

Westheights Park Natural Area Restoration and Management Plan

Community Workshop #1

June 5, 2024

7:00pm to 8:30pm

Welcome and Introductions

Welcome

Workshop Purpose:

- Provide an update on the Natural Environment Assessment and the findings to date
- Answer questions
- Collaboratively develop the vision for the future of the Natural Area
- Gather feedback that will inform the creation of the Restoration and Management Plan

Workshop Agenda:

- Background information, history and context of the Natural Area
- Updates on the Natural Environment Assessment
- Q+A
- Vision Discussion Activity
- SWOT Discussion Activity

Introductions

City of Kitchener

- Rachel Voros
- Joshua Shea

Dillon Consulting

- Nicole Beuglet
- Angel Bancale

Dance Consulting

- Kenneth Dance
- Kevin Dance

Participant Guidelines

- We welcome your questions and discussion – **there are no bad questions**
- We want to **hear from everyone** – everyone has wisdom and experience to share
- **Be respectful and listen** – everyone deserves to be heard and there may be differences in opinions
- We need **everyone's wisdom for the wisest result**
- The **City is here to listen** – you are welcome to reach out after the meeting
- There will be dedicated points throughout the presentation to answer questions

Westheights Park Natural Area

Introduction

The City of Kitchener is developing a plan for the ecological management, restoration, and stewardship of the **Westheights Park Natural Area**. This natural area is a key feature within the city that supports biodiversity and habitat for wildlife, while also contributing to the physical and mental wellbeing of the surrounding community.

The City, alongside Dillon Consulting and Dance Environmental, is facilitating workshops to engage the public in identifying opportunities for community involvement and input into the management and preservation of this ecologically significant space.

Westheights Park Natural Area

The vision for the **Restoration and Management Plan** project is to involve residents as ecological stewards to foster community ownership and responsibility for the natural environment. It aims to educate and empower residents, encourage collective stewardship, ensure long-term sustainability, and strengthen connections between people and nature.

This approach helps create a sustainable and thriving natural area that benefits both the environment and the community.

Project Process and Timeline

Vision and Key Directions

Help us create the vision for
Westheights Park Natural Area and
set key directions for the
Management Plan
June 2024 (We are here)



Identify Management Needs and Actions

Work with us to identify management
needs and develop potential actions to
protect and restore the Natural Area
Fall 2024



Continuing Ecological Studies

Data collection and analysis to be
conducted by Dance Environmental
Summer 2024



Westheights Park Natural Area and Urban Biodiversity

Parkland Classification Summary

Category	Description	Examples
Natural Areas	❖ Parkland owned or managed by the City generally intended to be preserved in its natural state (e.g. forest, woodland and swamp, marsh, valleyland, etc.) including cultural communities (e.g. plantation and cultural meadow)	Huron Natural Area Steckle Woods Laurentian Wetlands
City Parks	❖ Parks that provide multi-activity or multi-sport venues and/or serve specialized recreational, social and economic functions for the entire City that may also draw regional-scale audiences	Victoria Park Kiwanis Park McLennan Park
District Parks	❖ Community-level parks providing access to formal and/or informal active and/or passive outdoor recreation facilities and amenities serving multiple neighbourhoods	Breithaupt Park Kaufman Park Lions Park
Neighbourhood Parks	❖ Local parks providing walkable access to passive open space areas, playground facilities and other outdoor recreational amenities	Heritage Park Kinzie Park Northforest Park
Urban Greens	❖ Urban greenspaces designed for high public use and aesthetics in a diversity of settings including the urban core, within neighbourhoods and along trails and typically include a concentration of public amenities and higher level of design detail	Benton Green Vogelsang Green
Greenways	❖ Linear greenspaces providing linkages among parks, trails and other open space areas and public realm elements within the urban environment	Balzer Greenway Kolb Greenway Sandrock Greenway
Trails	❖ Off-road pedestrian corridors providing opportunities for a range of recreational activities and active transportation routes connecting various destinations	Iron Horse Trail Walter Bean Trail Dominic Cardillo Trail

Natural Area vs. City Parks

- **Natural areas** are intended to be preserved in its natural state including cultural communities
- **City parks** serve specialized recreational, social and economic functions for the entire City
- Access, facilities and activities in Natural Areas will be limited to passive recreational use compatible with long term sustainability of the natural resource
- Potential activities in Natural Areas include walking/hiking, cross country running/jogging, cycling, education, nature appreciation, bird watching, fishing, photography, hiking, skiing and snowshoeing

Westheights Park Natural Area and Urban Biodiversity

Natural Areas Planning and Management Objectives



Protect and enhance natural ecosystem features and ensure long-term ecological sustainability.



Promote environmental stewardship and awareness.



Set long-term goals and management strategies for specific natural areas.



Support connections that enhance natural area health and sustainable public access.



Provide sustainable public access for recreation and education.



Balance facility accessibility with ecological constraints on a site-specific basis.

Understanding the Natural Area and Pond Ecosystem

History of Westheights Park

- In 1978 the pond was a mud puddle, with virtually no water present.
- In 1979 the pond was dredged and plantings introduced.
- Volunteer monitoring in the 1980s followed the establishment of introduced wetland plants
- Routine park maintenance on-going, including signage, tree management, and armour stone placement.
- 2020s neighbours raise concerns about the “health of the pond”

Restoration and Management Plan for Westheights Pond and Park



- Consulting assignment starting in May 2023.
- Water quality sampling: Conducted in July and October 2023, and April 2024.
- Amphibian breeding surveys in May and June 2023 and April 2024.
- Breeding bird surveys 2023
- Vegetation surveys 2023 and 2024
- Pond quality, general natural history observations for over a year.

Understanding the Ecology of the Natural Area and Pond

Water quality in the 2 ponds is strongly influenced by surrounding drainage basin:

- Well vegetated, filters runoff
- Few nutrient sources expected in runoff



Impermeable area is small:

- Slow movement towards ponds
- Uptake by vegetation
- Low erosive force

Woodland:

- Nutrient cycling
 - Shade and cooling
 - Wildlife habitat-offers diversity from just the wetland pond
 - Woodland birds feed/drink at the ponds
 - Insect and weed pest control
-
- Woodland and ponds are connected



Ecology of the Natural Area and Pond

Nutrient Cycling within the Pond:

- Plants take up nutrients from sediments and water column
- When plants decay Autumn to Early Spring nutrients are released
- Plant tissue provides food for insects, snails etc.
- These invertebrates are food then for fish/frogs/turtles
- Fish and frogs eaten by large birds and turtles

Ecology of the Natural Area and Pond

- Dissolved Oxygen (DO) is essential to fish and invertebrates
- DO is produced by living plants during sunny periods
- DO enters the surface layers of the pond during windy periods
- DO is used by decomposers
- DO is required by fish.



Ecology of the Natural Area and Pond

- A healthy/diverse pond has a variety of vegetation communities present
- Deeper open water aquatic habitat
- Shallow water rooted plants -produce oxygen and nursery habitat for fish, frogs, and turtles.
- Shoreline herbs that grow out of the water
- Shoreline terrestrial herbs, shrubs, trees hold soils, provide areas of shade, and food sources that can fall into the pond (ie. insects, small rodents etc.)
- A “weedy” pond is ecologically diverse, stable and productive.

Findings Regarding the Ecological Health of Westheights Park

Pond Health:

- Diversity of plant life is thriving
- This is the base of the food chain for fish, frogs, turtles
- Fish-eating birds are present
- Over 100 species of birds have been documented within the park (eBird)
- Turtle population is reproducing
- Pond margins was confirmed to have Significant Wildlife Habitat for Terrestrial Crayfish.



Findings Regarding the Ecological Health of Westheights Park

Water Quality:

- Chloride is very low –means limited road salt is reaching the pond
- Nitrate is very low-means lawn runoff (fertilizers) is not an issue
- Dissolved Oxygen –No winter fish kills noted
 - Levels found are good for fish
 - Levels lower at pond bottom
 - Will check again this Summer
- Total Phosphorous (TP) -0.022 to 0.284 mg/L range from 8 samples
- Levels are higher at pond bottom
- TP may be coming out of sediments
- Rainfall is also a source of NO₃ and TP
- Enough TP to support dense aquatic plant and algal growths

Findings Regarding the Ecological Health of Westheights Park



Bacterial Quality:

- Total Coliforms: 600 to 19,000 CFU/100mL range (more than 1000CFU/100mL is considered impaired)
- Relatively small duck and goose populations, but enough to be the source of warm season high counts
- Waterfowl could be a focus of management

Findings Regarding the Ecological Health of Westheights Park

Summary:

- Plant and animal variety here is good for an urban setting
- Connections between the woodland and pond are good
- The shoreline and pond basin benefit from thriving plant life
- As expected in a seasonally closed, urban drainage basin, there is high Total Phosphorous and Total Coliform levels in the pond (this is typical of urban ponds)
- There is no indication of road runoff inputs
- The pond is functioning well

Restoration and Management Plan for Westheights Park

Potential Restoration Actions:

- Phragmites control
- Buckthorn and Garlic Mustard control
- Tree and Shrub plantings in woodland
- Install Turtle nesting beach
- Plant a nectar-source wildflower meadow
- Solar powered bubbler to put oxygen in deep-water zone
- Involve public/community in restoration actions



Restoration and Management Plan for Westheights Park

Potential Management Actions:

- Monitor and manage invasive species
- Maintain shoreline armour stone
- Install and maintain signage
- Dissuade waterfowl feeding
- Human water contact (risk for getting sick from coliforms)
- Maintain park trees, as needed

Q+A

Vision Activity

- Take a few moments to visualize the natural area in the future as a vibrant and thriving natural area
- Consider the wildlife, flora, and fauna and community use of the space
- Using the materials provided, draw or write what you envisioned. **What did you see? How did you feel?**

Community SWOT Analysis

- SWOT stands for Strengths, Weaknesses, Opportunities and Threats
- The purpose of the SWOT is to develop a strategic path for managing and restoring the natural area
- The results will help determine priorities for the area and promote an understanding of the current state of the Natural Area
- In small groups, we will collectively develop a SWOT for the Area

What We Have Found to Date

What is currently working well in the ecological aspects of the natural area. This might include existing wildlife, plant diversity, community involvement, etc.

- Ecosystem Diversity: Woodland, pond, wetland
- Wildlife diversity
- Educational resource –school use
- Well vegetated drainage basin
- Good water quality for urban pond –no street runoff
- Good recreational experience-walking cycling
- Beauty of the pond and forest



Identify the problem areas or potential areas of concern in the natural area. This might include invasive species, etc.

- Invasive plants - *Phragmites* (Common Reed), Common Buckthorn, Garlic Mustard.
- Pond Bottom water quality:
- Phosphorous and oxygen seasonally
- Bacteria from waterfowl
- Shoreline -armour stone



Explore potential opportunities for improvement, restoration, or community involvement. Consider elements like possible community volunteering, or potential partnerships.

- Public participation in restoration tasks
- Continued/increased educational use
- Interpretive signs
- Monitoring to facilitate adaptive management



Identify any potential threats to the ecological health and community enjoyment of the natural area. This might include climate change, etc.

- Humans feeding waterfowl
- Humans introducing alien fish, snails etc.
- New Invasive plants introduced by wildlife
- New plant/animal diseases invading Southern Ontario
- More years with limited precipitation (hot/dry conditions)



SWOT Activity

- Individually brainstorm: What are the key Strengths? Weaknesses? Opportunities? Threats?
- Write answers on sticky notes and discuss in small groups
- Some comments may be both strengths and weaknesses, or threats and opportunities - Place comments in both areas, with explanations of why
- Brainstorm ways to mitigate / address threats and weaknesses

Wrap Up and Close

The Key Themes

- What we heard tonight

Next Steps

View the project website for updates and explore ways to get involved!



Continuing Ecological Studies

Data collection and
analysis to be conducted
by Dance Environmental
Summer 2024

Project Page



iNaturalist Project Page



Send comments to:



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