



Ramara Creeks Subwatershed Plan

Implementation Plan: 2015 - 2020

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Background

Working in partnership with the MOECC, MNRF, OMAFRA, the County of Simcoe, Township of Ramara, Simcoe County Federation of Agriculture, and the Couchiching Conservancy, the Lake Simcoe Region Conservation Authority (LSRCA) has developed a subwatershed plan for the Ramara Creeks subwatershed. This subwatershed plan includes an assessment of the current state of the environment in its watercourses, the stressors upon their health, and the current management framework to address those stressors. As a result of that assessment, the subwatershed plan developed a list of 85 recommended actions which, if implemented, would provide additional support for the protection and restoration of the subwatershed. For a full list of recommendations, see Chapter 8 in the Ramara Creeks subwatershed plan.

In reality though, it may not be practical to implement all of the 85 recommendations within a short time frame. Furthermore, some stresses upon the health of the subwatershed may be more critical than others, requiring a more timely response. Recognizing these realities, LSRCA and its partners have developed this implementation plan to guide and focus effort on the implementation of a short-list of priority recommendations.

Prioritizing the recommendations

The first stage in developing an implementation plan was to short-list the full list of 85 recommendations to focus effort on those that address priority threats. The short-listing process followed The Nature Conservancy's Conservation Action Planning framework, which is a two-stage process: a threat assessment, and a cost-benefit assessment.

The threat assessment evaluated the scope and severity of each of the threats identified in the subwatershed plan on the targets and indicators of watershed health as articulated in the Lake Simcoe Protection Plan. Threats were ranked from low to very high for both scope (how extensive the threat is across the subwatershed) and severity (how severe the impact of the threat would be to each individual target), and summed across all watershed health targets.

Recommendations which addressed threats ranked as High or Very High were subjected to the cost – benefit assessment.

Each candidate recommendation was scored from 1 (low) to 4 (high) in terms of the benefits if it were implemented (i.e. scale, contribution, and duration of outcomes, as well as indirect benefits to other actions) and the costs to implement (in both staff time and dollars, as well as the length of time anticipated to achieve the recommendation). Short-listed recommendations were those which had above average benefit in addressing High or Very High threats, at below average cost.

Working in collaboration with the Subwatershed Plan Working Group, a table was developed for each of the selected short-list recommendations to provide further detail on its implementation, including:

- One or more **Activities** which must be undertaken to accomplish the recommendation.
- An output, or **Measure of Success**, to identify intended end goals for each activity. These measures provide an important metric against which agencies responsible for watershed management can hold themselves accountable to the public and other stakeholders
- A **Lead Agency** which will be tasked with ensuring the activity is completed. The role of the lead agency may include project management, identifying and securing funding, and reporting on progress to the Subwatershed Working Group. Some activities also include a list of collaborating agencies (provided in brackets). In cases where unanticipated budget constraints limit the ability of the designated lead agency to project manage one or more activities, they will be responsible for soliciting other partners to lead on their behalf.
- A **Target Deadline** to identify the date by when the activity should be completed. This target deadline plays an important role in ensuring accountability of lead agencies to the public and other stakeholders, and is particularly important in the case of activities upon which other activities or other recommendations depend.

Ramara Creeks Priority Activities

Protection and policy

The adaptive watershed planning process

Recommendation 8-1 – That the LSRCA and other relevant and interested stakeholders establish an implementation working group to assist in coordinating the implementation of priority recommendations to address the most significant threats in this subwatershed.

Recommendation 8-2 – That the LSRCA, with the assistance of the other government agencies and stakeholder groups involved in implementing the recommendations of this subwatershed plan, report on the progress of this implementation annually

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Have subwatershed plan approved by the LSRCA Board of Directors	Plans approved	LSRCA	2015
Meet periodically to report on status of implementation of subwatershed plan recommendations, including the number of stewardship projects completed	Meetings held and report completed	LSRCA (implementation partners)	Ongoing
Share annual reports with watershed municipal councils and CAOs, MPPs, MPs, Lake Simcoe Stewardship Network, Lake Simcoe Science Committee, Lake Simcoe Coordinating Committee, and other interested stakeholders	Report shared. Partners aware of work being done and accomplishments achieved to improve the health of the Ramara Creeks subwatershed	LSRCA (implementation partners)	Ongoing

Recommendation 8-3 – Within five years of the completion of this subwatershed plan, that the LSRCA, in collaboration with MOECC, MNRF, subwatershed municipalities, and other interested and relevant stakeholders, review progress on achieving its recommendations and update the subwatershed plan accordingly.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Review monitoring data on the state of the subwatershed, and implementation reporting. Revise subwatershed plans using “state-pressure-response” model, in context of that review	Subwatershed plans updated	LSRCA (MOECC, MNRF, Ramara, Simcoe)	2020
Conduct gap analysis of policies and programs in place to address watershed stressors. Develop recommendations to address policy gaps	Suite of subwatershed recommendations developed, as necessary	LSRCA (MOECC, MNRF, Oro-Medonte, Simcoe, Orillia)	2020
Develop implementation plan to implement priority recommendations	Implementation plan developed and approved by LSRCA Board	LSRCA (MOECC, MNRF, Oro-Medonte, Simcoe, Orillia)	2020

Official Plan consistency

Recommendation 6-1 - That the LSRCA, and relevant provincial agencies assist Ramara Township in ensuring its official plan is consistent with the recommendations presented in the Ramara Creeks subwatershed plan, as approved by the LSRCA Board of Directors. This approval will be subsequent to consultation with the Township, the subwatershed plan working group, and the general public, as outlined in the *Guidelines for developing subwatershed plans for the Lake Simcoe watershed (May, 2011)*.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Provide guidance to municipalities on incorporating recommendations and objectives of subwatershed plan into Official Plan and Secondary Plan policies	Guidance provided, as necessary	LSRCA (MOE, MMAH)	As part of the Municipal Official Plan Review process, or development of Secondary Plans
Develop Official Plan and Secondary Plan policies to ensure consistency with the Ramara Creeks subwatershed plan's compiled recommendations	Policies completed and endorsed by County and Township. Municipal Official Plans, and Secondary Plans are consistent with subwatershed plans	Simcoe County, Township of Ramara (LSRCA, MMAH)	As part of the Municipal Official Plan Review process, or development of Secondary Plans

Recommendation 4-4 – That the Municipality, in the context of LSPP Policy 6.37-SA, adopt the ‘Guidance for the protection and restoration of significant groundwater recharge area in Lake Simcoe’ document. Further, that the Municipality utilize this document to incorporate policies around significant groundwater recharge areas into their official plans, as per LSPP Policy 6.38-DP.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Adopt draft policies included in the Guidance document in Municipal Official Plans	Policies adopted, protection for significant recharge areas included in Official Plans	Simcoe County, Township of Ramara (LSRCA, MMAH)	As part of the Municipal Official Plan Review process, or development of Secondary Plans
Provide training for municipal staff on groundwater recharge, and implementation of proposed policies	Training provided, municipal staff have greater understanding of their role in protecting groundwater recharge function	LSRCA (Simcoe County, Township of Ramara)	Upon request of municipalities

Protecting groundwater recharge

Recommendation 3-7 - That the Township of Ramara finalize their draft Stormwater Management Master Plan as outlined in the LSPP 2011 Comprehensive Stormwater Management Master Plans Guidelines document with particular emphasis on maintenance of facilities, and the need for retrofits where appropriate

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Complete and finalize stormwater management master plan	Stormwater management master plan completed and approved by Council	Township of Ramara	2015
Adopt model site alteration by-law developed by LSRCA Stormwater Management Policy Working Group	By-law adopted (pending municipal review and revision)	Township of Ramara	2016
Develop information and educational materials for landowners detailing how they can promote infiltration and reduce the volume of stormwater runoff on their own properties	Education materials developed and provided to municipality for distribution	LSRCA (Township of Ramara, Simcoe County)	2016

Recommendation 4-3 – That the MOECC and MNRF require the LSPP Tier 2 integrated model (or another, comparable model, if deemed appropriate) be used to simulate proposed dewatering activities associated with aggregate operations within or near the Ramara Creeks subwatershed, and the impacts they would have on stream and wetland features in the subwatershed prior to issuing or renewing Permits to Take Water or aggregate permits. When reviewing aggregate applications, the MOECC is encouraged to collect the most up to date extraction, pumping, and groundwater level data, and use the data to update the integrated model.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Develop a process for reviewing aggregate applications with the support of the Tier 2 integrated water model (or other model as deemed appropriate). This process may include the development of a screening tool to determine when the model is necessary	Process developed and any screening tools or check sheets available to relevant staff from MOECC and MNRF	MOECC, MNRF (LSRCA)	2015
Provide training session to staff from MNRF, MOECC, and proponents on the review process, and data required from proponents	Training session provided	MOECC, MNRF (LSRCA)	2016
Make Tier 2 water budget model available for use, with protocol for model revisions based on detailed aggregate pit monitoring data	Tier 2 water budget available to proponents for use in permit applications	LSRCA	2016

Restoration and remediation

Reducing blue-green algae outbreaks in Lagoon City

Recommendation 3-17 – The Township of Ramara, through Lakehead University or other partners, undertake a study of the relative sources and fates of phosphorus in the Lagoon City lagoons. Based on that study, that the Township develop a targeted approach to improving water quality in the lagoons, with the intent of reducing blue-green algae outbreaks			
Activity	Measure of success	Lead (collaborating) agency	Target deadline
Review results of Lakehead University study on water and sediment chemistry in the lagoons	Study complete and available to Township of Ramara staff	Township of Ramara	2016
Convene workshop for expert review of Lakehead study	Workshop held, recommendations for next steps identified	LSRCA (interested members of Lake Simcoe Science Committee)	2017
Pending results of workshop, undertake a study of the sources and fates of phosphorus in Lagoon City's lagoons	Phosphorus budget for Lagoon City complete	Township of Ramara	2019
Develop a targeted approach to reduce phosphorus inputs to Lagoon City, based on results of phosphorus budget and Lakehead study	Strategy developed, targeted approach to water quality improvements identified	Township of Ramara	2020
Assess funding opportunities and delivery mechanisms for implementing Lagoon City phosphorus reduction projects	Framework for implementing the Lagoon City phosphorus strategy identified	Township of Ramara (LSRCA, MOECC, MNRF)	2020

Recommendation 4-9 - That the Township of Ramara, in partnership with LSRCA, should undertake works to naturalize swales within Lagoon City in order to achieve benefits to the system related to preserving water quantity and maintaining flow within the system.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Provide information to Lagoon City residents on impacts of lawn management to water quality	Information materials developed and made available to residents	Township of Ramara (LSRCA)	2016
Establish a pilot project on municipal lands or property owned by willing landowners	Pilot project established and monitored to ensure landowner satisfaction, and hydrologic function	Township of Ramara (LSRCA)	2016
Review successes and challenges of pilot project	Review complete. Decision made as to whether to expand to other swales	Township of Ramara	2019
Pending results of pilot study, make presentation to Lagoon City community about naturalization program	Presentation provided	Township of Ramara	2020

Managing watercourses in an agricultural landscape

Recommendation 3-18 - That the watershed municipalities, through the LSRCA, create a roundtable made up of municipalities, OMAFRA, MOECC, OFA, BILD, NGOs and related landowner representatives, or through the expansion of existing frameworks such as the Lake Simcoe Stewardship Network, to determine co-operative ways of implementing phosphorus reduction measures in the Ramara Creeks subwatershed, and to develop an 'action plan' for their implementation within the agricultural and rural communities

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Working with municipalities and the Lake Simcoe Stewardship Network, identify key landowner and agricultural representatives to engage in discussion	Stakeholders identified	LSRCA	2016
Hold workshop(s) as necessary to share information and coordinate efforts on issues such as best practices for phosphorus reduction on agricultural land, achieving in-stream flow targets, proper installation and maintenance of tile drains, implementation of stewardship programs, and methods of increasing public awareness	Workshops held, as necessary. Participants feel that workshops are a good use of their time	LSRCA (subwatershed municipalities, OMAF, MOE, MNR, interested environmental groups, others as identified)	Ongoing

Recommendation 4-15 (5-10) - That the LSRCA, in partnership with the province and the municipality, work with landowners to naturalize the agricultural drainage channels in the subwatershed to increase ecological resilience of the surface water system. To ensure the continued preservation of naturalization projects the LSRCA, in partnership with the municipality, should carry out an outreach program to educate landowners on the maintenance practices and benefits of naturalized channel design for agricultural drains.

Recommendation 5-11 – The LSRCA work with the municipality and OMAFRA to determine which municipal drains are natural watercourses that have been straightened, and which are created watercourses, and catalog which of these are still in use. Those no longer in use that were historically natural watercourses should be priorities for rehabilitation

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Update LSRCA watercourse layer to identify which watercourses are free-flowing and which are enclosed	GIS database updated	LSRCA	2016
Review drainage reports and notes from initial land surveys to estimate which drains are natural watercourses and which have either been extended or created	Review complete, map developed	LSRCA (Township of Ramara)	2016
Host workshop for conservation authority staff, farm community, drainage superintendents, and drainage contractors on managing ecosystem function in municipal drains	Workshop held	LSRCA, (OMAFRA, MNRF, interested members of agricultural roundtable)	2016
Establish a pilot project to focus efforts on modifying an existing drain to promote ecological function. Given concerns with water quality in Lagoon City, either the Murray Drain or the Prophet Drain may be candidates for the pilot study. Other candidates may be drains scheduled for clean out, for cost efficiencies	Pilot study established	LSRCA	2016
Promote use of features such as grassed buffers, two stage channels, or weirs on headwater wetlands to manage drains, while minimizing impacts on agricultural drainage	A combination of grassed buffers, two stage channels, and weirs on headwater wetlands established in the Ramara Creeks subwatershed, as appropriate	LSRCA	Ongoing

Assess savings in reduced drain maintenance achieved through such measures, and additional costs to the municipality and landowners in establishing them	Assessment of relative costs and savings of alternative drain management measures completed	LSRCA, Township of Ramara, (OMAFRA)	2018
Examine funding models to offset any financial impact to benefiting landowners	Funding models reviewed, programs developed as appropriate	LSRCA, Township of Ramara, (OMAFRA)	2018

Prioritizing stewardship projects

Recommendation 6-17 – That the LSRCA and MNRF, with the assistance of the MOECC, use their draft ‘Delineation of Priority Areas for Restoration’ report to develop a spatially-explicit decision support tool to assist in targeting terrestrial stewardship projects in the Lake Simcoe watershed

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Make use of MNRF stewardship opportunity areas map to identify priority areas for LSRCA stewardship program, based on targets established in the Ramara Creeks subwatershed plan	Restoration priority map created	LSRCA (MNRF)	2015
Share priority area map with members of the Lake Simcoe Stewardship Network	Presentation provided. Map made available to Network members.	LSRCA	2015

Increasing uptake of stewardship programs

Recommendation 5-1 (6-11) – That MNRF, MOECC, OMAFRA, and LSRCA continue to implement stewardship projects in the Ramara Creeks subwatershed, and encourage other interested organizations in doing the same.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Implement stewardship projects that address significant threats in the Ramara Creeks subwatershed	Quantitative targets for stewardship projects achieved. Projects address significant threats to watershed health	LSRCA, MNRF, OMAFRA (Lake Simcoe Stewardship Network)	Ongoing, interim targets to be reached by 2019

Recommendation 6-23 – That the Ministry of Transportation, Township of Ramara and the County of Simcoe, in partnership with the Simcoe County Federation of Agriculture, LSRCA, and MNRF, promote and implement, where appropriate, the use of treed windbreaks and/or ‘living snowfences’ along roadsides to prevent impacts from wind and blowing snow. The creation of a ‘living snowfence’ involves selectively harvesting crops in order to leave a specified amount of plant material standing along a roadway to facilitate snow accumulation.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Review success of living snow fence pilot projects	Review of pilots complete	Simcoe County (LSRCA)	2016
Develop map of priority areas for windbreak establishment, to manage blowing snow and dust	Priority area map developed	LSRCA	2016
Promote the adoption of farm windbreaks and living snow fences	Windbreaks established in priority areas	MTO, Ramara, Simcoe County, (Simcoe County Federation of Agriculture, LSRCA, MNRF, OMAFRA)	Ongoing

Recommendation 5-5 (6-15) – The MOECC, MNRF, OMAFRA, LSRCA and other interested members of the Lake Simcoe Stewardship Network support research to determine barriers limiting uptake of stewardship programs in this subwatershed, and share these results with other members of the Lake Simcoe Stewardship Network, to enable agencies and stakeholders to modify their stewardship programming as relevant. This research should include a review of successful projects to determine what aspects led to their success, and how these may be emulated.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Conduct literature review of factors related to stewardship behaviour of private land owners	Literature review complete and report written	LSRCA (MNRF, MOECC, OMAFRA)	2016
Interview practitioners regarding perceived motivations of partners and barriers to uptake of stewardship programs, and successful examples. In the context of the Ramara Creeks subwatershed, the Couchiching Conservancy should be included as interviewees	Interviews complete and report written	LSRCA (MNRF, MOECC, OMAFRA)	2016
If questions remain as a result of earlier steps, survey subwatershed residents to determine their knowledge, attitudes, and behaviours related to watershed stewardship	Survey complete as necessary, with sufficient sample size to achieve statistical power	LSRCA (MNRF, MOECC, OMAFRA, LSRCA)	2017
Present results of research to Lake Simcoe Stewardship Network	Presentation completed	LSRCA	2017

Recommendation 5-8 (3-19) – That prioritized restoration areas identified through the recently developed tool be integrated into a stewardship plan that ensures prioritized restoration opportunities are undertaken as soon as feasible. This stewardship plan needs to incorporate the outcomes of recommendations to improve uptake identified in Recommendations 5-1 through 5-6.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Review output of stewardship prioritization tools developed, to identify priority areas for stewardship outreach	Priority areas identified	LSRCA (MNRF, OMAFRA, MOECC)	2015
Establish quantitative targets for stewardship program delivery in the Ramara Creeks subwatershed, based on priority issues identified in subwatershed plan and funding availability	Targets established for each stewardship program delivery	LSRCA	2015
Review output of study on motivations and barriers related to stewardship (Recommendation 5-5) to identify communication / outreach needs to engage priority landowners	Communication needs identified	LSRCA	2017
Develop stewardship plan to engage priority landowners in undertaking priority stewardship projects	Stewardship plan developed	LSRCA, Couchiching Conservancy	2017
Share stewardship plan with members of the Lake Simcoe Stewardship Network	Presentation provided	LSRCA	2017
Revise and/or develop communication and outreach tools to address identified barriers, as necessary	Communication products developed or updated	LSRCA (MNRF, OMAFRA, MOECC)	2018

Recommendation 3-20 – Given the anticipated challenge in using stormwater pond retrofits to offset phosphorus loading from projected growth areas in the Ramara Creeks, Talbot River, and Upper Talbot River subwatersheds, that the LSRCA assess the feasibility of expanding the Lake Simcoe Phosphorus Offsetting Program (LSPOP) to support phosphorus-reduction projects on agricultural land in these subwatersheds.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Provide approval to proceed with Phase I of the Lake Simcoe Phosphorus Offsetting program	Approval to proceed provided	MOECC	2015
Implement Phase I of the Lake Simcoe Phosphorus Offsetting Program, with a focus on urban stormwater retrofits	LSPOP launched	LSRCA	2016
Review the Alternative Land Use Services (ALUS) program, and other similar programs to identify challenges and best practices in compensating farmers for environmental works	Best practices reviewed and summarized	LSRCA (interested members of Agricultural roundtable)	2018
Assess value and feasibility of extending LSPOP to agricultural land uses	Decision made on inclusion of agricultural projects in Phase II of LSPOP	LSRCA (Township of Ramara, interested members of Agricultural roundtable)	2018
Modify bid, contract, and governance structure, as necessary	LSPOP program modified to address best practices, as deemed appropriate	LSRCA	2019
Implement LSPOP on agricultural land in the Ramara Creeks subwatershed, as dictated by market, and pending decision on direction of Phase II	Phase II LSPOP launched	LSRCA	2020

Recommendation 5-6 (6-16) – The MOECC, MNRF, OMAFRA and LSRCA continue to investigate new and innovative ways of reaching target audiences in the local community and engage them in restoration programs and activities (e.g. local radio, Chamber of Commerce, 4H clubs, high school environmental clubs, through Facebook groups, hosting a Lake Simcoe Environment Conference for high schools/science community interaction, and/or including inserts in tax or utility bills). Results of these efforts should be shared with the Lake Simcoe Stewardship Network.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Review existing web presence and develop online communication strategies, including assessment of the role of social media in increasing public awareness of the state, and management, of Lake Simcoe	Online communication strategy developed	LSRCA	2015
Implement communication strategy	Strategy implemented	LSRCA	2016
Identify and engage other groups active in the subwatershed, particularly those which include non-farm rural landowners, such as schools, faith groups, or public libraries	New audiences found. Presentations or other communications material provided	LSRCA, MNRF, MOECC, Couchiching Conservancy	2015
Submit notices and articles to newsletters of local residents associations, on issues related to subwatershed management, and opportunities to participate in stewardship programs	Material provided to newsletters	LSRCA	Ongoing
Review results of study on motivations and barriers related to stewardship uptake (recommendation 5-5) to determine key communication needs	Stewardship communication strategy developed	LSRCA (agricultural round table)	2017

Recommendation 5-7 – That LSRCA create and/or publicize link to a website that provides information and contact information on available funding programs for stewardship works, and ensure that this site is kept current

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Expand LSRCA website to provide information on range of stewardship funding programs available in the Lake Simcoe watershed, with contact information	Web content developed and made publicly available	LSRCA (OMAFRA, MNRF, Couchiching Conservancy, Lake Simcoe Stewardship Network)	2016
Maintain website, to ensure information remains current	Website maintained	LSRCA (OMAFRA, MNRF, Couchiching Conservancy, Lake Simcoe Stewardship Network)	Ongoing

Land securement by public agencies

Recommendation 6-8 – That the LSRCA and subwatershed municipalities should continue to secure outstanding natural areas for environmental protection and public benefit, through tools such as land acquisition or conservation easements, and should support the work of Land Trusts doing similar work. Priority areas identified by LSRCA’s Land Securement Strategy in the Ramara Creeks subwatershed are the Lagoon City, Barnstable Bay, and Joyland Provincially Significant wetlands.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Map opportunity areas for preserving the health of the watershed, based on the needs identified in the Ramara Creeks subwatershed plan	Securement opportunity map completed	LSRCA	2015
Prioritize opportunity areas, based on relative contribution to watershed health, and vulnerability to loss if not protected	Securement priority areas map created	LSRCA	2015
Review and update LSRCA Land Securement Strategy, to incorporate analysis of priority securement areas	Land Securement Strategy updated	LSRCA	2015
Develop funding model to support land securement in Simcoe County	Greenland acquisition reserve established, for use in securing priority natural areas	LSRCA	2018

Protecting and enhancing groundwater resources

Recommendation 4-7 - The Lake Simcoe Region Conservation Authority should create eligibility for infiltration projects under the LEAP, targeting funding to those in ecologically significant groundwater recharge areas in order to maintain existing groundwater recharge functions

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Develop funding program to support infiltration projects	Funding program review complete, infiltration projects supported as resources permit	LSRCA	2015
Consider significant groundwater recharge areas in stewardship prioritization mapping (recommendation 6-17)	Priority areas to promote infiltration identified	LSRCA	2015
Consider significant groundwater recharge areas in land securement prioritization mapping (recommendation 6-8)	Priority areas for land acquisition to preserve infiltration identified	LSRCA	2015

Science and research

Establishing in-stream flow targets

Recommendation 4-2 (5-9) –That LSRCA, with assistance from MNRF and MOECC, establish ecological flows (in-stream) targets for each main tributary. These in-stream flow targets should be based on the framework established for the Maskinonge River. Once these targets are established, a strategy should be established to achieve them. This strategy should also protect baseflow and location of upwellings in order to maintain thermal stability.

Recommendation 4-10 –That the LSRCA, in collaboration with the MNRF and MOECC, utilize the LSPP Tier 2 integrated model in the development of in-stream flow targets and the development of management strategies to address climate change impacts

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Complete the pilot in-stream flow target setting exercise for the Lovers Creeks subwatershed	In-stream flow targets established for Lovers Creek subwatershed.	MOECC, MNRF, (LSRCA)	2015
Complete the pilot in-stream flow strategy which will identify mechanisms to achieve in-stream flow target regimes. Areas assessed may include stormwater management, land use planning policies, stewardship program delivery, or use of the permit to take water process.	In-stream flow target strategy completed.	MOECC, MNRF, (LSRCA)	2016
Select creeks in the Ramara Creeks subwatershed for which to establish in-stream flow targets. Priorities may be natural watercourses managed as agricultural drains (as identified in recommendation 5-11) but which exhibit periods of low or no flow	Priority watercourses identified	MOECC, MNRF, (LSRCA)	2016
Develop in-stream flow target regimes for selected creeks, based on Lovers Creek pilot	In-stream flow regime targets established	MOECC, MNRF, (LSRCA)	2019
Develop strategy for achieving in-stream flow target regimes for selected creeks, based on Lovers Creek pilot	In-stream flow target strategy completed	MOECC (LSRCA, MNRF)	2019

Increasing our understanding of climate change

Recommendation 6-18 – That the members of the Lake Simcoe Stewardship Network be encouraged to build into their projects relevant provisions for the anticipated impacts of climate change, such as the need to recommend native species which will be tolerant of future climate conditions, and the likelihood of an increase in invasive plants, pests, and diseases which may further limit the success of traditional stewardship approaches.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Modify existing recommended tree planting lists for reforestation, based on expected changes to climate in southern Ontario	Recommended planting list developed	MNRF (LSRCA)	2019
Share recommended tree planting list with members of the Lake Simcoe Stewardship Network, and watershed municipalities	Presentation provided	MNRF	2019
Share recommended tree planting list with garden centres, nurseries, landscaping companies, and horticultural societies in Orillia and southern Simcoe County	Information provided	MNRF	2019
Incorporate a percentage of species from the recommended climate change planting list as planting stock used on an annual basis in stewardship projects	Planting prescriptions transition toward species mix relevant for future climate scenarios	LSRCA, MNRF, Simcoe County, Township of Ramara, interested members of the Lake Simcoe Stewardship Network	2020
Establish timeline for review and update of recommended tree planting lists, based on actual climate trajectories and pest and disease occurrences	Timeline for review established, and responsibility delegated	MNRF	2020

Monitoring and assessment

Recommendation 3-23 (5-12) - That the LSRCA enhance the existing monitoring network, through the comprehensive monitoring strategy, to address identified limitations and gaps of the current monitoring program.

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Review current location and frequency of water quality and aquatic habitat monitoring in the Lake Simcoe watershed, including parameters measured. Assess ability of current data to monitor impacts of land use change and report on proposed Key Performance Indicators (recommendation 8-2)	Review complete. Any spatial or temporal gaps in monitoring identified	LSRCA	2015
Develop business plan to improve monitoring program, including potential funding sources, as necessary	Business plan complete	LSRCA	2015
Implement enhanced monitoring program, as necessary, and as funding permits	Identified spatial and temporal gaps in monitoring resolved	LSRCA	2017

Recommendation 3-25 – That the LSRCA, MNRF, and MOECC analyse and report the results of the existing and proposed water quality, water quantity, and aquatic and terrestrial natural heritage monitoring programs regularly, and that the information be used to update the LSRCA Watershed Report Card. Further, stakeholders should be made aware when updates are available, and be provided access to the monitoring data collected via a web portal, to increase distribution and communication of this data

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Develop a detailed reporting and communication strategy to report on Key Performance Indicators of the environmental health of the Lake Simcoe watershed	Completed business plan outlining potential products, roles and responsibilities and resource allocation.	LSRCA (MOECC, MNRF)	2015
Analyze and report on Key Performance Indicators	Provide identified products (e.g. web portal) within specified time frames and resources	LSRCA (MOECC, MNRF)	Ongoing, to begin in 2016
Update watershed report card, using data collected on the health of Lake Simcoe and its watershed	Watershed report card updated and made available to the public	LSRCA (Conservation Ontario)	2018

Recommendation 5-13 – That LSRCA and its partners work to create a centralized location for reports and resources pertaining to Lake Simcoe and its watershed such that information can be accessed by all interested stakeholders

Activity	Measure of success	Lead (collaborating) agency	Target deadline
Establish and maintain an on-line library of reports and scientific studies on Lake Simcoe and its watershed	Publicly-accessible report database created	LSRCA	2016
Maintain online report library	Library maintained. Reports remain available	LSRCA	Ongoing