

**Question 1**

Whole-lake studies on Lake 227 at Canada's Experimental Lakes Area (ELA) over multiple decades demonstrate that phosphorus controls the growth of blue-green algae blooms. This research has driven important policy changes that have greatly improved Great Lakes water quality. This same research points to the need to maximize phosphorus removal from the City of Winnipeg's sewage.

Manitoba's Clean Environment Commission, the Province of Manitoba, the City of Winnipeg, and freshwater scientists from around the world agree that removal of phosphorus from Winnipeg treatment plant effluent is imperative to reduce algae growth on Lake Winnipeg. However, action to achieve this has been stalled for over a decade. In December 2015, Winnipeg's North End plant released effluent with almost four and a half times the recommended phosphorus.

**How will you and your party resolve the longstanding stalemate that continues to prevent action to remove phosphorus from Winnipeg's wastewater? How will you ensure immediate action is taken ensure phosphorus in Winnipeg's effluent does not exceed 1 milligram/litre?**

**GPM Response:**

The Green Party of Manitoba notes that the Manitoba NDP government misinterpreted the research of Dr. David Schindler and his colleagues respecting the effects of phosphorus and nitrogen on the production of blue-green algae. Through the Green Infrastructure Fund of \$166 million annually that will be created from revenues from a \$50/tonne carbon tax, the GPM will finance required initiatives to ensure that Winnipeg's water treatment plants are brought up to required standards. As well, the GPM will direct funds to those initiatives that reduce the run off of phosphorous from farms.

Relative to achieving the 1 mg/litre Manitoba water quality standard, the GPM recommends immediately undertaking a study to examine novel interim and long-term solutions to the problem (e.g., in the short- and perhaps long-term, the potential to incorporate cattails to eliminate phosphorus, with the secondary benefit of providing biomass ... i.e., why not run the effluent through another treatment cell or multiple cells? ... as done by Melbourne, Australia three or four decades ago). At some point in time, for example with new builds, there should be consequences ... i.e., penalties for exceedance in new plants. The GPM would consider surcharges on water to fund proper plants; e.g., challenge Winnipeg where it is, in the most recent budget, moving funds from water fees into general revenue. If Winnipeg is not prepared to fund the plant, Manitoba may have to force the issue.

**Question 2**

The eutrophication of Lake Winnipeg is a significant environmental threat caused by human activities occurring across a watershed that is 40 times larger than the lake itself. Improving, protecting and managing the health of Lake Winnipeg for long-term sustainability require financial investments commensurate with the scale and complexity of the challenge.

To protect Lake Winnipeg, Manitoba's department of conservation and water stewardship (MCWS) is responsible for water quality management, water monitoring programs, regulation of Manitoba's fisheries, and zebra mussel containment initiatives.

Over the past five years, MCWS's budget has been repeatedly cut – a troubling trend given that the health of Lake Winnipeg continues to decline while the cost of effective, sustainable solutions continues to rise.

**Will you and your party commit to increasing MCWS's budget to rebuild the department's core capacity to monitor and manage Manitoba's valuable freshwater resources? To which other MCWS programs would you direct further investment?**

**GPM Response:**

Yes. The funding for this will come from the Green Infrastructure Fund mentioned above in the response to Question 1. The GPM commits to reversing the significant and ongoing demise of the Department under the NDP government by committing to getting staffing and operating budgets to pre-NDP levels ... via growth in the economy over the 4 year term of government. The NDP has starved the Branches so severely that it is getting to the point where some Branches should almost 'turn out the lights' and walk away. Some specifics include the following.

- Commit to hiring the best quality staff (e.g., wide and open competitions instead of the often internal competitions).

Respecting "capacity to monitor and manage Manitoba's valuable freshwater resources":

- Commit to enhanced water quality monitoring. For example, respecting the peat farms licensed by the NDP several years ago, the Environmental Impact Statements were dated by 10 years or more, and the Manitoba government required little monitoring.
- Commit to funding the implementation of 'sustainable fishery' management.
- Commit to a review of the 2011 Manitoba Water Quality Standards, Objectives, and Guidelines from the perspective of reducing the number of objectives and guidelines to the bare minimum (i.e., increasing the number of standards).
- Commit to greater enforcement.
- Commit to implementing means to reduce land use-related impacts to water quantity and quality (e.g., penalties for when riparian areas are cleared to the edge of streams thereby increasing flashiness and decreasing water quality).
- Commit to improve the Environmental Review process respecting freshwater resources (e.g., including ensuring that bureaucrats do not feel that they must approve virtually everything, and ensuring that poor quality assessments are returned to proponents for further work).

**Question 3**

Wetlands keep our water clean by filtering out excess phosphorus. Bill 5, the *Surface Water Management Act (Amendments to various acts to protect lakes and wetlands)*, died on the order paper in the last legislative session. This bill was the result of four years of public consultation, had the support of both conservation and agricultural communities, and would have been an important first step in protecting Manitoba's threatened wetlands.

The introduction of a new and strengthened *Surface Water Management Act* must be an immediate priority for Manitoba's new government. A revised bill should be based on the premise of no net loss of wetland benefits and put in place a drainage moratorium on seasonal (class 3) wetlands – equivalent to the protection granted to permanent and semi-permanent wetlands (classes 5 and 4).

**Will you and your party commit to rapidly re-introducing a comprehensive bill enabling strong regulatory protection of Manitoba's threatened wetlands?**

**GPM Response:**

Absolutely. The GPM will protect seasonal wetlands because different species of wildlife use seasonal wetlands in comparison to semi-permanent and permanent wetlands. For example, mallards and pintails use less permanent wetlands because they warm quickly in the spring and provide the invertebrates important to early nesting, whereas diving ducks like canvasback and redhead favour semi-permanent and permanent wetlands. The GPM would require no-net loss on a wetland type basis (i.e., if a wetland had to be drained, it would have to be replaced by a wetland of the same class). The GPM would include other wetland types within the Bill (e.g., like willow-covered fens that were drained and converted to canola production in the Swan River area in 2015). The GPM would also require determination of the full environmental costs of drainage, and those costs would have to be mitigated. For example, in consideration of a drainage proposal, if drainage would lead to an increase of phosphorus into a system, mitigation would be required. Similarly, the carbon emissions associated with drainage would have to be mitigated and offset.

**Question 4**

Phosphorus inputs to Lake Winnipeg are driven by the amount of water flowing across the lake's vast watershed. Monitoring where, when and how phosphorus is entering our waterways is vital to improving the health of the lake.

The most recent publicly available data on phosphorus levels in Lake Winnipeg and its tributaries are from 2007. Since then, Manitoba has experienced two of the worst flooding events in its history. To make smart water-management decisions, Manitoba needs a collaborative water-quality monitoring program that measures the impact of high-water events such as spring melts, floods and storms, and that draws on expertise throughout the province. Data must be made public so that all Manitobans know what's happening, and what remains to be done.

**How will you and your party develop and fund a collaborative, events-based monitoring program? Will you also commit to regular annual public reporting of collected data?**

**GPM Response:**

The GPM will consult with experts like Greg McCullough to determine the most cost-effective approach to monitoring water quality for Lake Winnipeg and it commits to the annual public reporting of the collected data. Water monitoring for levels already occurs during floods with funding from various programs (e.g., on First Nation lands via Indigenous Affairs and Northern Development Canada and/or the Manitoba Emergency Measures Organization), and could be expanded to include flows and nutrients.

As for funding this initiative, there are several options. One is to use some of the money from the Green Infrastructure Fund. Alternatively, a funding model could be developed based on the polluter pay principle whereby costs are assigned to those contributing to the problem in proportion to their contribution. Key contributors include

- Farmers – phosphorous and nitrogen;
- City of Winnipeg – phosphorus;
- Peat farms – phosphorus and water;

- Alberta, Minnesota, and other jurisdictions.

### **Question 5**

Recent media portrayals have led to widespread public perception that Lake Winnipeg cannot recover. Inconsistency in the way solutions are presented has left citizens concerned about what's been accomplished, what's left to do and who's responsible. Independent oversight is necessary to ensure our actions are adding up to real impact.

Though multiple collaborative initiatives and reports have generated hundreds of recommendations over the last decade, no mechanism exists to ensure these recommendations are being followed, or to evaluate the cumulative effectiveness of current efforts.

Establishing an Office of the Environmental Commissioner – as has been done federally and in Ontario – would create a means through which Manitoba's existing programs could be reviewed and aligned, and compliance could be enforced.

**Do you and your party support the establishment of an independent Office of the Environmental Commissioner of Manitoba?**

**GPM Response:**

Yes. An independent Office to oversee progress on the many environmental challenges in our province is absolutely necessary, and the GPM would move immediately to establish an Office ... whose time has come.