Subject:

Carruthers Creek Watershed Plan Update, File D07-17-01

Recommendation:

Receive for information

Report:

1. Purpose

1.1 The purpose of this report is to advise of the activities undertaken up to November 2019 on Phase 2 of the Carruthers Creek Watershed Plan Update.

2. Background

2.1 On April 1, 2015, Regional Council authorized staff to engage the Toronto and Region Conservation Authority (TRCA) in a consulting capacity to update the Carruthers Creek Watershed Plan on the Region’s behalf. In June of 2015, the TRCA received Board authority to enter into a servicing agreement with the Region and to initiate the project.

2.2 The Watershed Plan update is being completed in two Phases. Phase 1 culminated in the preparation of seven peer reviewed technical reports that characterize the watershed’s existing conditions. Phase 2 was initiated in January of 2018 and includes public consultation, further technical reports, watershed scenario analyses, and the development of management recommendations. The updated Watershed Plan is currently in the process of being drafted by TRCA staff.
3. **Phase 2 Progress**

3.1 Since the last update on May 7, 2019 ([Report #2019-P-25](#2019-P-25)) most of the Phase 2 work plan has been completed. Attachments #1 and #2 provide a detailed update which is summarized as follows:

a. Step 1: Establish updated goals and objectives for the watershed (**complete**);

b. Step 2: Based on the conditions observed through Phase 1 and other watershed health assessments, develop targets for the watershed and identify the actions to achieve the goals and objectives (**complete**);

c. Step 3: Establish watershed response methodologies / assessments to be used to measure how the watershed could respond to changes in land use and other factors (**complete**);

d. Step 4: Develop, model and evaluate five scenarios for the watershed, consisting of historic conditions, existing conditions, approved development (as per the current Official Plan designations), enhanced natural heritage system, and a development scenario with an enhanced natural heritage scenario (**complete**);

e. Step 5: Formulate and evaluate candidate management actions to achieve the desired state of watershed health (**complete**);

f. Step 6: Develop management recommendations (**complete**);

g. Step 7: Finalize the Watershed Plan for internal and partner review (**underway**)

h. Step 8: Release the final Watershed Plan for public comment, incorporate feedback, and present to Region of Durham for approval (**not yet started**)

3.2 The purpose of the Phase 2 technical analyses is to model, assess, and evaluate how the Carruthers Creek Watershed will respond to different scenarios of land use change. A number of technical reports have been prepared, documenting the watershed response. These include:

a. Aquatic Impact Assessment;

b. Fluvial Geomorphic Assessment;

c. Groundwater Modelling;

d. Soil Water Assessment Tool Modelling;

e. Stormwater Management;

f. Terrestrial Impact Assessment;

g. Urban Forest Assessment; and,

h. Hydrology Assessment.
3.3 Similar to Phase 1, the Phase 2 technical reports are subject to an external peer review process to ensure the analysis was rigorous and completed at or above technical/industry standards. Aside from the Hydrology Assessment (which is currently being issued for peer review), the peer review of all the Phase 2 technical reports has been completed. The final technical reports will accompany the completed Watershed Plan.

3.4 The key Phase 2 milestone has been the development of a draft watershed Management Framework. The Management Framework is designed to address existing issues within the watershed and to mitigate issues associated with future land uses. The Framework consists of Goals, Management Recommendations, and Tracking Indicators/Monitoring related to the categories of Land Use, Natural Heritage System, and Water Resource System. The Management Framework is broken down into actions to be undertaken by partner organizations, including the Region, The Town of Ajax, the City of Pickering, the Toronto and Region Conservation Authority, as well as other stakeholders, such as the agricultural community.

3.5 The draft Management Framework as presented at the October public open houses (discussed below) can be found in Attachment #3. The Management Framework and the wording of individual management recommendations may change as TRCA staff assess and address public feedback, and work towards finalizing the peer review of the Hydrology Assessment.

3.6 From October 1, 2018 to October 18, 2019, TRCA staff continued to implement the Carruthers Creek Watershed Plan Communications and Consultation Strategy (as outlined in Reports #2018-INFO-54 and #2018-INFO-102). In addition to continuing to raise awareness and inform partners of the Carruthers Creek Watershed Plan and the planning process, a focus during this stage of consultation was to gather feedback on the draft Management Framework. Consultation activities over this period included:

a. Regular update and collaboration meetings with Durham, Ajax, and Pickering staff;
b. Presentations and consultations with stakeholder and interest groups;
c. Presentations to Durham, Ajax and Pickering committees of Council (as determined appropriate by the municipality);
d. Public Open Houses in Ajax (October 8, 2019) and Pickering (October 10, 2019);
e. Continued posting and updating of the project website, and receipt of inquiries and submissions through the dedicated project email.

3.7 Additional information about the consultation activities undertaken during this period, including a summary of what was heard, can be found in Attachment #4.

4. Next Steps

4.1 TRCA staff are in the process of drafting the updated Carruthers Creek Watershed Plan. It is anticipated that the draft Watershed Plan will be made available for municipal staff review (Durham, Ajax and Pickering) in December 2019. It is also anticipated that the final Phase 2 technical report, and the Hydrology Assessment, will be peer reviewed and made available for review by area municipal staff during this time.

4.2 After receipt and incorporation of preliminary municipal comments, the Watershed Plan and supporting peer reviewed Phase 2 technical reports will be released for public comment. The comment period is planned to be open for 45 days and is expected to commence in early 2020. Following the receipt and response to public comments, the final Watershed Plan will be presented through the Durham Regional Planning and Economic Development Committee for consideration of approval/endorsement by Regional Council.

4.3 Once Regional Council has made its decision, the final Carruthers Creek Watershed Plan will proceed to the TRCA Board of Directors for their consideration and approval.

5. Conclusion

5.1 A draft Watershed Plan is expected for staff review by the end of year, with public consultation and final consideration by Regional Council in Q1-Q2 of 2020.

5.2 A copy of this report will be forward to the Toronto and Region Conservation Authority, the Town of Ajax, and City of Pickering.

6. Attachments

Attachment #1: Correspondence dated November 15, 2019 from Gary S. Bowen, TRCA, providing a status update on the project

Attachment #2: Carruthers Creek Watershed Plan Phase 2 work plan, including status updates on the various tasks, dated November 2019
Attachment #3: Draft Management Framework as presented at the Public Open Houses (hosted October 8 and October 10, 2019)

Attachment #4: Carruthers Creek Watershed Plan Communications and Consultation Summary for Phase 2, Stage 2, dated October 2019.

Respectfully submitted,

Original signed by

Brian Bridgeman, MCIP, RPP
Commissioner of Planning and Economic Development
15 November 2019

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L1N 6A3

Sent via email: brad.anderson@durham.ca

RE: Carruthers Creek Watershed Plan Phase 2 Update

Dear Mr. Anderson:

I am pleased to submit this letter which provides an overview of various aspects of the Phase 2 study approach and progress report. TRCA’s overall workplan for the Carruthers Creek Watershed Plan (CCWP) was outlined in our submission approved by the Region of Durham in April 2015. The characterization of current watershed conditions (Phase 1) was completed in Fall 2017. The steps to be completed as part of Phase 2 of the CCWP were described in our letter, and associated attachments, dated March 27, 2018. This update follows the update provided earlier this year in our letter, and associated attachments, dated April 1, 2019.

1a.) Status of Phase 2 Technical Work

The purpose of the Phase 2 technical analysis was to model, assess and evaluate how the Carruthers Creek watershed responds to scenarios of land use changes. The Carruthers Creek Watershed Plan Phase 2 - Updated November 2019 (Attachment 1) is an amended version of the workplan submitted as part of Report #2018-INF0-54 from the April 13, 2018 Planning and Economic Development Committee Meeting that provides a status update on all workplan items.

All Phase 2 technical analysis has been completed and all reports, except for the hydrological modelling report, have undergone external peer review. TRCA engineers, working collaboratively with Town of Ajax and City of Pickering engineering staff, have completed the hydrological modelling and prepared a technical report that is currently being peer reviewed. The external peer review process ensures that analysis was rigorous and completed to the highest technical standard.

Phase 1 and 2 technical analysis and assessments were integrated to develop the draft CCWP’s Management Framework (Attachment 2). The Management Framework is designed to address existing issues within the watershed and mitigate impacts from potential future land uses, while recommending appropriate actions to protect, enhance and restore the watershed. Staff will continue to incorporate feedback from all stakeholders to finalize the Management Framework. The Table of Contents for the CCWP was developed and finalized in collaboration with the Region of Durham, City of Pickering and Town of Ajax.

1b.) Next Steps in Phase 2 Technical Work

All Phase 2 technical analysis has been completed and the final reports will be released with the draft CCWP. The draft CCWP will be completed in Q4 2019 and released in early 2020 for a public review period.
2a.) Communications and Consultation in Phase 2, Stage 2
The Communications and Consultation Summary Report (Phase 2, Stage 2) (Attachment 3) is a detailed report of all communications and consultation activities undertaken by TRCA for Phase 2, Stage 2 of the CCWP. The main objective of this stage of communications and consultation was to gather feedback on the draft Management Framework. Feedback on the Management Framework was provided by Region of Durham, City of Pickering, and Town of Ajax staff at two working sessions in September 2019. In addition, Public Open Houses were hosted in Ajax (October 8, 2019) and Pickering (October 10, 2019) to solicit feedback on the draft Management Framework from the general public and other stakeholders.

2b.) Next Steps in Communications and Consultation
As part of the planned next steps for the CCWP, consultation and communication will continue as approved in the CCWP Communications and Consultation Strategy and discussed in our previous letter dated May 31, 2018.

The next stage of communications and consultation (Phase 2, Stage 3) will aim to gather feedback from partners, stakeholders, and the general public on the draft CCWP. Municipal partners will complete a review of the draft CCWP in December 2019. The draft CCWP will be released for a public review period in early 2020.

Exact dates for presentations/reports to Councils and the TRCA Board of Directors will be confirmed as work progresses. TRCA staff will continue our current practice of providing correspondence to municipal staff in order to share information and seek input and comments as components of the project are advanced. Starting in March 2019, TRCA and the Region of Durham initiated monthly meetings with local municipal partners which will continue until the completion of the CCWP. TRCA will continue to consult the general public and other stakeholders through the methods identified in the CCWP Communications and Consultation Strategy. Since the project began, TRCA and Region of Durham have developed an excellent working relationship and we look forward to your continued collaboration as we complete the CCWP.

In summary, the CCWP is proceeding well and along the timelines identified in our previous progress letters. Visit https://yoursay.ca/carruthers-creek to learn more and to download project documents and reports.

Please do not hesitate to contact me if I may be of further assistance or you have questions.

Sincerely,

Gary S. Bowen
Watershed Specialist

Attachment 1: Carruthers Creek Watershed Plan Phase 2 - Updated November 2019
Attachment 2: Carruthers Creek Watershed Plan – Draft Management Framework
Attachment 3: Communications and Consultation Summary Report (Phase 2, Stage 2)
Carruthers Creek Watershed Plan Phase 2 – Updated November 2019

STEP 1: Establish Goals and Objectives for the Watershed

TIMING
January to June 2018

PURPOSE
Review the fundamental building blocks provided in the 2003 Watershed Plan and supporting documents in the context of advancements in scientific approaches and language since the last Watershed Plan was completed. The goals and objectives will be revisited throughout the plan development process to ensure implementation of the new management actions can meet these goals.

WORK TO BE DONE

TECHNICAL
- Review Goals, Objectives, Management Actions from 2003 Watershed Plan, 2004 Fisheries Management Plan, other supporting documents: assess gaps, add new information, update/ remove elements which are no longer relevant; Status: Complete

CONSULTATION
- Consult public and stakeholders on vision and management philosophy from 2003 Watershed Plan which will form the principles of the new plan; Status: Complete

STEP 2: Current Watershed Conditions

TIMING
January to June 2018

PURPOSE
Protocols for watershed health assessment follow a similar process to that of the 2003 Watershed Plan, with appropriate scientific and engineering knowledge of the evolving state of best practice. Based on the biophysical conditions observed from 2015 and 2016 field studies and previous watershed health assessment ratings and targets, develop current targets for the watershed which will identify the actions required to achieve the goals and objectives. Begin integration of the seven Phase 1 technical reports to derive a holistic view of the watershed based on the separate studies.

WORK TO BE DONE

TECHNICAL
- The various subject matter experts (SMEs) on the staff technical team will assess the targets from 2003 Watershed Health Ratings Report for relevance, updating, gaps, and set new targets; Status: Complete
- Begin the integration exercise based on the Phase 1 technical reports and management recommendations, a comprehensive exercise which requires a multi-disciplinary approach; Status: Complete

STEP 3: Watershed Response “Tool Box”

TIMING

T: 416.661.6600 | F: 416.661.6898 | info@trca.on.ca | 101 Exchange Avenue, Vaughan, ON L4K 5R6 | www.trca.ca
January to December 2018

PURPOSE
The "tool box" is a collection of models and evaluation methodologies which assess various criteria from the land use scenarios. The modelling results and findings from the terrestrial and aquatic response methodologies illustrate how the watershed can reasonably be expected to respond to land use changes, and other factors such as climate change, based on the best available science. TRCA scientists and planners will interpret the outcomes in order to develop recommended management actions which protect, restore, and enhance Carruthers Creek watershed.

WORK TO BE DONE

TECHNICAL
- SWAT (Soil and Water Assessment Tool) model which assesses surface water quality set up and calibrated (initial data from Phase 1); **Status: Complete, report completed and peer reviewed**
- Groundwater model set up and calibrated; **Status: Complete, report completed and peer reviewed**
- Hydrology model set up and calibrated (initial data from Phase 1); **Status: Complete, report completed and undergoing peer review**
- Assess options/tools to evaluate watershed's terrestrial response; **Status: Complete, report completed and peer reviewed**
- Assess options/tools to evaluate watershed's aquatic response; **Status: Complete, report completed and peer reviewed**
- Surface water quantity report based on stream flow gauges completed and peer reviewed; **Status: Complete, report completed and peer reviewed**

CONSULTATION
- Review Hydrology model results with Ajax and Pickering staff; **Status: Complete**

STEP 4: Watershed Scenario Evaluation

TIMING
January to September 2018

PURPOSE
Develop five scenarios for the watershed, evaluating past, current, future, and potential future watershed conditions to be analyzed using state-of-the-art modelling and watershed response tools. Knowledge garnered will be shared amongst the technical experts, allowing for integration of outputs and best outcomes for the overall health of the watershed.

WORK TO BE DONE

TECHNICAL
Finalize mapping for each of the five scenarios, each subsequent scenario builds on the previous, ranging from historic conditions (1999) to development as per current approved Official Plans to 2031 and an enhanced Natural Heritage System, plus prospective development post-2031.
- Using various inputs such as Official Plans, existing natural cover, older TRCA Terrestrial Natural Heritage System plans, etc., delineate an enhanced Natural Heritage System for use in the future scenarios; **Status: Complete**
- Evaluate opportunities for urban forestry enhancement; **Status: Complete, report completed and peer reviewed**
- Complete Ecosystem Services Valuation study and identify Green Infrastructure features/practices which could be incorporated into existing urban areas and in new urban development; **Status: Complete**
- Complete a storm water management retrofit study; **Status: Complete, report completed**

CONSULTATION
- Review scenario criteria/conditions with Ajax and Pickering staff; **Status: Complete**
STEP 5: Evaluate Management Actions

**TIMING**
July 2018 to June 2019

**PURPOSE**
Formulate candidate management actions which will be evaluated when recommendations are developed, to ensure that the overall conditions in the watershed will sustain the desired state of health once the plan is adopted and implemented.

**WORK TO BE DONE**

**TECHNICAL**
- Management actions will be derived as the modelling is carried out and the terrestrial and aquatic response tools are applied. Actions tend to be specific and are expected to arise through non-linear, multi-disciplinary analysis, as all SMEs integrate their findings. Actions will be evaluated against the plan’s draft recommendations, goals, and objectives; **Status: Complete**

STEP 6: Draft Management Recommendations

**TIMING**
July 2018 to September 2019

**PURPOSE**
Develop draft recommendations for the optimal management of the watershed based on the most advanced scientific knowledge available. They will be practical and make the best use of partnerships and available resources, and anticipate the challenges ahead. The recommendations inform the management actions and guide the implementation of the Watershed Plan.

**WORK TO BE DONE**

**TECHNICAL**
- Management recommendations will be evaluated against meeting the vision, management philosophy, goals, and objectives established earlier in the process. This is a non-linear, multi-disciplinary exercise which involves all SMEs and is integrated with other steps throughout the process; **Status: Complete**

**CONSULTATION**
- Review draft management recommendations with Ajax and Pickering staff; **Status: Complete**
- Consult public and stakeholders about draft management recommendations; **Status: Complete**

STEP 7: Finalise Draft Watershed Plan

**TIMING**
October to December 2019

**PURPOSE**
Complete the process to draft the Carruthers Creek Watershed Plan.

**WORK TO BE DONE**

**TECHNICAL**
- Complete draft Watershed Plan for internal and partner review; **Status: Complete**

**CONSULTATION**
- Complete TRCA internal review of the draft Watershed Plan document; **Status: Complete**
- Municipal staff review of the draft Watershed Plan document; **Status: Underway**
STEP 8: Public Review and Approval of Watershed Plan

TIMING
January to May 2020

PURPOSE
Complete public consultation on the draft Watershed Plan and ensure Regional Council approval

WORK TO BE DONE

TECHNICAL
- Incorporate all stakeholder feedback to finalize Watershed Plan; **Status: Not started**

CONSULTATION
- Inform Regional Council on the desire to post the draft Watershed Plan for public review; **Status: Not started**
- Conduct 45-day public review period; **Status: Not started**
- Submit final Watershed Plan for approvals; **Status: Not started**

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<tr>
<th>#</th>
<th>Key Tasks</th>
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<td>5</td>
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Carruthers Creek Watershed Plan Management Framework

- Outlines how the watershed plan will be implemented and progress evaluated
- The draft management framework consists of:
  - **Goals** – broad outcomes to achieve
  - **Objectives** – specific statements to achieve the goals
  - **Indicators** – explain how objectives will be evaluated
  - **Management recommendations** – outline what needs to be done to accomplish the objectives
  - **Monitoring program** – will be used to evaluate implementation success and the overall health of the watershed

## GOALS

### LAND USE

Achieve sustainable land use and infrastructure development patterns to protect, enhance and restore water quality and maintain stable water balance

**LAND USE OBJECTIVE 1**

Minimize the impacts of land uses through sustainability policies and the use of low impact development and green infrastructure

**INDICATOR**

Report on implementation of sustainable development policies/standards

Number of priority crossings installed to facilitate the function and ecological connectivity

**LAND USE OBJECTIVE 2**

Install and upgrade stormwater infrastructure using best available technologies to reduce runoff, resulting in improved water balance and water quality

**INDICATOR**

Report on the status of stormwater management in the watershed

**LAND USE OBJECTIVE 3**

Manage the risks of natural hazards through appropriate mitigation measures and restoration.

**INDICATOR**

Reduce number of flood vulnerable structures and flood vulnerable roads

**LAND USE OBJECTIVE 4**

Encourage the use of agricultural best management practices to minimize agricultural runoff and improve rural land stewardship

**INDICATOR**

Work with agricultural community to track implementation of best management practices
DRAFT MANAGEMENT RECOMMENDATIONS

Goal: Achieve sustainable land use and infrastructure development patterns to protect, enhance and restore water quality and maintain stable water balance

**LAND USE OBJECTIVE 1**: Minimize the impacts of land uses through sustainable policies and the use of low impact development and green infrastructure

Municipalities, in collaboration with TRCA, to adopt green development standards and require new developments, and re-developments, to utilize low impact development and green infrastructure techniques.

Municipalities, in collaboration with TRCA, to develop mechanisms to track and report on implementation of sustainable development practices to assess the effectiveness of policies and standards.

If it is determined that a Settlement Area Boundary Expansion is required in the headwaters of Carruthers Creek, in accordance with Growth Plan policies, municipalities, in collaboration with TRCA, to develop a Terms of Reference outlining requirements for further studies in support of subwatershed planning that includes:

- how natural hazards will be assessed and mitigated
- how the Natural Heritage System and Water Resource System will be protected, enhanced and restored
- how water quality and quantity will be protected.

During planning for transportation infrastructure improvement projects, or new projects, municipalities to implement best management practices for road design, road expansions and road widening in accordance with TRCA’s Crossing Guidelines for Valley and Stream Corridors, and ensure consistent policies and standards are in place to facilitate hydrologic function (e.g. prevent flooding) and ecological connectivity (e.g. wildlife passages). See map 7 for priority crossings as projects are planned.

Improve the management of excess soils and prevent fill deposition that is incompatible with the soils and hydrology of the area by:

- ensuring adequate policies are in place to manage excess soil
- improving compliance and enforcement of policies through collaboration between TRCA and municipalities
- conducting education and outreach on:
  - the importance of proper soil management
  - existing regulatory requirements
  - regulatory responsibilities of various agencies, including who to contact with concerns.

Municipalities, in collaboration with other levels of government and TRCA, to work to reduce the amount of chlorides entering the watershed by:

- continuing to implement best management practices for winter de-icing procedures on public property
- continuing education and outreach on salt management for private property.

**LAND USE OBJECTIVE 2**: Install and upgrade stormwater infrastructure using best available technologies to reduce runoff; resulting in improved water balance and water quality

Municipalities through stormwater master planning continue to:

- employ best management practices for stormwater management and consistent design criteria to manage stormwater quantity and quality
- consider stormwater rate payer fees for cost recovery
- examine opportunities to retrofit outdated stormwater infrastructure and install stormwater controls in areas without controls through long-term planning and investment strategies
- refine existing policies to ensure modern stormwater controls are required
- adaptively manage stormwater infrastructure through operation maintenance schedules and procedures.

Municipalities, in collaboration with TRCA, to develop mechanisms to track the status and effectiveness of stormwater management infrastructure.

For new development, require hydraulic analysis and erosion threshold assessments downstream of potential stormwater management facilities that need to demonstrate no negative or adverse downstream impacts, prior to municipal approvals.

Explore opportunities to enhance stormwater management in the South Ajax Flood Vulnerable Area by retrofitting infrastructure to meet modern stormwater design criteria, as much as possible, given site characteristics.

**LAND USE OBJECTIVE 3**: Manage the risks of natural hazards through appropriate mitigation measures and restoration

For new developments, geomorphic studies will be undertaken to assess and refine meander belt widths, erosion hazard corridor and erosion thresholds to identify future plantform and assist in siting of infrastructure.

TRCA, in collaboration with municipal partners, to prioritize the restoration of the erosion hazard sites identified on map 3. Additional channel restoration, or increased stream bank protection may be required as preventative measures in areas downstream of new developments.

Municipalities, in collaboration with TRCA, will identify potential hazard risks to sewer and existing road infrastructure associated with in-stream creek erosion.

Implement the appropriate flood mitigation measures for the Pickering Beach community in the Town of Ajax.

TRCA, in collaboration with municipalities, to educate property owners in high flood risk areas about proper lot level practices (e.g. removing hydraulic impediments).

TRCA to complete comprehensive floodplain mapping based on new models and best available information to inform land use and infrastructure decisions.

**LAND USE OBJECTIVE 4**: Encourage the use of agricultural best management practices to minimize agricultural runoff and improve rural land stewardship

In collaboration with the agricultural community and provincial ministries, TRCA and municipal partners to identify opportunities to expand best management practices that reduce agricultural runoff and improve water management, such as:

- use cover crops and/or leave crop residue
- adopt no till farm practices during non-growing season
- conduct soil testing for nutrients and adjust fertilizer application rates, if required.

In collaboration with the agricultural community and provincial ministries, TRCA and municipal partners to identify opportunities to improve rural land stewardship best management practices through:

- natural buffers between agricultural lands and natural and/or water resource features and areas
- implementation of Environmental Farm Plans and other rural land stewardship programs (e.g. TRCA’s Rural Clean Water Programs)
- education/outreach about the benefits of utilizing best management practices to improve habitat (e.g. meadows for sensitive bird species).
DRAFT MANAGEMENT RECOMMENDATIONS

Goal: Protect, enhance and restore the Natural Heritage System and urban forest within the watershed to improve ecosystem resilience and sustainability

NATURAL HERITAGE SYSTEM OBJECTIVE 1: Improve the quality and quantity of the Natural Heritage System across the watershed through ecosystem protection, enhancement and restoration, and implementation of relevant policies

- Municipalities, in collaboration with TRCA, will ensure the protection and restoration of the enhanced Natural Heritage System (map 1) by:
  a. updating Official Plan policies and associated zoning by-laws to adequately protect the enhanced Natural Heritage System
  b. assessing existing standards and guidelines for land use and infrastructure development to ensure they reflect current provincial policy direction to maintain, restore or enhance the Natural Heritage System
  c. minimizing infrastructure development in the enhanced Natural Heritage System, with the exception of stormwater outfalls and low impact development technologies
  d. adopting municipal policies for ecosystem compensation, in accordance with TRCA's Guideline for Ecosystem Compensation, where development in the enhanced Natural Heritage System is unavoidable
  e. applying a minimum 30 metre vegetation protection zones along features at the boundary of the enhanced Natural Heritage System to protect ecological function
  f. ensuring development and redevelopments be designed and approved to prevent encroachment into the enhanced Natural Heritage System

- TRCA, in collaboration with municipalities, to prioritize the restoration of the terrestrial sites identified on map 3, which have been selected for contributing to the following criteria:
  a. increasing habitat quantity
  b. enhancing habitat quality and connectivity
  c. ensuring biodiversity persists
  d. adapting for climate vulnerabilities.

- TRCA, in collaboration with municipalities, to explore opportunities to secure the sites identified on map 4 for ecological protection and to increase public land ownership and connectivity along the main channel of Carruthers Creek South of Taunton Road.

- TRCA and municipalities to regularly update their trail guidelines and standards for consistency, and to ensure that any new or modifications to existing trails, use best practices, such as prioritizing the use of boardwalks in sensitive areas (e.g. wetlands), and methods to ensure trail users stay on marked trails (e.g. signage, barriers to humans, but not other species, and limited access during breeding season).

- TRCA, in collaboration with municipalities, to minimize impacts to the enhanced Natural Heritage System from recreation and community access by:
  a. ensuring proper trail management and signage
  b. education and outreach on the importance of the Natural Heritage System
  c. promoting community stewardship to maintain and monitor the Natural Heritage System for improper trail usage (e.g. off-trail compaction and erosion), illegal dumping and invasive species, while encouraging community restoration programs (e.g. tree plantings).

- Wetland water balance studies that demonstrate how the hydrological function of the wetland should be protected will be undertaken by the landowner for any potential future growth in the areas identified in map 5, or other areas identified during subwatershed planning, prior to any planning approvals.

NATURAL HERITAGE SYSTEM OBJECTIVE 2: Ensure habitat exists for native terrestrial species to thrive throughout the watershed

- Municipalities, TRCA, landowners and other agencies collaborate to manage problematic invasive species.

- TRCA continue to work with landowners to restore meadow habitat areas in support of open country bird species at risk, in accordance with the terrestrial restoration priorities identified on map 3.

NATURAL HERITAGE SYSTEM OBJECTIVE 3: Increase the urban forest cover within the developed portion of the watershed to improve social and environmental well-being

- Municipalities, in collaboration with TRCA, to update existing urban forest studies and consolidate a comprehensive study that:
  a. accounts for all public and private lands
  b. develops targets for public and private lands for inclusion in an urban forest strategy
c. develops indicators for the quality and quantity of the urban forest for inclusion in an urban forest strategy.

- Municipalities, in collaboration with TRCA, to develop a comprehensive urban forest strategy that:
  a. enhances tree and soil conservation in accordance with Preserving and Restoring Healthy Soil Best Practices for Urban Construction at any new development, or re-development, (e.g. Carruthers Creek Business Area), and on regional roads and operational facilities (e.g. along Taunton Road) as depicted on map 7
  b. focuses urban forest tree planting programs in the Town of Ajax as depicted on map 7
  c. encourages an urban forest with diverse tree species and class sizes
  d. ensures consistent policies and by-laws for tree conservation on public and private lands
  e. explores opportunities to increase the capacity of the Region of Durham to implement an Urban Forest Strategy consistent with this management recommendation
  f. encourages participation in knowledge-sharing and collaboration through the Regional Public Works Commissioners of Ontario's Urban Forestry Sub-working Group and Ontario's Municipal Arborist and Urban Foresters Association
  g. includes urban forest targets for existing developed areas and any future development as part of the strategy.

Goal: Protect, enhance and restore the areas and features that make up the Water Resource System (including aquatic habitat) for ecosystem resilience and sustainability

WATER RESOURCE SYSTEM OBJECTIVE 1: Implement appropriate policies and programs that protect, enhance and restore the areas and features that comprise the Water Resource System

- Municipalities, in collaboration with TRCA, to ensure the protection of the Water Resource System (map 2) and its functions by:
  a. updating Official Plans and zoning by-laws to adequately protect the Water Resource System
  b. assessing existing standards and guidelines for land use and infrastructure development to ensure they reflect current provincial policy direction to protect, enhance and restore the quality and quantity of water.

- TRCA, in collaboration with municipal partners, to consolidate mapping data layers for all components of the Water Resource System.

- TRCA, in collaboration with municipal partners, to prioritize the restoration of the aquatic sites identified on map 3, which have been selected for contributing to the following criteria:
  a. enhancing habitat quality and watershed connectivity
  b. ensuring biodiversity persists
  c. improving watershed resiliency to climate change.

- TRCA, in collaboration with municipal partners, to prioritize the restoration of the aquatic sites identified on map 3, which have been selected for contributing to the following criteria:
  a. enhancing habitat quality and watershed connectivity
  b. ensuring biodiversity persists
  c. improving watershed resiliency to climate change.

- If it is determined that a Settlement Area Boundary Expansion is required in the headwaters of Carruthers Creek, in accordance with Growth Plan policies, it must be demonstrated through a subwatershed plan (or equivalent) that:
  a. key hydrologic features will be avoided
  b. appropriate mitigation measures can be implemented at key hydrologic areas to maintain downstream hydrologic function
  c. there will be no negative or adverse downstream effects in terms of flooding or erosion.

WATER RESOURCE SYSTEM OBJECTIVE 2: Promote aquatic habitat connectivity to facilitate native fish movement throughout the watershed

- Remove the six priority barriers to fish movement identified in map 8.

- Identify and implement avoidance, conservation, design and mitigation measures for the protection and/or recovery of Redside Dace and its habitat, in accordance with Guidance for Development Activities in Redside Dace Protected Habitat (MNRF 2016). For activities that affect Redside Dace habitat, consult with MECP and DFO to determine requirements under species at risk legislation.

CARRUTHERS CREEK WATERSHED PLAN
Carruthers Creek Watershed Plan
Communications and Consultation Summary
Phase 2, Stage 2

October 2019
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1 Context for This Report

Carruthers Creek is a relatively small watershed with a drainage area of approximately 38 km², ranging from 2-3km in width and 18km in length (See Appendix 1). It is the easternmost watershed in Toronto and Region Conservation Authority’s jurisdiction and is located entirely within the Region of Durham with a population of approximately 41,000 residents. Carruthers Creek’s headwaters form to the south of the Oak Ridges Moraine, in the City of Pickering, and the creek enters Lake Ontario in the Town of Ajax. The watershed is mainly rural north of Highway 7 and urbanized south of Taunton Road to the lakeshore. From Highway 7 south to Taunton Road, the majority of lands are in the Protected Countryside of the provincial Greenbelt.

Toronto and Region Conservation Authority (TRCA), in partnership with the Region of Durham is undertaking an update to the last Watershed Plan for Carruthers Creek, which was completed in 2003. TRCA will assess the many changes and impacts which have occurred in the Carruthers Creek watershed since 2003 and review the current conditions of the watershed through a multi-year process. The updated Watershed Plan will not make decisions about land use however; it will make recommendations for the protection, restoration, enhancement and overall management of the watershed that will guide future decision making for the watershed.

The goal of communication and consultation is to inform and consult with the public and stakeholders in and neighbouring the watershed to create awareness about the updated Watershed Plan and to review and consider input as the watershed plan progresses. TRCA hired a third party Consultation Advisor to ensure an independent, credible consultation process. Public input is important to establish the updated Watershed Plan vision statement and to consider public and stakeholder feedback on Management Recommendations. A new Watershed Plan will aim to protect Carruthers Creek’s ecological health now and for years to come.

Phase 1 of the project, which culminated in the preparation of seven peer-reviewed technical reports characterising the watershed’s existing conditions, was completed in Fall 2017. Phase 1 did not include public consultation as the work was completed by technical staff. Phase 2 of the Carruthers Creek Watershed Plan update has been initiated; the process is shown in Table 1.

Table 1: Phase 2 Key Tasks for updating the Watershed Plan

<table>
<thead>
<tr>
<th></th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish updated goals and objectives for the watershed.</td>
</tr>
<tr>
<td>2</td>
<td>Based on the conditions observed through Phase 1 and other watershed health assessments, develop targets for the watershed and identify the actions required to achieve the goals and objectives.</td>
</tr>
<tr>
<td>3</td>
<td>Establish watershed response methodologies / assessments that will be used to measure how the watershed could be expected to respond to changes in land use and other factors, such as climate change.</td>
</tr>
<tr>
<td>4</td>
<td>Develop, model and evaluate five scenarios for the watershed, consisting of historic conditions, existing conditions, approved development (as per current Official Plan designations), enhanced natural heritage system, and a development scenario with an enhanced natural heritage system.</td>
</tr>
<tr>
<td>5</td>
<td>Formulate and evaluate candidate management actions to achieve the desired state of watershed health.</td>
</tr>
<tr>
<td>6</td>
<td>Develop Management Recommendations.</td>
</tr>
<tr>
<td>7</td>
<td>Deliver the completed Watershed Plan.</td>
</tr>
</tbody>
</table>
Communications and Consultation Summary – Phase 2, Stage 2

As part of Phase 2, TRCA is undertaking extensive stakeholder and public consultation. Consultation will occur in stages throughout Phase 2 of the Watershed Plan update and will follow the Carruthers Creek Watershed Plan Communications and Consultation Strategy. The Communications and Consultation Strategy was received by Durham Regional Council in May 2018, and timelines were refined at Council’s request in June 2018. It is a dynamic document that is adapted to respond to communications and consultation needs and opportunities as the work proceeds.

Phase 2, Stage 1 involved updating the Vision which will guide this new Watershed Plan. During this initial stage, communications and consultation were undertaken to seek input on the Vision for the Watershed Plan. Consultation in Phase 2, Stage 2 had the main objective of soliciting feedback on the draft Management Recommendations and Phase 2, Stage 3 will solicit feedback on the draft Watershed Plan, including the technical work completed as part of Phase 2. The Carruthers Creek Watershed Plan Communications and Consultation Summary (Phase 2, Stage 1) was received by Durham Region Planning and Economic Development Committee in May 2019.

This report is a compilation of the communications and consultation by TRCA on Phase 2, Stage 2 which were undertaken from October 1, 2018 to October 18, 2019. It outlines the public process objectives which guided the communications and consultation and describes the methods and activities used to inform and consult the public and stakeholders.

2 Communications and Consultation for Phase 2

2.1 Public Process Objectives

A key objective of Phase 2, Stage 2 was to continue to promote awareness and interest in the watershed planning process. Durham Region and TRCA are committed to a process to develop the Watershed Plan that provides opportunities for residents and stakeholders to learn about the health of the watershed and to share issues and ideas for protecting the health of Carruthers Creek watershed.

The purpose of the consultation for Phase 2, Stage 2 was to:

- Continue to raise awareness about the Carruthers Creek Watershed Plan.
- Continue to inform partners, stakeholders, and the public about the watershed planning process.
- Gather feedback on the draft Management Framework (including Goals, Objectives, Indicators, Targets, and Management Recommendations) that was developed by integrating Phase 1 and Phase 2 technical work.

2.2 Audiences for Communications and Consultation: Who was consulted?

The Region of Durham, Town of Ajax, and City of Pickering (Councils, Staff and Advisory Committees) have a key role in protecting the health of the watershed and implementing the 2003 Watershed Plan and the new updated plan. As such, the groups mentioned above are a key audience and stakeholder in all stages of the watershed planning process and some were already actively engaging the public on issues they identified within the Carruthers Creek watershed prior to the initiation of the Watershed Plan update.
Communications and Consultation Summary – Phase 2, Stage 2

The Carruthers Creek Watershed Plan will also be of interest to residents across Ajax and Pickering (in and neighbouring the Carruthers Creek watershed), environmental stakeholders, land owners, farmers, golf course operators, businesses, and land developers.

Various audiences have different levels of knowledge of, and interest in, the watershed and communications and consultation methods were geared to these different audiences. Methods utilized are outlined in Section 3 of this report.

Additional stakeholders expected to be affected by, and who will have an interest in, this Watershed Plan continue to be identified as work to develop the plan progresses.

3 Communications and Consultation Activities: What methods were used?

The communications and consultation efforts used various formats and tools to share information and gather input. The following provides an overview of the communications and consultation methods used during Phase 2, Stage 2 and should be read in conjunction with Section 4 of this report which describes what was heard.

Carruthers Creek Watershed Plan Project Website: The website yoursay.ca/carruthers-creek was developed for the Carruthers Creek Watershed Plan update as a mobile device-friendly online portal for information on watershed features, current issues, technical work completed as part of the Watershed Plan, and projects occurring in the watershed. Also, regular blog posts help to inform the public about various aspects of the Plan including technical work, consultation, and general watershed news. As part of Stage 2, 15 blog posts were uploaded on the website. The website provides information on how the Plan is being developed, identifying the Phases of work, and includes feedback mechanisms for receiving comments. From October 1, 2018 (the end of Phase 2, Stage 1) to October 18, 2019 (end of Phase 2, Stage 2) the website has received approximately 1400 visits and there has been 845 individual downloads of the various documents uploaded in the Reports and Resources section of the website.

Dedicated Carruthers Creek email – carruthers@trca.on.ca: A dedicated email address was established for the Carruthers Creek Watershed Plan update to provide a single point of contact for residents and stakeholders to provide input. This dedicated email address was promoted through a media release and post cards distributed throughout the watershed. TRCA’s Project Manager receives, responds to, and documents emails from this address.

Online Survey: No online survey was completed during Phase 2, Stage 2. To see information about the Comment Form completed as part of the Public Open House process, please see Public Open House section below.

Post Cards: A post card was developed and distributed by TRCA, the Town of Ajax and the City of Pickering at public events since October 2018 to raise awareness of the Watershed Plan and direct people to the project website and project email address. Over 2000 postcards have been distributed since the initiation of Phase 2 consultation.

Public Open Houses: A Public Open House was hosted on October 8, 2019 in Ajax and on October 10, 2019 in Pickering. TRCA staff with technical expertise, public outreach training and experience facilitated the open houses and presented the Information Panels to attendees. Each open house consisted of five interactive stations that focused on the watershed planning process. These stations included:

- Watershed planning station that described what a watershed is and what the watershed planning process is and why it is important. This station also gave a brief introduction about the Carruthers Creek watershed.
- Watershed characterization station that described the current conditions of the Carruthers Creek watershed and the main issues identified throughout the technical work.
- Scenario analysis station that presented mapping of the scenarios developed for analysis and the implications the scenarios would have on the watershed.
- Next steps station that encouraged participants to submit their feedback and questions on a Comment Form. This station also described what the timeline and next steps are for the watershed plan process.

The open houses were effective at raising awareness of the watershed plan and at soliciting feedback on the draft Management Framework. 50 residents attended the open houses and the materials were downloaded 71 times on the Project Website during the comment period. In total, 16 Comment Forms were completed and submitted. When asked how well the Public Open Houses described the process and purpose of watershed planning, 64% of respondents answered “Well” and 27% answered “Very Well”.

Staff to Staff meetings: Regular update meetings were held between staff of Region of Durham, Town of Ajax, City of Pickering, and TRCA. The meetings provide an opportunity for broad discussion related to the Carruthers Creek Watershed Plan amongst different departmental staff from each municipality. Further, TRCA regularly coordinates directly with municipal staff through teleconferences, emails and correspondence on a variety of issues and technical studies throughout the process. Group meetings will continue at regular intervals and key milestones throughout Stage 3. A comprehensive list of the communications and consultation activities undertaken for Phase 2, Stage 2, including all municipal partner meetings, can be seen in Appendix 2.

Presentations/Reports to Councils and Committees: TRCA presented to Councils and Advisory Committees to provide an overview of the watershed planning process, information on the health of the watershed, and to seek feedback on the draft Management Framework. Presentations to Councils and Committees were effective for clarifying the purpose and approach for the watershed planning process and receiving input.

Presentations and/or reports were presented to the following groups:
- Town of Ajax Community Affairs and Planning Committee
- City of Pickering Planning and Development Committee
- Durham Region Planning and Economic Development Committee
- TRCA Regional Watershed Alliance
- TRCA Board of Directors
- Ajax-Pickering Board of Trade Eco-business Advisory Committee

A comprehensive list of the communications and consultation activities undertaken for Phase 2, Stage 2, including all presentations to Councils, Committees, and Boards, can be seen in Appendix 2.

4 What we Heard

Key goals of Phase 2, Stage 2 of the communications and consultation were to promote awareness of the watershed planning process, to inform the public and stakeholders on how they could provide input, and to solicit feedback on the draft Management Framework. Generally, the feedback received on the draft Management Framework was positive with suggestions for clarification or additions that will be considered in the draft Watershed Plan. Public input received throughout Phase 2, Stage 2 could be categorised in four key topics as follows:
Communications and Consultation Summary – Phase 2, Stage 2

1. Discussion and understanding of the watershed planning process including clarification on how the watershed plan will inform land use decisions
2. Clarification on how the recommendations identified in the Draft Management Framework will be implemented and what is the timeline for their implementation
3. Importance of ongoing engagement, education and stewardship to protect, enhance, and restore the watershed
4. Protection of existing greenspaces.

The four key topics heard throughout the public consultation undertaken in Phase 2, Stage 2 will be addressed in the Watershed Plan in the following ways:

1. Clarification on how watershed plans inform land use decisions will be included in a dedicated section in the Watershed Plan. This section will also provide a summary of the policy basis about the function of watershed plans in relation to provincial planning policy (i.e. Provincial Planning Policy, Growth Plan, Greenbelt Plan, etc.) and will break down the role of municipalities as well as Conservation Authorities.
2. Monitoring is vital to the successful implementation of watershed plans. A dedicated section of the Watershed Plan will discuss ongoing monitoring and evaluation that will help to track the implementation of the Plan’s management recommendations.
3. The Watershed Plan identifies engagement, education and stewardship as an important aspect of the Management Framework. Some of the programs recommended in the Plan include a program to educate homeowners in high flood risk areas about lot level best practices, rural land stewardship to engage the agricultural community on best management practices, educational signage, and community stewardship to maintain recreational trails and restore priority restoration sites.
4. Protection and enhancement of the Natural Heritage System (NHS) and the Water Resource System (WRS) are main goals of the Watershed Plan. A dedicated section of this Plan will describe both systems, and the importance of their protection, in detail.

5 Conclusion

This report is a compilation of the communications and consultation by TRCA on Phase 2, Stage 2 which were undertaken from October 1, 2018 to October 18, 2019. It outlines the public process objectives which guided the communications and consultation and describes the methods and activities used to inform and consult the public and stakeholders. It also describes what was heard and how public input will be reflected in the Management Framework and draft Watershed Plan. As the watershed plan continues to develop, consultation and communication with partners, stakeholders, and the public will be an important tool in helping to create the final Carruthers Creek Watershed Plan.

We would like to give our sincere gratitude to everyone who took the time and effort to become involved in the Carruthers Creek Watershed Plan by sending in their questions and comments, attending meetings, and submitting a Comment Form during Phase 2, Stage 2 consultation. All of your efforts and passion will help develop a new Watershed Plan that will protect, restore, enhance, and manage the Carruthers Creek watershed now and in the future. You can continue to be involved as the Watershed Plan progresses by visiting https://yoursay.ca/carruthers to stay up-to-date and submit any questions/comments you may have.
Figure 1: A map of the Carruthers Creek watershed and study area for the updated Carruthers Creek Watershed Plan.
## 7 Appendix 2

### Table 2 – Phase 2, Stage 2 Communications and Consultation Activities

<table>
<thead>
<tr>
<th>Phase 2, Stage 2 Consultation Activities</th>
<th>Date</th>
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<tbody>
<tr>
<td>1  Staff to Staff meeting: Pickering and Ajax staff</td>
<td>30 October 2018</td>
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<tr>
<td>2  Staff to Staff meeting: Durham staff</td>
<td>30 November 2018</td>
</tr>
<tr>
<td>3  Staff to Staff meeting: Ajax staff</td>
<td>15 January 2019</td>
</tr>
<tr>
<td>4  Staff to Staff meeting: Durham staff</td>
<td>19 February 2019</td>
</tr>
<tr>
<td>5  Presentation to Watershed Planning and Big Data Workshop hosted by Pollution Probe and Council of the</td>
<td>26 February 2019</td>
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<tr>
<td>Great Lakes</td>
<td></td>
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<tr>
<td>6  Staff to Staff meeting: Pickering staff</td>
<td>4 March 2019</td>
</tr>
<tr>
<td>7  Presentation to TRCA Regional Watershed Alliance</td>
<td>15 March 2019</td>
</tr>
<tr>
<td>8  Staff to Staff meeting: Durham, Pickering and Ajax staff</td>
<td>21 March 2019</td>
</tr>
<tr>
<td>9  Staff to Staff meeting: Durham staff</td>
<td>18 April 2019</td>
</tr>
<tr>
<td>10 Presentation and staff report to Region of Durham Planning and Economic Development Committee</td>
<td>7 May 2019</td>
</tr>
<tr>
<td>11 Staff to Staff meeting: Durham, Pickering and Ajax staff</td>
<td>8 May 2019</td>
</tr>
<tr>
<td>12 Presentation to Ajax-Pickering Board of Trade Eco-business Advisory Committee</td>
<td>28 May 2019</td>
</tr>
<tr>
<td>13 Presentation and staff report to Town of Ajax Community Affairs and Planning Committee</td>
<td>3 June 2019</td>
</tr>
<tr>
<td>14 Presentation to City of Pickering Planning and Development Committee</td>
<td>17 June 2019</td>
</tr>
<tr>
<td>15 Staff to Staff meeting: Durham, Pickering and Ajax staff</td>
<td>25 June 2019</td>
</tr>
<tr>
<td>16 Staff to Staff meeting: Durham staff</td>
<td>24 July 2019</td>
</tr>
<tr>
<td>17 Staff to Staff meeting: Durham, Pickering and Ajax staff</td>
<td>1 August 2019</td>
</tr>
<tr>
<td>18 Presentation and staff report to TRCA Regional Watershed Alliance</td>
<td>11 September 2019</td>
</tr>
<tr>
<td>20 Staff to Staff meeting: Durham, Pickering and Ajax staff</td>
<td>19 September 2019</td>
</tr>
<tr>
<td>21 Staff report to TRCA Board of Directors</td>
<td>27 September 2019</td>
</tr>
<tr>
<td>22 Public Open House Materials posted on Project Website</td>
<td>7 October 2019</td>
</tr>
<tr>
<td>23 Public Open House - Ajax</td>
<td>8 October 2019</td>
</tr>
<tr>
<td>24 Public Open House - Pickering</td>
<td>10 October 2019</td>
</tr>
</tbody>
</table>