necessary after watercraft or water-related equipment is removed from provincially designated control areas. For a map of the control areas or Watercraft Inspection Stations, visit www2.gov.mb.ca/water/stopais.htm

It wouldn't take long for Zebra Mussels to get established once they arrive. Each female can produce as many as 1 million eggs per year.

The mussels can be spread unknowingly by boaters, fishers, beach goers and other water-using lake users. In their early larval stages, they cannot be seen with the naked eye and can be invisibly transported in dampened equipment or standing water in objects being moved from one body of water to another. As their juvenile stage, they can be the size of a grain of sand and begin attaching to hard surfaces. You may not be able to see them but they feel like sandpaper on a surface such as a boat hull. All their targets they are about the size of your thumb nail. They can be carried on trailered boats and other watercraft, such as, jet-skis, kayaks, inflatables, etc. They can also be transported on damp or wet hip waders, fishing tackle, the jacks, water toys and other objects that have been in invaded waters.

Riding Mountain UNESCO World Biosphere Reserve

WHERE DID THEY COME FROM?
They were first introduced to Canada's Great Lakes region and the United States in the 1930s after ballast water was discharged by vessels traveling from Eurasia.

WHERE ARE THEY NOW?
Zebra Mussels have been in the Great Lakes in Ontario and Quebec since the late 1980s and have been spreading ever since through the USA. In 2013, they were discovered in Lake Winnipeg and, in 2015, the Red River and Cedar Lake.

When they arrived in Central Manitoba, the Province expanded their Watercraft Inspection program. Watercraft being transported over land must stop at the inspection stations when they are open - it is the law.

Sandy Lake in the Duck Mountains (20 km North West of Dauphin) is closed to day-use boaters until further notice. In 2017, potential Zebra Mussel eggs was found.

Now that Zebra Mussels are only a 3-4 hour drive from our waters where we work, live and play, the importance of prevention is more critical than ever.

WHAT ARE THE IMPLICATIONS?
Studies have found that an invasion of Zebra Mussels can negatively impact:

- Water intakes for cottage owners and farmers' irrigation systems
- The safety of drinking water because of potential increased toxic algae levels
- Aquatic infrastructure (e.g. marinas, public and private docks, boat lifts, booms, etc.)
- Motor boats by encrusting watercraft hulls, propellers and cooling systems, increasing drag and maintenance costs or causing catastrophic overheating and engine failures
- The natural ecology of the lake, by removing invertebrates that are important to native fish species and enhancing the growth of aquatic plants which are a nuisance for boaters, fishers & swimmers
- Real estate values, especially waterfront properties, as the area becomes less attractive
- Our beaches with the presence of razor sharp shells and smelly decaying mussels
- Our local tourist economy, due to fewer visitors due to closed beaches and poorer fishing
- Our local economies with the loss of business revenues, jobs and the potential loss of businesses that provide recreation with important goods and services
- Local government infrastructure, such as, drinking water intake/distribution systems, storm drains and sewage systems, in increased maintenance costs and higher taxes
- And downstream waters, as Zebra Mussel larvae (glochidia) move with the currents

SPREAD THE WORD, NOT THE MUSSELS

We cannot be certain that a waterbody is free of microscopic Zebra Mussel eggs and larvae, so "CLEAN+DRAIN+DRY+DISPOSE, and if necessary, DECONTAMINATE, as required by law"

This is the new water user's etiquette that is essential if we are to protect the waters we love.

Visit the Riding Mountain Biosphere Reserve website for more information:
www2.gov.mb.ca/water/stopais.htm

Riding Mountain Biosphere Reserve is a UNESCO World Biosphere Reserve

Zebra Mussel Fact Sheet

Can I launch here?

(This includes canoe, kayak, inflatable, trailered watercraft and water-related equipment)

1. If your watercraft was stored in the cold over winter and this is the first launch of the open water season, you can launch.
2. If this is the only water body you have used your watercraft in this season, you can launch.
3. If your watercraft has been launched in a provincially-designated control zone (waters such as the Red River or Lake Winnipeg, that are invaded with zebra mussels or other AIS) you MUST decontaminate your watercraft and it must be completely dry before launching it in this or any other water body. It is the law. **DO NOT LAUNCH until you decontaminate and dry your watercraft.**
4. If you have followed the provincial AIS cleaning requirements when you took your boat out of the water the last time (Clean+Drain+Dry+Dispose, and if necessary, Decontaminate) you can launch.

If you are not sure, please, do not launch!

For more information visit: Manitoba.ca/StopAIS

SPREAD THE WORD, NOT THE MUSSELS

"CLEAN+DRAIN+DRY+DISPOSE, and if necessary, DECONTAMINATE as required by law"

This is essential if we are to protect the waters we love!

rmbrr.ca/SpreadTheWordNotTheMussels

Sign

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Improving Water Quality Initiative

We have created a project to improve the water quality of Sandy Lake and in the process develop a document to assist other communities that are facing similar water quality issues.

This is a 2 year project with a budget of \$120,000.

Title: **Implementing a community-based, eutrophic lake remediation pilot program**



There are two major funding opportunities available:

1. Lake Winnipeg Basin Program and
2. The Conservation Trust (a Manitoba Climate and Green Plan Initiative).

Each of these programs will fund up to 1/3 the value of our project. The remaining dollars will come from fund raising or in-kind donations of materials, equipment use and volunteer time.

The application process has two parts:

1. A Letter of Interest (LOI) must be submitted
2. If the LOI is acceptable, you are invited to submit an application.

We have submitted a LOI to both programs and were asked by both programs to submit an application. Funding applications were submitted to both programs and we are waiting to hear if our applications one or both of them will be funded.

Project Description:

This project is intended to serve as a model for other similar communities.

Objectives:

- Develop an evidence-based plan for nutrient reduction in Sandy Lake
- Create a monitoring and engagement model for similar communities to adapt

Activities:

1. Develop literature, signage and a presentation that can be used to undertake a public awareness campaign. This information will be in plain language and target a small sub-watershed like Sandy Lake where there is considerable human activity.

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2. Engage stake holders with a public awareness campaign to gain support for implementing measures that will reduce nutrients entering the watershed
3. Establishing a baseline nutrient budget for Sandy Lake to:
 - Measure progress against
 - Identify point and non-point nutrient sources
 - Determine mitigation strategies that can be implemented
4. Implement an aeration / water circulation unit as an experiment for 5 acres of Sandy Lake which includes the swimming beach and boat launch areas. Measurements will be taken in the area treated as well as a control area to determine the effectiveness of this technology.
[One Solution \(AerationPlus 1800 Circulator\)](#)
5. Encourage re-establishing riparian buffer zones in developed areas of the lakeshore.
6. Investigating geotextile filtering material to remove nutrients.
7. Investigate methods to recover nutrients from Sandy Lake for reuse in a circular economy by:
 - Harvesting cattails.
 - Creating movable riparian filters that can be removed and harvested. These floating cattail islands could be installed at point source locations such as the golf course creek, municipal drains and creeks that are not already protected.
[IISD Floating Treatment Wetlands Webpage](#)
 - Removing nutrient rich water from Sandy Lake for irrigation applications such as golf courses, residential lawns & gardens and agriculture.
 - Harvesting lake sediments using low environmental impact methods.

Outcomes:

1. A document that can be shared with similar like-minded groups to give them a starting point that they can adapt to their community's requirements in order to implement nutrient reducing actions for themselves.
2. A nutrient remediation plan for Sandy Lake based on data and lake loading models and informed by scientific community consultation.

Project Partners:

1. Riding Mountain Biosphere Reserve
2. Municipality of Harrison Park
3. The Little Saskatchewan River Conservation District
4. Manitoba Sustainable Development
5. International Institute of Sustainable Development (IISD)
6. Friends of Sandy Lake

We may be successful in attracting significant funding from one or both of these sources but in any case, we plan to accomplish as much of the project as possible with the resources we are able to obtain.