
Report To: Board of Directors

Subject: Watershed-based Resource Management Strategy

Report No: FA-62-24

Date: December 13, 2024

Recommendation:

THAT Report No. FA-62-24 RE: Watershed-based Resource Management Strategy **BE RECEIVED**;

AND THAT the Watershed-based Resource Management Strategy, as presented in Appendix 1, **BE APPROVED**;

AND THAT staff **BE AUTHORIZED** to publish the Watershed Strategy on the NPCA website;

AND FURTHER THAT the Watershed Strategy **BE CIRCULATED** to upper-tier, single-tier, and local area municipalities within the Niagara Peninsula Watershed;

Purpose:

To seek NPCA Board of Directors' approval of the Watershed-based Resources Management Strategy (Watershed Strategy) required under the Conservation Authorities Act and recommend that the Watershed Strategy be made publicly available through the NPCA's website and distributed directly to municipal partners.

Background:

The Watershed Strategy is being developed in response to Ontario Regulation 686/21: Mandatory Programs and Services, which is made under section 21.1(1)2 of the *Conservation Authorities Act*. This regulation outlines the specific programs and services that all Conservation Authorities must provide within their jurisdiction, including the development of a Watershed-based Resource Management Strategy.

The Watershed-based Resource Management Strategy must include the following components:

- Guiding principles and objectives that inform the design and delivery of the programs and services that the Conservation Authority is required to provide under section 21.1 of the *Conservation Authorities Act* (i.e., mandatory programs and services).
- A summary of existing technical studies, monitoring programs and other information on the natural resources the authority relies on within its area of jurisdiction or in specific watersheds that directly inform and support the delivery of programs and services under section 21.1 of the Act.
- A review of the authority's programs and services provided under section 21.1 of the Act for the purposes of:
 - Determining if the programs and services comply with the regulations made under clause 40 (1) (b) of the Act (e.g., mandatory programs and services, and review of applications under prescribed Acts);
 - Identifying and analyzing issues and risks that limit the effective delivery of these programs and services; and
 - Identifying actions to address the issues and mitigate the risks identified by the review and providing a cost estimate for the implementation of those actions.
- A process for the periodic review and updating of the Watershed-based Resource Management Strategy by the authority that includes procedures to ensure stakeholders, and the public are consulted during the review and update process.

The purpose of the Watershed Strategy is to assist NPCA with evolving or enhancing the delivery of its programs and services and improve efficiencies and their effectiveness in supporting mandatory programs of the Conservation Authorities Act. The Watershed Strategy will effectively guide the NPCA in managing watershed resources sustainably.

At the October 18, 2024 Full Authority meeting, the Board endorsed the draft Watershed Strategy, and further directed staff to post the draft Strategy for public comment and bring forward the proposed final Watershed Strategy on or before December 13, 2024.

As outlined in O. Reg. 686/21 under the *Conservation Authorities Act*, the Watershed Strategy must be completed by December 31, 2024.

Discussion:

The NPCA Watershed Strategy incorporates guiding principles and objectives from NPCA's 10-year Strategic Plan that shape the design and delivery of mandatory programs and services. Key objectives include enhancing watershed health through integrated watershed management, promoting climate resilience, and incorporating stakeholder input. The Watershed Strategy supports NPCA's

commitment to protecting the Niagara Peninsula's unique watershed and promoting community engagement, and preserves NPCA's inherent Integrated Watershed Management (IWM) approach to conservation that recognizes water is a valuable resource that should be managed sustainably in conjunction with natural resources like fisheries, wildlife, and land.

One significant component of the Watershed Strategy focuses on identifying potential issues and risks that could hinder the effective delivery of mandatory programs and services, along with targeted actions to mitigate these challenges.

Five prominent issues and challenges forecasted through the development of the Strategy include:

1. Climate variability and change

Climate change impacts have the potential to be wide-reaching, affecting ecosystems, agriculture, infrastructure, water supply, energy, transportation systems, tourism and recreation, human health and well-being, and ultimately the economy.

Adaptation efforts minimize the level of damage, hazard and risks associated with climate change while also recognizing new opportunities presented with the changing climate. Such adaptation efforts include flood management programs, ecosystem enhancements, water quality and quantity monitoring, municipal plan review and input, local climate change monitoring and modelling, information management, and green infrastructure and stormwater management.

Mitigation efforts are focused on reducing greenhouse gas emissions and other causes that adversely and rapidly influence weather patterns and climatic conditions. They include green building technologies and retrofits (e.g., LEED), energy conservation, renewable energy, reforestation, carbon sequestration (e.g., wetlands), and low impact development.

2. Increasing growth pressures on watersheds

As communities grow and change, and as the need for housing increases, more marginal land may be considered for development. Areas that are susceptible to erosion or flooding may be identified to accommodate innovative forms of infill development and face greater development pressure.

3. Loss of biodiversity, species at risk, habitat and natural cover

The loss of habitat, increased numbers of species at risk, and an ongoing decrease in biodiversity continue to be major threats to the function and health of natural areas and the local ecosystem in the Niagara Peninsula watershed.

4. Invasive species

Invasive species are a major threat in Ontario and the Niagara Peninsula watershed as they become more abundant and widespread. These species outcompete native species and impact the watershed's existing natural heritage system and features. Devastation of local woodlots and forest patches due to impacts caused by the emerald ash borer are evident throughout NPCA's jurisdiction. Other prevalent species such as Common Reed (*Phragmites australis*) have invaded local natural areas across the Niagara Peninsula watershed while new invasive species are reported ever more frequently.

5. Impacts on water quality

Watershed health is strongly influenced by water quality indicators. Impacts are well known in the Niagara Peninsula watershed, as documents through NPCA's ambient Water Quality Monitoring Program. Annual Results continue to indicate that many of NPCA's watersheds have marginal to poor water quality.

Mitigation strategies identified through the development of the Strategy include:

1. Enhance our Integrated Watershed Management Approach

Through its Integrated Watershed Management (IWM) approach, NPCA's foundational watershed management activities readily support its mandatory programs and services and those complementary to them. Significant investment in this approach is the primary vehicle with which to mitigate issues and challenges faced by the Niagara Peninsula watershed.

These management activities fundamentally include:

- Watershed scale monitoring, data collection and management as well as modelling;
- Watershed scale studies, plans, assessments, and/or strategies; and
- Watershed wide actions including stewardship, communication, outreach, and education.

Revitalizing formal watershed planning is critical to support the adaptive management cycle at the watershed scale, ensuring continuous progress toward specific management recommendations for both the watershed and subwatershed levels.

2. Enhancement of Restoration, Stewardship, Monitoring, Education and Outreach Programs

Enhancement of existing programs and services to assist with delivery of the Watershed Strategy has already begun through the implementation of the Strategic Plan. Restoration and Stewardship, Watershed Monitoring and

Reporting, and Education and Outreach are evolving into a refreshed suite of programs grounded in IWM principles and practices. These efforts complement mandatory programs and services.

3. Enhance Partnerships and Collaboration

The NPCA will continue to strengthen existing partnerships and actively pursue new ones within the communities that it serves, to ensure the preservation, maintenance, sustainability, restoration, and enhancement of the natural environment. These partnerships include those with the federal and provincial governments, municipalities, Indigenous communities and individuals, the NPCA Board of Directors and staff, agricultural organizations and societies, conservation clubs, service groups, private landowners, conservation area neighbours, adjacent conservation authorities, and the Niagara Peninsula Conservation Foundation (NPCF).

NPCA will develop new approaches to improve conservation efforts and streamline program delivery with these partners. Additionally, the NPCA deeply values and supports its dedicated volunteer base, which actively collaborates with staff to address watershed issues and challenges through initiatives like community tree plantings. Volunteers also play a vital role in the success of key NPCA projects, including the heritage village at Ball's Falls Conservation Area.

4. Broaden Sources of Financial Support

Being able to continue to advance its programs and services will require the NPCA to continue to broaden the sources of financial support to mitigate the risks associated with reliance on municipal levy. NPCA continues to find success in seeking external funding sources, and self-generated revenue activities such as user fees to support the implementation of its strategic plan and programs and services.

While opportunities to contend for available government grants are plentiful at present, NPCA continues to nurture diverse funding strategies that include working closely with the Niagara Peninsula Conservation Foundation (NPCF) to empower its abilities to draw donations in support of NPCA programs and services.

Engagement Summary

NPCA took a comprehensive approach to internal and external engagement to develop the Strategy, including both in-person and online engagement opportunities to ensure accessibility for diverse audiences and broad participation.

Key outreach and engagement efforts included a Public Information Centre (PIC), meetings, direct emails, and targeted social media campaigns to reach members of the public, local area municipalities, staff, Board Members, Indigenous

communities, and other interested parties. The Get Involved online engagement portal was utilized to solicit feedback through a survey and comment submission. Throughout the public engagement period, the Get Involved portal received 1,400 web visits and garnered 23 survey responses.

The analysis of the survey responses, comments, feedback, and discussions led to key findings, including the following:

- 70 per cent of the issues and risks identified in the Strategy significantly impact NPCA's ability to maintain effective service delivery; the remaining 30 per cent will moderately impact service delivery.
- Common themes surrounding issues and risks from survey respondents align with those outlined in the Draft Watershed Strategy. These themes include issues and risks pertaining to climate change and adaptation, funding constraints, changing legislation, urban development, and its impacts on natural features, including the loss of, and impacts to water quality; and
- Recommendations for improvement also surrounded common themes. These include better communication including public education on our watershed, focused land acquisition that includes preservation of vulnerable areas, enhancing biodiversity and stricter legislation to preserve natural features.

Feedback received through internal and external engagement was thoroughly reviewed by the project team and has been considered and added to the strategy where applicable.

Review Cycle

The Watershed Strategy is to be read as a living document. NPCA will commit to assess the need for a fulsome review of the Watershed Strategy on a five-year cycle. Impacting factors (i.e. technological advances, socioeconomic changes, arising political and environmental issues) will be analyzed to determine the level of review required. Should there be exceptional circumstances that would warrant an earlier update to the Watershed Strategy (e.g., legislative changes), staff will seek direction to update the Strategy to ensure compliance and alignment with governing legislation, where required.

An engagement plan will be developed for each update to the Watershed Strategy to ensure NPCA's watershed partners, communities, Indigenous communities, and interested parties are appropriately consulted. Further, a workplan identifying key tasks and general timelines will be presented to the NPCA Board of Directors upon initiation of an update to the Watershed Strategy.

This framework for the Watershed Strategy provides a structured approach for periodically reviewing NPCA's Inventory of Programs and Services, ensuring that program descriptions and language remain consistent across all NPCA initiatives. By doing so, the strategy will help pinpoint opportunities to enhance or sustain watershed health, enabling NPCA to continuously adapt its efforts to meet evolving resource management needs within the Niagara Peninsula.

Financial Implications:

The development of the Watershed-based Resource Management Strategy is funded through the operating budget. Implementation of the Strategy will be prioritized through annual workplans and approved budgets.

Links to Policy/Strategic Plan:

Goal 1.1: Support evidence-based decision-making for climate-resilient watersheds and shorelines.

Goal 2.2: Lead an integrated watershed management approach to support planning and policy for protection and enhancing watersheds.

Goal 4.2: Foster relationships with the community, non-government organizations, businesses, agriculture, industry, and academic institutions for collective outcomes and impact.

Related Reports and Appendices:

Appendix 1: Watershed-based Resource Management Strategy

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