LWF LAKE WINNIPEG FOUNDATION

SPRING & SUMMER 2022
VOLUME 22, ISSUE 1

THE WATERSHED OBSERVER

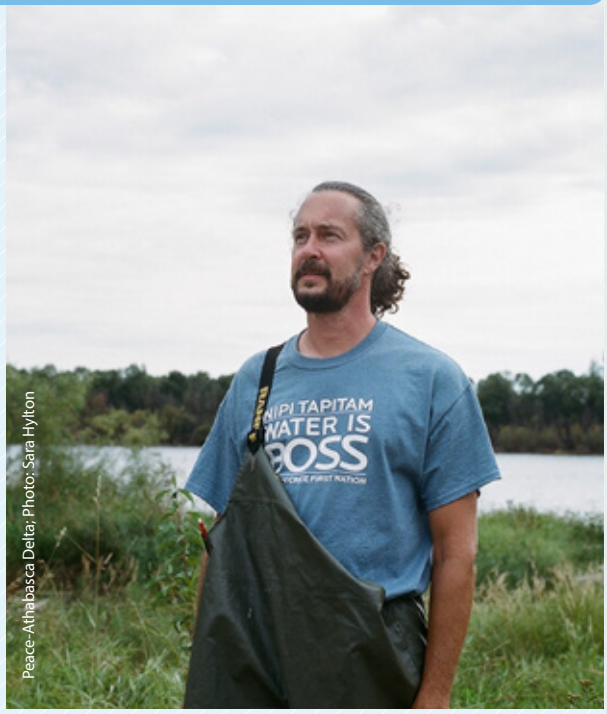
Chalet Beach; Photo: Jesse Vanderhart

MESSAGE FROM LWF'S CHAIR

For much of my youth I visited Lake Winnipeg in absolute ignorance that Indigenous people have always lived there. I discovered that my knowledge of the region was profoundly one-sided. Learning about the forced displacement of Indigenous peoples and the continued suffering of those relocated, such as by flooding this spring in Peguis First Nation, I am reminded to reframe environmental issues to include their social-justice facets.

Understanding the human and historical dimensions of environmental issues is part of our journey to create new, honest relationships with Indigenous peoples. Taking on the challenge of reconciliation and ecological restoration will include healing. Unflinchingly facing these challenges creates a space of grace that allows community to grow – and in that community, the vastness and diversity of Lake Winnipeg is matched only by our strengths and gifts, creating spaces for all to share in this growth.

And yes, we have our hands full. Reconciling past harms, climate change, phosphorus reduction: these are all complicated, decades-long issues. Winnipeg's wastewater infrastructure is sorely antiquated, as is any governance that allows 60 million litres of raw sewage to spill into the Red River and the north end treatment plant to exceed its provincially licensed phosphorus limit going on 21 years now. That's an almost worse record than the Maple Leafs in the playoffs. Meanwhile, this spring's federal budget saw a shocking decrease in support for freshwater protection despite previous promises of a "historic investment." And federal commitment to meaningfully discuss Indigenous water rights is also sorely lacking.



Peace-Athabasca Delta; Photo: Sara Hylton

Addressing these issues requires individuals working together as a collective, using evidence-based decisions and teachings from the Elders, and listening to solutions-focused farmers, scientists, fishers and youth. Fortunately, this exists: You! Dear LWF members, it is my sincere pleasure to watch you cultivate this network of lake-loving, ever-learning individuals.

– Bruce Maclean, Chair, LWF Board of Directors

LAKE WINNIPEG FOUNDATION

107 - 62 Hargrave St | Winnipeg, MB, R3C 1N1 | Treaty 1 Territory & Homeland of the Métis Nation | 204-956-0436

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FEDERAL BUDGET FAILS LAKE WINNIPEG

Last fall, the Liberal Party of Canada made an ambitious and historic funding commitment for water in its federal election campaign: $1 billion over 10 years for a Freshwater Action Plan that would protect and restore large lakes and river systems across the country, including Lake Winnipeg.

From 2008 to 2022, the federally funded Lake Winnipeg Basin Program provided dedicated support to address the eutrophication of Lake Winnipeg. The program invested in phosphorus-reduction projects and provided opportunities to ensure meaningful inclusion of Indigenous peoples in water governance.

When this funding program ended on March 31, 2022, we looked optimistically to Budget 2022 and the promised Freshwater Action Plan.

We were sorely disappointed. Instead of allocating $100 million/year for 10 years, the federal budget delivered only $19.6 million for a single year. It's not clear how much – if any – of this funding will be available for Lake Winnipeg.

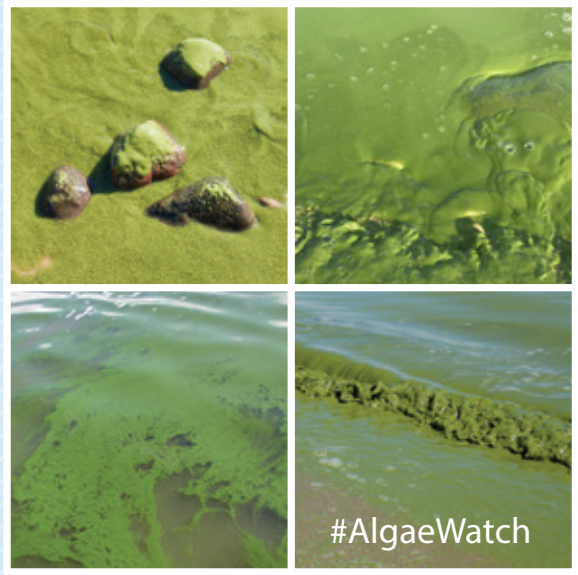
With ongoing federal support now uncertain, the future of Lake Winnipeg – the 10th largest freshwater lake in the world – is in jeopardy. We are at risk of losing the progress achieved over 15 years of collaborative effort funded by the Lake Winnipeg Basin Program.

We cannot allow our federal government to fail Lake Winnipeg again. We expect Canada's decision-makers to keep their promises – and we expect to see a renewed $1 billion Freshwater Action Plan in Budget 2023.

HOW YOU CAN HELP

In this issue of *The Watershed Observer*, you'll find a postcard advocating for renewed funding for Lake Winnipeg in Budget 2023.

Use your voice to speak up for Lake Winnipeg by filling in the postcard and sending it – no postage required – to the federal minister of Environment and Climate Change, the Honourable Steven Guilbeault.



Algae on Lake Winnipeg, as seen by LWF supporters (clockwise from top left): Victoria Beach, 2017; Photo: Jeope Wolfe; Spruce Sands Beach, 2021; Photo: Rosalie Lazar; Victoria Beach, 2017; Photo: Jeope Wolfe; North basin near Berens River, 2002; Photo: Mike Stainton

SHARE YOUR PHOTOS ONLINE WITH #AlgaeWatch

Sewage spills and overland flooding have set the stage for a season of potentially severe algal blooms on Lake Winnipeg.

We need your help to ensure our elected leaders understand the impacts of their inaction. This summer, we're encouraging people who experience algae on the lake to snap a photo and share it on social media using the hashtag #AlgaeWatch.

Online networks like Instagram, Twitter and Facebook are monitored by politicians and journalists. Elected officials pay attention to what their constituents are talking about, while trending topics often get picked up by local media, which helps further amplify citizens' concerns. This is where we have great power to influence change.

The more attention an issue receives, the more likely elected officials at all levels of government are to take notice.

Tag us in your #AlgaeWatch photos:

- savelakewpg
- savelakewpg
- lakewinnipegfoundation

SEWAGE UPDATE

CALLING FOR COMMON SENSE AND COST-EFFECTIVENESS

This spring, the alarming failure of Winnipeg's sewage-treatment system to protect our city's rivers underscores the urgency with which upgrades to Winnipeg's largest sewage treatment plant must be completed.

On June 30, 2022, the City of Winnipeg will submit an updated plan for the North End Water Pollution Control Centre (NEWPCC) to the province's Environmental Approvals Branch.

This is the fourth attempt to develop a workable plan since the city missed its Dec. 31, 2019, deadline to complete NEWPCC upgrades.

Previous plans (released on Jan. 31, 2020, Sept. 30, 2020, and Feb. 15, 2022) have each projected longer and longer timelines to complete treatment-plant upgrades. The latest plan did not even provide a timeline for phosphorus compliance, as the Phase 3 Nutrient Removal Facilities project – the most expensive phase, estimated to cost $828 million – remains unfunded.

The failure of our elected leaders and public servants alike to effectively plan, design and manage Winnipeg's wastewater treatment system to protect Lake Winnipeg is unconscionable.

> Elected officials need a faster and cheaper way to achieve phosphorus compliance at the north end treatment plant. The solution is right in front of them.

Proven, efficient and cost-effective means exist to enable Winnipeg's wastewater infrastructure to meet the 1 mg/L phosphorus limit to protect Lake Winnipeg. This phosphorus limit, set out in the plant's provincial operating licence, is fully in line with wastewater regulations in many other Canadian jurisdictions – some dating back as far as 1972 – and can be met using well-established technology adopted by municipalities across North America.

The June 30 NEWPCC upgrade plan must commit to achieving phosphorus compliance as quickly as possible, using the most efficient and cost-effective design.

To this end, we are calling on the City of Winnipeg to proactively design NEWPCC's new biosolids facilities to achieve phosphorus compliance, by integrating approved interim phosphorus removal into the upcoming design and construction of the Phase 2 Biosolids Facilities project.

We are also calling on the Province of Manitoba to amend NEWPCC Environment Act Licence 2684 RRR to require phosphorus compliance upon completion of the new biosolids facilities.

Almost three years of progress on NEWPCC upgrades have been lost since the City of Winnipeg failed to meet the NEWPCC licence deadline of Dec. 31, 2019. Much energy and effort has been expended by both the province and the city in that time, but they've just been running in place. Not only have they yet to actually reduce phosphorus loads from the north end plant, they have yet to present a feasible plan for achieving compliance with the phosphorus limit set in 2005.

This spring's sewage spills are no longer once-in-a-lifetime events – without an efficiently upgraded sewage-treatment system, this is the new normal. And it's a new normal that constantly reminds us: city water is lake water. What we flush away down our city drains just meets us later downstream, when we visit Lake Winnipeg.

LAKE WINNIPEG HEALTH PLAN

Action 3: Setting the Standard for Wastewater Treatment

The water we use to flush our toilets ends up in Lake Winnipeg. It's our collective responsibility to ensure it's clean when it gets there.

SUPPORTER SPOTLIGHT

MAKING A DIFFERENCE FOR LAKE WINNIPEG – ONE WATER SAMPLE AT A TIME

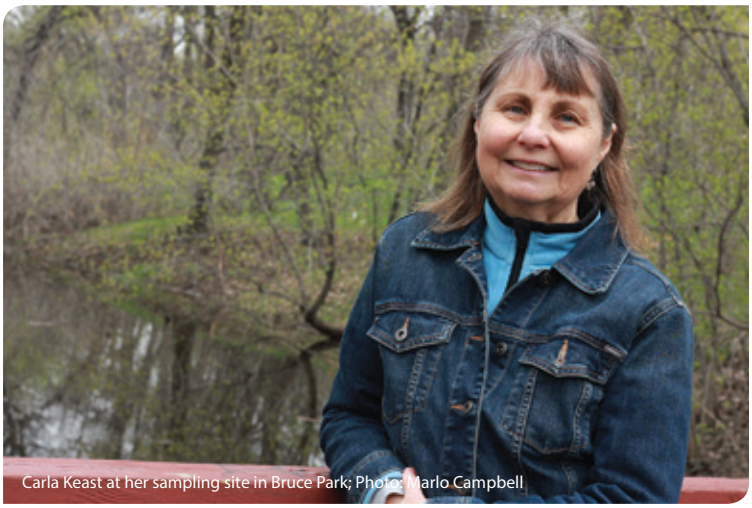
In 2018, Carla Keast had recently retired from a career in landscape architecture and was looking for volunteer work when a *Winnipeg Free Press* article about the Lake Winnipeg Community-Based Monitoring Network (LWCBMN) caught her eye.

"I thought, that is just such a perfect fit for me," she recalls. In addition to her personal connection to Lake Winnipeg (she's cottaged at Victoria Beach with her husband and two sons for the past 27 years), she liked the idea of contributing to water-quality data collection.

"I have a science background and so I really do believe in the importance of solid, scientific data."

While almost all of LWCBMN's current citizen scientists sample in rural areas – and at just one location – Keast collects samples in northwest Winnipeg at three very different sites along Truro Creek, a tributary of the Assiniboine River.

Carla's downstream site is a picturesque bridge in Bruce Park; always busy with foot traffic, she says it's where she has the most conversations with curious passers-by. By comparison, her upstream site is a culvert in a remote ditch surrounded by agricultural fields. There, it's wildlife she meets. "That's the location where I see foxes and hawks, and the red-wing blackbirds like to set up their nests there; they give me the gears when I collect in the summer."



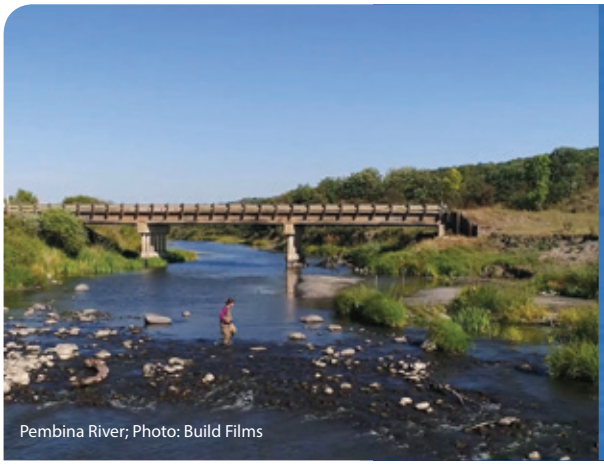
Carla Keast at her sampling site in Bruce Park; Photo: Marlo Campbell

Keast knows first-hand about the consequences of phosphorus loading to Lake Winnipeg. Over the years, she says algal blooms have become much bigger in size and arrive much sooner in the season.

"I'm just so grateful that the Lake Winnipeg Foundation exists because it is a group of considerable expertise – and we need considerable expertise to begin to address this problem," she says.

"The solution is certainly not a solution that one person can come up with," she adds. "I can't change this myself but I can do one small thing that is going to contribute to making a change – and that is so important."

Want to become a citizen scientist? LWF is seeking volunteers to collect water samples at rural sites throughout the Pembina, Red and Assiniboine river watersheds, as well as along the Seine and La Salle rivers. For more information, contact Meghan Mills at meghan@lakewinnipegfoundation.org.



Pembina River; Photo: Build Films

The Lake Winnipeg Community-Based Monitoring Network: Citizen science, freshwater solutions

Our new LWCBMN video showcases the important work of citizen scientists and explains how LWCBMN is generating vital phosphorus data to inform policy, direct research and target on-the-ground action.

We're excited to have a new tool to promote this program's contribution to evidence-based solutions.

Watch the video on YouTube by searching for Lake Winnipeg Foundation.

HIGH WATER, BIG IMPACT

A flooded field near Virden in 2018; Photo: Paul Mutch

WHAT SPRING FLOODING MEANS FOR LAKE WINNIPEG

Spring in Manitoba brought a series of severe storms. Coming on the heels of a high-volume snow melt – the result of one of the snowiest winters in recorded history – this additional precipitation led to widespread overland flooding throughout the province and in neighbouring jurisdictions to the east.

In addition to the immediate effects on homes and community infrastructure, flooding can have significant downstream effects on Lake Winnipeg.

Excess phosphorus from various sources across the watershed drives the growth of algal blooms. Phosphorus is transported to the lake via water flow; more specifically, by the rivers which eventually drain into the lake after receiving water from smaller creeks and streams, and from overland runoff.

Not only is there more water available to carry phosphorus to the lake in flood years, total phosphorus concentrations within the rivers which flow into the lake are also much higher in flood years, says Dr. Greg McCullough, Research Associate at the University of Manitoba's Centre for Earth Observation Science and Chair of LWF's Science Advisory Council.

McCullough has been studying the effects of people, climate and flooding on phosphorus loading to freshwater lakes – primarily Lake Winnipeg – for the past 30 years. He says scientific research has demonstrated that population growth and land-use changes since the 1990s have contributed to an increase in both phosphorus on the land and phosphorus washing off the land.

Time is also an important variable. "In a big flood year, water sits on the land – and it sits on the land for several weeks. And all the time it's sitting there, it's dissolving whatever is soluble on the surface."

In the case of the Red River Valley – an extremely flat landscape dominated by high-intensity crop and livestock production – floodwaters extend over a very large surface area. Soils in the Red River Valley are rich in phosphorus from fertilizers and animal manure – and this phosphorus dissolves into overlying floodwaters. What's more, research shows that the longer water sits on the land, the more dissolved phosphorus is taken up.

While some of this phosphorus will eventually settle out of the water into sediment, the rest makes its way to Lake Winnipeg, where it can be accessed easily by algae for use as a food source.

So, given the extensive flooding this spring, are algal blooms a sure thing this summer?

"There are two factors to consider when predicting algal blooms: how much phosphorus came in [to Lake Winnipeg] in the spring and how warm it gets in the summer," McCullough says.

He points to research led by Dr. Caren Binding, published in the *Journal of Great Lakes Research* in 2018, which found surface-water temperatures affect the prevalence and severity of algal blooms in Lake Winnipeg. In years with similar phosphorus loading, including flood years, summers with above-average temperatures – like 2005 and 2011 – saw severe blooms, while those with cooler temperatures – like 2004 and 2009 – did not.

This underscores the impact of climate change on phosphorus loading to Lake Winnipeg. Going forward, climate change is expected to cause warming temperatures, as well as increasing frequency and severity of storms – both of which will increase the severity of algal blooms.

Scientific research also points to a solution, McCullough says: if we reduce flooding, we will also reduce phosphorus loading to Lake Winnipeg.

"Rainfall, runoff and discharge are the big issue – and that is something we can do something about," he says. "We can store water on the land. We can make sure we don't lose any more wetlands – and we can work on restoring wetlands. There is a way out of this."

LWF SUMMER EVENTS

Victoria Beach; Photo: Paul Mutch

JULY 15 - AUG. 5: BID FOR LAKE WINNIPEG

Our online art auction has worked so well, we're keeping it online permanently! This is your chance to bid on a variety of amazing work created by Manitoba artists.

AUG. 5: BIKE TO THE BEACH

Back for a third year after another record-breaking success in 2021, a group of determined cyclists will once again challenge themselves to ride from Winnipeg to Victoria Beach to raise funds for a healthy lake.

AUG. 7: WALK FOR WATER VICTORIA BEACH & DISTRICT

Our signature family-friendly event returns to the Village Green Stage. Take part in the 2.5 km walk and join together with other lake-lovers in a show of community support for evidence-based freshwater solutions.

CAN'T JOIN IN PERSON?

Donate online at **lakewinnipegfoundation.org/donate**.

Visit our website, lakewinnipegfoundation.org, for more details. See you at the lake!

cut mail-in form here

YOUR GIFT MAKES A HEALTHY LAKE WINNIPEG POSSIBLE

LWF Donate online at lakewinnipegfoundation.org/donate

OR

Mail your cheque and this form to:
Lake Winnipeg Foundation
107-62 Hargrave St, Winnipeg, MB, R3C 1N1

Please find a cheque attached for:

☐ $1,000 ☐ $500 ☐ $200
☐ $100 ☐ $50* ☐ $ _____ (specify amount)

*All donations of $50 or more will include a one-year membership.

Name: _____ Address: _____

City: _____ Province: _____ Postal Code: _____

Email: _____ Phone: _____ Lake Community: _____

This donation is ☐ in honour of: OR ☐ in memory of: _____

Please send recognition on my behalf to:

Name: _____ Address: _____

Too much paper? ☐ I would prefer to receive this newsletter via email

Want more info? ☐ Please send me monthly e-updates ☐ No, thank you

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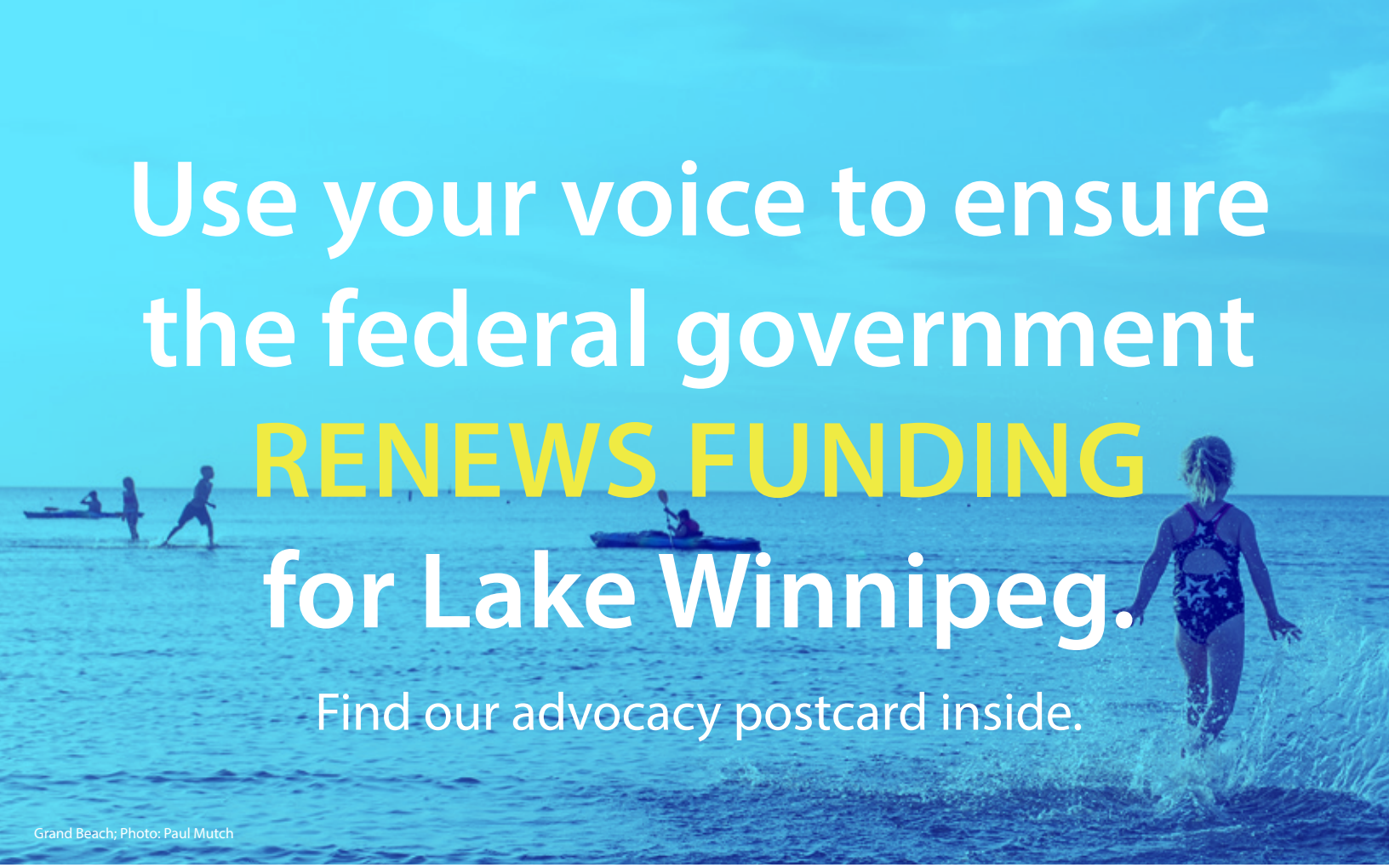

Grand Beach; Photo: Paul Mutch

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