	_	Relationship to Building the Living City, the TRCA	T	T	1	T
Goals/Initiatives to be Completed in 2020 (SMART)	Additional Comments	2013-2022 Strategic Plan - Strategic Priorities	Relationship to Building the Living City, the TRCA 2013-2022 - Projected Accomplishments	Accountable Business Unit(s)	Accountable Lead/Staff Contact	Other Divisional and/or Business Unit Support Required
Invest in our staff • Provide staff training, including health and safety, learning requirements and specialized training - Q1-Q4 • Restaffing positions to ensure effecive service delivery to clients - Q2 • Develop succession plan		Strategy 11 - Invest in our staff, Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment	Strategy 10 - Seek input from TRCA staff and support their efforts to develop innovations that improve program delivery., Strategy 11 - Create a TRCA Succession Plan that identifies future leaders and ensures business continuity.	Development Planning and Permits. Infrastructure Planning and Permits. Engineering Services Watershed Planning Enforcement and Compliance	Steve Heuchert / Quentin Hanchard (DPP), Beth Williston (IPP), Dan Hipple (Water Resources Engineering), Rehana Rajabali (FRM), Craig Mitchel (FIH), Nick Lorrain (CP), All Shirazi (Geo-Tech), Don Ford (Hydro G), Scott Jarvie (WPES), Sue Hayes (TI&M), Noah Gaetz (E&CS), Laura DelGiudice (WPR), Rick Portiss (AM&M)	Human Resources
Undertake Business and Financial Planning for the Division including review and development of updated metrics and key performance indicators (KPI) • Provide timely and accurate divisional financial, metric and performance information, in order to support the following key deliverables for the organization: • Quarterly variance reporting to TRCA's Board and stakeholders • Annual financial statements • Monthly metric and performance reporting to TRCA's Board and stakeholders • Annual metric and performance reporting to TRCA's Board and stakeholders • Review Key Performance Indicators (KPI) by Q2 and implementing new processes to collect additional KPI data for reporting by the end of Q3. New KPI data will be reported in 2021. • Develop business plan for division by end of Q3		Strategy 9 - Measure performance, Strategy 4 - Create complete communities that integrate nature and the built environment	Strategy 9 - Improve and enhance the CPR database by developing consistent reporting measures including key performance indicators and targets to measure progress towards strategic outcomes and to report on the impact of TRCA work.	Development Planning and Permits. Infrastructure Planning and Permits. Engineering Services Watershed Planning Enforcement and Compliance	Steve Heuchert / Quentin Hanchard (DPP), Beth Williston (IPP), Dan Hipple (Water Resources Engineering), Rehana Rajabali (FRM), Craig Mitchel (FIH), Nick Lorrain (CP), Ali Shirazi (Geo-Tech), Don Ford (Hydro G), Scott Jarvie (WPES), Sue Hayes (TI&M), Noah Gaetz (E&CS), Laura DelGiudice (WPR), Rick Portiss (AM&M)	Strategic Business Planning, Finance
Achieve Development Planning and Permitting (DPP) and Infrastructure Planning and Permitting (IPP) Timelines • Undertake development and infrastructure planning and permit application reviews within CO / TRCA's timeline targets, or per service delivery agreement timelines. Achieve 80% of the timeline targets from Q1-Q4. Develop an interim tool by end of Q1 to track timelines so that we can report on success from Q2-Q4. • Undertake review of planning and permitting fees	Internal timeline targets permitting: Provide complete application requirements within 14 days (Major) 7 days (minor). Confirm whether application complete, 21 days (major) 14 days (minor). Decision on approval - 28 days (Major). 21 days	Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 9 - Measure performance	Strategy 4 - Assist landowners and government partners to realize complete communities and environmental best practices in new developments and existing neighborhoods., Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas. , Strategy 7 - Advance new business models to maintain assets and ensure efficient program delivery., Strategy 4 - Assess TRCA's development review process with member municipalities, industry and other stakeholders to identify opportunities to facilitate more timely reviews.	Development Planning and Permits. Infrastructure Planning and Permits. Engineering Services Enforcement	Steve Heuchert for City of Toronto and Durham, Quentin Hanchard for Peel, Mono / Adjala and York Region, Beth Williston for IPP. Technical Services - Dan Hipple (Engineering), Ali Shirazi (Geo-Tech), Don Ford (Hydro G)	Policy and Planning, Planning Ecology, Engineering Services
Streamline DPP and IPP review including enhancing relationships with Municipalities and Building Industry to improve quality of development applications and reduce review times • Finalize and implement a development planning and permitting review services streamlining and enhancement strategy by end of Q3. Report to the Board on streamlining enhancement initiatives in Q4. • Implement Phase 1 of Administrative Planning Technician enhanced services to assist Planning staff. This includes restructuring teams with enhanced administration services, particularly around file intake and processing. End of Q3. • Ensure staff are allocated to address the anticipated increase in the number of LPAT appeals in 2020 and beyond due to LPAT procedural changes in Bill 108. A resourcing plan will be developed by the end of Q1 that identifies staff resources and external legal services required. The plan will be implemented from Q2-Q4. • Create new tools to optimize consistency and expediency in commenting on standard applications, including submission checklists, template response forms, updated guidelines. This includes developing standard templates including tools such as pull down lists to assist in planning and permitting. This will be completed by the end of Q3. • Continue to meet with BILD and Municipal partners to improve communications, and develop planning and permitting review standards.		Strategy 7 - Build partnerships and new business models, Strategy Create complete communities that integrate nature and the built environment		Development Planning and Permits. Infrastructure Planning and Permits. Engineering Services Enforcement and Compliance	Steve Heuchert for City of Toronto and Durham, Quentin Hanchard for Peel, Mono / Adjala and York Region, Beth Williston for IPP. Technical Services - Dan Hipplie (Engineering), Ali Shirazi (Geo-Tech), Don Ford (Hydro G)	Policy and Planning, Planning Ecology, STEP
Modernization of TRCA's Planning/Permit Application, Review and Enforcement System (PARES) - Develop PARES Project Charter and work plan. - Enhance and implement interim digital review and file processing capacity. This will include enhancing 0365 tools so that we can received digital submissions by end of Q3 and circulate and review files digitally by end of end of Q4. - Complete and implement digital permit issuance process. Complete testing Q1; roll-out for smaller permits Q2; rollout for all permits Q4; integrate into PARES and DPP in 2021 - Update hardware technologies for IPP, DPP, policy planners, enforcement and technical review staff, including transitioning to tablets and large monitors. Goal – 50% before Q4	Project Charter and Work plan to SLT end Q2 pending PARES project manager hiring, final PARES rollout Q4 2022 pending final work plan recommendations and funding	Strategy 7 - Build partnerships and new business models, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 9 - Measure performance	Strategy 7 - Advance new business models to maintain assets and ensure efficient program delivery., Strategy 4 - Assess TRCA's development review process with member municipalities, industry and other stakeholders to identify opportunities to facilitate more timely reviews Strategy 9 - Invest in digital technologies which will allow the organization to better measure and communicate TRCA's value proposition.	Development Planning and Permits. Infrastructure Planning and Permits. Engineering Services Enforcement	Steve Heuchert for City of Toronto and Durham, Quentin Hanchard for Peel, Mono / Adjala and York Region, Beth Williston for IPP. Technical Services - Dan Hipple (Engineering), Ali Shirazi (Geo-Tech), Don Ford (Hydro G)	ITM, Planning Ecology, Policy and Planning and Corporate Records.
Deliver External Training • Educate and train municipal partners, consultants and property owners on development planning and permitting processes including pre-consultation, complete applications, policy implementation and technical guidelines + Host 2 industry based workshops related to plan input and review and technical needs, e.g. Annual Partnership Workshop, technical and sector-based climate change and LID workshops. These workshops will occur in Q2 and Q3 at an agreed upon locations (i.e. TRCA HO or Municipality) • Provincial Flood Workshop	Ongoing, all year.	Strategy 5 - Foster sustainable citizenship, Strategy 7 - Build partnerships and new business models, Strategy 4 - Create complete communities that integrate nature and the built environment	Strategy 5 - Provide increased engagement opportunities for stakeholders of all ages that build environmental, sustainability and climate awareness and promote leadership within communities including training and capacity building., Strategy 7 - Advance new business models to maintain assets and ensure efficient program delivery., Strategy 4 - Engage with member municipalities, academic institutions, the development industry, and professional associations to deliver professional avelopment programs, conduct design charrettes and forums to achieve integrated sustainable community design in projects and plans.	Development Planning and Permits. Infrastructure Planning and Permits. Engineering Services Watershed Planning Enforcement	Steve Heuchert for City of Toronto and Durham, Quentin Hanchard for Peel, Mono / Adjala and York Region. Technical Services - Dan Hipple (Engineering), Ali Shirazi (Geotech), Don Ford (Hydro G), Rehana Rajabali (FRM)	Policy and Planning, Education (STEP), Planning Ecology, Municipal Partners, BILD, Province
Finalize Service Level Agreements and MOUs • Coordinate with our Regional partners to better define roles and responsibilities pertaining to the implementation of their Regional natural heritage goals and objectives through the development and Infrastructure planning review process. This will require monthly meetings with our Regional partners to ensure we are on the same page and to align and clarify roles and responsibilities. • Provide service level agreement staffing, project and deliverable updates for 2021 to partners. Develop agreements with both Lower and Upper Tier Municipalities by end of Q3. • Update Metrolinx templates for data, archaeology, compensation, conditions of approval as per service level agreement by Q2			Strategy 4 - Assist landowners and government partners to realize complete communities and environmental best practices in new developments and existing neighborhoods. Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas. , Strategy 7 - Advance new business models to maintain assets and ensure efficient program delivery.	Development Planning and Permits. Infrastructure Planning and Permits.	Steve Heuchert for City of Toronto and Durham, Quentin Hanchard for Peel, Mono / Adjala and York Region, Beth Williston for IPP	Policy Planning, Strategic Business Planning, PMO, Government and Community Relations

Goals/Initiatives to be Completed in 2020 (SMART)	Additional Comments	Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan - Strategic	Relationship to Building the Living City, the TRCA 2013-2022 - Projected Accomplishments	Accountable Business Unit(s)	Accountable Lead/Staff Contact	Other Divisional and/or Business Unit Support Required
Undertake Floodplain Mapping, SPA and Regulation Mapping Updates Complete NDMP funded floodplain mapping updates and produce over 300 new floodplain map sheets and new hydrology and hydraulic models • Rouge River (2 new HEC-RAS models, approx. 103 new floodplain map sheets, and study report) • Don River (2 new HEC-RAS models, approx. 80 new floodplain map sheets, study report) • Highland Creek (1 new HEC-RAS model, 1 new PSCWMM model, approx. 30 new floodplain map sheets, study report) • Mimico Creek (1 new HEC-RAS model, approx. 20 new floodplain map sheets, study report) • Duffins Creek (1 new HEC-RAS model, approx. 73 new floodplain map sheets, study report) • Provide technical input into SPA updates for Unionville, Bram East and Dixie/Dundas by Q4	Projects are to be completed by no later than April 14, 2020, and paid out no later than March 31, 2020	Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment	Strategy 2 - Work with municipal partners to implement flood remediation, erosion monitoring, maintenance work, stormwater system retrofits, low impact developments, green infrastructure, and water quality and habitat restoration projects to realize more sustainable developments (e.g. The Portlands, Vaughan Metropolitan Centre, Brampton Rivervalle, Markham Centre). Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas.	Engineering Services	Nick Lorrain	Corporate Services - GIS Support, Development and Infrastructure Planning and Permits
Implement flood remediation projects, including flood feasibility studies and Environmental Assessments • Rockcliffe SPA Flood and Transportation Feasibility Study (Complete by May 2020, Board Report in May 2020) • Continue technical support for the Port Lands Flood Protection Enabling Infrastructure Project including detailed involvement with Flood modelling and Infrastructure. Ongoing work from 01-04. • Highland Creek Markham Branch (Corporate Drive) Flood Remediation EA (Complete by April 2021 and Board Report at City Council in May 2021) • Rockcliffe SPA Flood Remediation Environmental Assessment and Detailed Design Process (City of Toronto and TRCA, 04 2022, with Board/Council reports in 01 2023) • Downtown Brampton SPA Flood Remediation EA in the City of Brampton (complete EA by March 31, 2020 and Board report in April 2021) • Downtown Brampton SPA Flood Remediation Detailed Design Process (City of Brampton 2022 with TRCA's assistance) • Divide and Dundas SPA in the City of Mississauga (To be completed by the City by Q1 2021, with TRCA support) • Spring Creek/Bramalea City Centre/Avondale SPA in the City of Brampton (City of Brampton lead to be completed by Q4 2021 with TRCA support) • Pickering and Ajax Dyke Restoration EA (TRCA, Draft ESR March 31, 2020, completion date June 2020 and Board report in September 2020)		Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment	Strategy 2 - Work with municipal partners to implement flood remediation, erosion monitoring, maintenance work, stormwater system retrofits, low impact developments, green infrastructure, and water quality and habitat restoration projects to realize more sustainable developments (e.g. The Portlands, Vaughan Metropolitan Centre, Brampton Riverwalls, Markham Centre), Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas.	Engineering Services	Nick Lorrain	Corporate Services - PMO Support, R&I, Local and Regional Municipalities
Delivery of TRCA's Flood Forecasting and Warning Program including Technology Enhancements • FDO/CFDO 24/7 on call rotation and training • Enhance TRCA's online flood forecasting and warning system (trcaguaging.ca) through the inclusion of identified Phase 2 website improvements. To be completed by Q4 2020. • Begin development of TRCA's next generation flood forecasting and warning system utilizing new technology such as Delft FEWS, first through a pilot project configuration to delivery flow forecasts at key flood risk areas in the Don River watershed • Installation of remote camera systems for additional flood monitoring capabilities at Humber River at Old Mill, Stouffville Dam and Ajax Dyke. Examine the feasibility of using cameras for ice monitoring in Bolton. Q4, Future expansion to be explored. • Develop a Common Operating Picture and ticket tracking system for flood Forecasting and Warning Incident Management, to facilitate efficiency internally during flood events and streamline flood event documentation, leading to an improved delivery of flood forecasting and warning. Complete by end of Q4.		Strategy 2 - Manage our regional water resources for current and future generation	Strategy 2 - Reduce flood risks and protect communities through continuous improvements to TRCA's flood forecasting and warning program.	Engineering Services	Rehana Rajabali, Craig Mitchell	ITM, Corporate Communications
Continued operation and maintenance of TRCA's stream gauge and precipitation gauge networks plus Strategic Enhancements - Install four more real-time gauges in 2020 for the Flood Warning and Hydrometrics Program to improve coverage of the real-time flood monitoring which will translate into more accurate flood risk information that can be used to reduce flood impacts. To be completed by Q4 2020.		Strategy 2 - Manage our regional water resources for current and future generation	Strategy 2 - Reduce flood risks and protect communities through continuous improvements to TRCA's flood forecasting and warning program.	Engineering Services	Craig Mitchell	Flood Risk Management, ITM
Operate, maintain and inspect TRCA owned infrastructure including dams, dykes and channels. • Continued O/M and inspections, Q1-Q4 • Development of GIS tools for tracking flood infrastructure inspections and maintenance for due diligence purposes by Q4 • Initiate final design to repair Stouffville Dam's emergency spillway. To be completed by Q4 for Construction Drawings • Implement drone monitoring program for ice jams, flood extent mapping and flood infrastructure inspection. To be completed by Q3 2020. • Undertake concrete repairs at Yonge/York Mills Flood Control Channel by end of Q2 • Development of policy for debris removal from natural channels. Complete Draft by Q3 • Continued preventative maintenance activities on dams, channels and dykes. Q4 2020 with continued activities in future years • Initiation of the Phase II part of the Bolton Dyke Restoration Project. Work will include repairing the dyke between Humber Lea Rd. and King Rd. Design will be completed by Q4, with Contruction beginning in Q4 or Q1 2021.		Strategy 2 - Manage our regional water resources for current and future generation	Strategy 2 - Reduce flood risks and protect communities through continuous improvements to TRCA's flood forecasting and warning program., Strategy 2 - Work with municipal partners to implement flood remediation, erosion monitoring, maintenance work, stormwater system retrofits, low impact developments, green infrastructure, and water quality and habitat restoration projects to realize more sustainable developments (e.g. The Portlands, Vaughan Metropolitan Centre, Brampton Riverwalk, Markham Centre).	Engineering Services	Craig Mitchell	Engineering Projects (R&I), ITM, PMO
Updated Lake Ontario based shoreline hazard maps • Complete a shoreline hazard study that accounts for updated lake levels and future erosion risks. TOR and budget secured by Q3 and startup in Q4.		Strategy 2 - Manage our regional water resources for current and future generation	Strategy 2 - Work with municipal partners to implement flood remediation, erosion monitoring, maintenance work, stormwater system retrofits, low impact developments, green infrastructure, and water quality and habitat restoration projects to realize more sustainable developments (e.g. The Portlands, Vaughan Metropolitan Centre, Brampton Riverwalk, Markham Centre).	Engineering Services	Rehana Rajabali	Capital Projects (R&), PMO, Government and Community Relations, Municipal Partners on the Lake

	Additional Community	Relationship to Building the Living City, the TRCA	Relationship to Building the Living City, the TRCA 2013 -2022	Assessment to Develop the World	Accomplete to the Wife	
Goals/Initiatives to be Completed in 2020 (SMART)	Additional Comments	2013-2022 Strategic Plan - Strategic Priorities	- Projected Accomplishments	Accountable Business Unit(s)	Accountable Lead/Staff Contact	Other Divisional and/or Business Unit Support Required
Increase Flood Awareness • Engage with flood vulnerable communities to increase awareness about flood risks and protective actions, through in-person meetings and tailored digital content. TRCA's Flood Risk Awareness and Education Program's open houses planned include (Completed by End of Q1): • Bolton Core- January 2020 • Downtown Stoutfyille - January 2020 • Avondale/Spring Creek- January 2020 • Markham Industrial- February 2020 • Dixile-Dundas- February 2020 • Unionville - March 2020 • Participate in Municipal Emergency Prepardness events (Q2) • Completion of Site-Specific Flood Response Plans for 10 high-risk flood vulnerable clusters, leveraging the information gathered through the Flood Risk Assessment and Ranking study. Complete by Q2. • Present findings from the Bolton Ice Jam Study to the local community in January 2020 in order to better inform the community about flood risks and feasible/non-feasible options for ice jam risk reduction. Public outreach completed Q1 2020.		Strategy 2 - Manage our regional water resources for current and future generation	Strategy 2 - Engage with local communities to increase awareness about issues facing water resources and their importance to the health and well-being of the jurisdiction.	Engineering Services	Rehana Rajabali	Marketing; Government relations; Policy Planning, Municipalities
Undertake Watershed Planning and Support Municipal Comprehensive Reviews (MCR) • Seek public feedback and final approvals of the Carruthers Creek Watershed Plan from Durham Region Council and BoD. Release final approved Watershed Plan by end of Q3. • Address feedback and seek final approvals of the Highland Creek Watershed Greening Strategy from BoD and commence implementation in collaboration with the City of Toronto. Release final approved Strategy by end of Q3. • Continue supporting our municipal partners by providing advice, data and studies to protect and restore natural heritage and water resources in planning for growth through their Municipal Comprehensive Reviews. Ongoing throughout 2020 (MCR's are to be completed by July 2022) • Compile data layers for delineation of all components of the Water Resource System across the entire jurisdiction and identify policy implications for municipal partners. City of Toronto by end of Q2, all other regions by end of Q4 • Initiate scoping and the characterization stage of the Etobicoke Creek Watershed Plan by Q1 update to inform municipal planning for growth and infrastructure initiatives in collaboration with TRCA technical staff and relevant municipal partners. Final report by Q4. • Work with Environmental Monitoring & Data Management to identify major data gaps in the Humber River watershed to better monitor the watershed and begin scoping of watershed plan.	Implementation and engagement will be long-term over the life of the plans (10 years) y	Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 12 - Facilitate a region-wide approach to sustainability	Strategy 2 - Work with municipal partners to implement flood remediation, crosion monitoring, maintenance work, stormwater system retrofits, low impact developments, green infrastructure, and water quality and habitat restoration projects to realize more sustainable developments (e.g. The Portlands, Vaughan Metropolitan Centre, Brampton Riverwalk, Markham Centre), Strategy 2 - Engage with local communities to increase awareness about issues facing water resources and their importance to the health and well-being of the jurisdiction, Strategy 4 - Assist landowners and government partners to realize complete communities and environmental best practices in new developments and exiting neighborhoods., Strategy 12 - Ensure that updated TRCA plans and strategies are leveraged in amendments to municipal official plans and in provincial and regional infrastructure initiatives.	Watershed Planning and Ecosystem Science	Laura DelGiudice	Government Relations, Policy Planning and R&I, Municipal Partners
Produce Updated Watershed and Living City Report Cards Initiate scoping and partnership development for the Living City Report Card, which is scheduled to be released in 2021. Ongoing throughout 2020 with report card to be released in Q2 2021 In collaboration with relevant TRCA business units finalize data sets and indicators for the Watershed Planning and Reporting online platform and test initial version by Q4		Strategy 9 - Measure performance	Strategy 9 - Produce updated Watershed and Living City Report Cards on a regular basis and support community-led reporting to ensure stakeholders and community members understand the environmental health of TRCA watersheds.	Watershed Planning and Ecosystem Science	Laura DelGiudice	
Support the development of the Humber Watershed Plan through the collection of additional aquatic data including 15 water quality stations and 13 fish community sites in the Humber Watershed to fill gaps Data will be collected in Q2 and G3 following protocis used in the broader Regional Watershed Monitoring Progam with associated data management being completed in Q4.	s. Performance Measures from the Strategic Plan include - # of Data sets, # of Monitoring sites,	Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment	Strategy 12 - Ensure that updated TRCA plans and strategies are leveraged in amendments to municipal official plans and in provincial and regional infrastructure initiatives. J. Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas. J. Strategy 2 - Monitor the health of the waterbeds through the Regional Watershed Monitoring Program and through work with academic institutions.	Watershed Planning and Ecosystem Science	Scott Jarvie	Policy, Education and Training (SNAP)
Continue the collection of Fish Community and Habitat Data along the Toronto Waterfront at approximately 100 sites including 10 standardized Remedial Action Plan (RAP) sites in Q2 and Q3. Data Management and QA/QC to be completed in Q4. Data collected will be in support of various Capital and EA projects and for on-going RAP reporting. Compliance monitoring reports for projects including the Dor Portlands project, Ashbridges Bay Landform and Gibralter Point will be completed as required for Fisherie and Oceans Canada in Q4.	n	Strategy 2 - Manage our regional water resources for current and future generation, Strategy 9 - Measure performance	Strategy 2 - Monitor the health of the watersheds through the Regional Watershed Monitoring Program and through work with academic institutions., Strategy 9 - Work with industry, government, academic institutions and partners to highlight successful and innovative projects in journals and publications.	Watershed Planning and Ecosystem Science	Rick Portiss	Government and Community Relations, PMO
Publish the Toronto Waterfront Aquatic Habitat Restoration Strategy (TWAHRS) Update Report by the end of Q1 and take to the TRCA Board of Directors for information in Q2. The analysis and report will be used to confirm the TWAHRS techniques and concepts with compiled fisheries data and statistics and will be used to measure performance of major waterfront habitat restoration projects and support the design and planning of new ones.	Communication related to the updated report will be facilitated through targeted presentations at relevant technical conferences including the International Association of Great Lakes Research (IAGLR) and American Fisheries Sociaty - Ontario Chapter in Q1 and Q2	- Measure performance	Strategy 8 - Bring together agencies, professional organizations, and academic institutions working on protection and restoration in the jurisdiction to maximize efficiencies and to ensure the best science and data is leveraged in the delivery of programs and projects. Strategy 9 - Work with industry, government, academic institutions and partners to highlight successful and innovative projects in journals and publications.	Watershed Planning and Ecosystem Science	Kaylin Barnes	Restoration and Resource Management
Complete Terrestrial Natural Heritage Inventories on up to 1300 ha of lands including the mapping of ELV wegetation communities, flora species and breeding birds and amphibians. Field work to be completed in 02 and 02 with associated data managament and mapping in 04. Inventory/Assessment reports will be completed and forwarded to TRCA internal departments and poster on corporate web-site as required based on sites surveyed and will be completed by 01 of 2021. Data management includes updates of TRCA's species and vegetation community lists and update of the TRCA's scores and ranks system for species of Regional Conservation Concern	d	Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 3 - Rethink greenspace to maximize its value	to inform reviews of projects and the timely execution of projects, Strategy 4- Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas	Watershed Planning and Ecosystem Science	Sue Hayes	Development Planning and Permits, Planning and Policy, Restoration and Resource Management
Continue the implementation of the Regional Watershed Monitoring Program to collect water risk and regional biodiversity data in support of TRCA's planning, development review, watershed reporting and restoration and capital infrastructure projects. Annual data collection will include 50 aquatic sites for fish habitat and stream temperature, 150 sites for benthic macroinvertebrates, 50 fissed terrestrial plots, 47 water quality sites and 21 groundwater wells. Data will be collected in Q1 through Q4 depending on the monitoring component. Data management and QA/QC is ongoing with datasets being updated and finalized in Q4 or in Q1 of 2021		Strategy 2 - Manage our regional water resources for current and future generation, Strategy 3 - Rethink greenspace to maximize its value, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 8 - Gather and share the best sustainability knowledge	Strategy 2 - Monitor the health of the watersheds through the Regional Watershed Monitoring Program and through work with academic institutions, Strategy 3 - Secure, restore, and where appropriate, provide more accessible greenspace as part of the technical review of proposed projects and plans, Strategy 3 - Update TRCA's Terrestrial Natural Heritage System Strategy, Hersens Trategy, Hersens Trategy, Hersens Trategy, Hersens Trategy, TRCA's Living CIIV Policies and their associated technical guidelines to inform reviews of projects and the timely execution of projects., Strategy 4 - Provide value- added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas. Strategy 8 - Bring together agencies, profession organizations, and academic institutions working on protection and restoration in the jurisdiction to maximize efficiencies and to ensure the best science and data is leveraged in the delivery of programs and projects.	Watershed Planning and Ecosystem Science	Scott Jarvie	Development Planning and Permits, Planning and Policy, Restoration and Resource Management, Engineering and Development Services

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dualsy illitiatives to be completed in 2020 (SWART)	Additional Comments	Priorities	- Projected Accomplishments	Accountable business offices	Accountable Leady Staff Contact	Other Divisional ana/or business only support required
Natural Heritage System Update Complete TRCA's Natural Heritage System (NHS) update that integrates terrestrial and aquatic ecology priorities along with the policy criteria and evaluation of ecosystems-benefits to develop an updated NHS for the region along with data layers that inform watershed planning and municipal NGP processes. Complete by Q4. The update will be presented to SLT for endorsement and will include specific actions for communication to internal and external stakeholders and support for implementation.	I. Integrate the municipal Natural system layers, habitat connectivity priorities, natural system climate vulnerabilities, and terrestrial and aquatic species habitat needs with the provincial and TRCA policy criteria for NHS to develop a regionwide integrated NHS for TRCA by Q4. 2. Assess and quantify co-benefits that the updated NHS provides to the TRCA region and its residents by Q4. 3. Provide ongoing support to municipal partners to inform their MCR planning process (ongoing). 4. Engage with partner CAs and municipal partners to share knowledge, data, and methods for NHS development (ongoing; conference in Q2, technical workshop in Q4). 5. Develop collaborative partnership with academic researchers (e.g. University of Toronto) and TRCA's municipal partners to advance urban ecosystem science and management in GTA (Research partnership with U of T from 2018-2020, conference symposium Q2)	Strategy 3 - Rethink greenspace to maximize its value, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 8 - Gather and share the best sustainability knowledge, Strategy 9 - Measure performance, Strategy 10 - Accelerate innovation	Strategy 3 - Update TRCA's Terrestrial Natural Heritage System Strategy, the Regional Trail System Strategy, TRCA's Living (IT) Policies and their associated technical guidelines to inform reviews of projects and the timely execution of projects. Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitatis in the design of new communities and redeveloping areas. Strategy 4 - Engage with member municipalities, academic institutions, the development Industry, and professional associations to deliver professional development programs, conduct design charrettes and forums to achieve integrated sustainable community design in projects and plans. Strategy 9 km/s with industry, government, academic institutions and partners to highlight successful and innovative projects in journals and publications. Strategy 8 - Bring together agencies, professional organizations, and academic institutions working on protection and restoration in the jurisdiction to maximize efficiencies and to ensure the best science and data is leveraged in the delivery of programs and projects.	s Watershed Planning and Ecosystem Science	Namrata Shrestha	Policy Planning, GIS. Property, Greenspace planning, Development and Engineering Services, and government relations staff will also be engaged and provide presentations on the update.
Support land use and infrastructure plan review through guideline development and application 1. Evaluate valley and stream crossing mitigation effectiveness and identify priority areas for mitigation to achieve natural heritage objectives. Completed by Q4. Develop report for endorsement by S11 that vail include a summary and analysis of road mortality and wildlife crossing data collected from 7 sites in Peel and York, preliminary findings of pilot sites and initial recommendations for improved crossing guideline implementation. 2. Evaluate impacts of development on wetland watere balance and the success of mitigation measures across TRCA's pixification in support of stormwater management guidelines, land use planning, and watershed plans. This is a long-term project. 2020 deliverables include: development of a decision support tool for Planning Ecology staff by Q3 and evaluation of 3 post-development sites to see if designs were successful in protecting hydrological and ecological functions by Q4.		Strategy 3 - Rethink greenspace to maximize its value, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 8 - Gather and share the best sustainability knowledge, Strategy 5	Strategy 3 - Achieve the most appropriate use of TRCA's inventory of lands and facilities while respecting cultural heritage and environmental values, Strategy 3-Secure, restory, and where appropriate, provide more accessible greenspace as part of the technical review of proposed projects and plans., Strategy 4-Provide	Watershed Planning and Ecosystem Science	Namrata Shrestha and Neil Taylor	EA Planning, GIS, Policy Planning
TRCA Research Agenda Complete, with direction from the Research and Science working group, TRCA Research Agenda and Research Partnerships Toolkit to facilitate a coordinated approach to developing science based evidence to fill the knowledge gap of TRCA and its municipal partners. The research agenda, including actions to engage academic partners, will be presented to SLT for endorsement by Q4.	1. Work with the TRCA Research and Science Working Group to revise the draft research agenda. updated draft by Q3. Endorsed by S1 Tby Q4. 2. Draft key research questions summary that can be shared with external research partners (e.g., Center for Urban Environment at U of T) to answer most relevant applied research questions for TRCA and its municipal partners in Q4. 3. Organize an annual research forum for TRCA staff to share novel and innovative projects and knowledge generated within the organization in Q2.	Strategy 7 - Build partnerships and new business models, Strategy 8 - Gather and share the best sustainability knowledge, Strategy 10 - Accelerate innovation, Strategy 7 - Build partnerships and new business models, Strategy 8 - Gather and share the best sustainability knowledge, Strategy 10 - Accelerate innovation	strategy a - Bring togetime agencies, proressional organizations, and academic institutions working on protection and restoration in the jurisdiction to maximize efficiencies and to ensure the best science and data is leveraged in the delivery of programs and projects, Strategy 8 - Deliver knowledge sharing events to professionals in the fields of environmental engineering, restoration ecology and climate change resilience, Strategy 8 - Undertake pilot collaborations with industry, academic institutions and partners to determine and demonstrate which TRCA data are most useful in supporting sustainable practices, and how best to provide access to that data to achieve more sustainable development, Strategy 10 - Continue to host knowledge sharing events such as the TRCA and International Erosion Control Association (ERISEA) Conference.	Watershed Planning and Ecosystem Science	Namrata Shrestha and Meaghan Eastwood	Research and Science Working Group-all other divisions will have a minor role to play in guiding the final research agenda.
Numbers aspired to use in review and the second sec	n		Strategy 1 - Expand TRCA's fee-for-service work for governmental, private sector and not-for-profit stakeholders, to facilitate the efficient delivery of green infrastructure and sustainability projects in areas of TRCA expertise, Strategy 3 - Secure, restore, and where appropriate, provide more accessible greenspace as part of the technical review of proposed projects and plans, Strategy 4- Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas.	Watershed Planning and Ecosystem Science	Meaghan Eastwood	GIS, and Government Relations.
Aquatic and Wetland Ecosystem Program 1. Quantify the cumulative effects of storm water management ponds on aquatic habitat to inform stormwater management guidelines, watershed planning, and aquatic habitat management. Final report completed by Q4. 2. Initiate applied research project to identify overwintering habitat for endangered species, Redside Dace, to inform protection, restoration, and mitigation planning through watershed planning and development planning processes. 2020 is year 1 of a 4 year project. 2020 deliverables include data collection and partnership development 3. Develop Key Performance Indicators to measure benefits of wetland restoration/creation within TRCA watersheds by Q4.		Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 8 - Gather and share the best sustainability knowledge	Strategy 2 - Work with municipal partners to implement flood remediation, erosion monitoring, maintenance work, stormwater system retrofits, low impact developments, green infrastructure, and water quality and habitat restoration projects to realize more sustainable developments (e.g., The Portland's, Vaughan Metropolitat Centre, Brampton Kierwall, Markham Centre), Strategy 2 - Monitor the health of the watersheds through the Regional Watershed Monitoring Program and through work with academic institutions, Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas. Strategy 8 - Bring together agencies, professional organizations, and academic institutions working on protection and restoration in the jurisdiction to maximize efficiencies and to ensure the best science and data is leveraged in the delivery of programs and projects., Strategy 9 - Work with industry, government, academic institutions and partners to highlight successful and innovative projects in journals and publications, Strategy 3 - Secure, restore, and where appropriate, provide more accessible greenspace as part of the technical review of progosed groriects and olans.		Jonathan Ruppert and Neil Taylor	STEP, Develop and Engineering Services, Policy Planning
Develop Water Resource System Delineate jurisdictional Water Resource System including development of new comprehensive data layers including instream thermal temperature of reaches, ecologically significant groundwater recharge areas (EGGRAs), wetlands, vernal pools, headwater drainage features (HDFs), and seepages/springs. The new Water Resource System will be presented to SLT for endorsement and communicated to our municipal partners by Q4.	Analyze, model and produce new data to support internal and external strategic planning, including 6 comprehensive data layers for the TRCA jurisdiction. Complete assessment for Toronto by Q2, the remaining jurisdiction by Q4. Initiate, in consultation with planning staff, pilot study areas, where future growth is planned, for mapping Headwater Drainage Features and vernal pools by Q3.	Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 8 - Gather and share the best sustainability knowledge	Strategy 2 - Work with municipal partners to implement flood remediation, erosion monitoring, maintenance work, stormwater system retrofits, low impact developments, green infrastructure, and water quality and habitat restoration projects to realize more sustainable developments (e.g. The Portland's, Vaughan Metropolitan Centre, Brampton Riverwall, Markham Centre), Strategy 2 - Monitor the health of the watersheds through the Regional Watershed Monitoring Program and through work with academic institutions, Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas. Strategy 8 - Bring together agencies, professional organizations, and academic institutions working on protection and restoration in the jurisdiction to maximize efficiencies and to ensure the best science and data is leveraged in the delivery of programs and projects.		Jonathan Ruppert	GIS, Development and Engineering Services, and Policy Planning.
Research links between temperature and forest biodiversity Develop technical methods and analysis to support monitoring forest canopy and assess the impact of restoration activities within the TRCA jurisdiction using novel satellite based and drone multispectral imagery, 2020 is the first year of a two year project; preliminary work planning, fieldwork and analysis will be completed in 2020.	Through an academic partnership, remotely sensed thermal imagery from drones and satellites will be combined and analyzed with field data to improve our understanding of the links between temperature and biodiversity, tree pests, diseases, and invasive species. This III will support watershed planning, natural heritage planning, and strategic restoration planning processes.	complete communities that integrate nature and the built environment,	Strategy 3 - Secure, restore, and where appropriate, provide more accessions greenspace as part of the technical review of proposed projects and plans., Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas. , Strategy 8 - Undertake pilot collaborations with industry, academic institutions and partners to determine and demonstrate which TRCA data em onst useful in supporting sustainable practices, and how best to provide access to that data to achieve more sustainable	Watershed Planning and Ecosystem Science	Jonathan Ruppert	Restoration
Watershed Planning Lead the terrestrial, aquatic, urban forest, and water quality/quantity technical components of the Etobicoke Crek Watershed Plan including scoping and initiate current condition characterization analysis. Completed by Q4.	1. Support the scoping process including usersophient or reims or Neiterence and identifying preliminary data gaps by Q.2. 2. Analyze available monitoring data to initiate current condition characterization on various technical elements by Q4 including - surface water quality, - water quantity, - aquatic ecology - terrestrial ecology - fluvial geomorphology, - storm water management assessment, - urban forest assessment, and	Strategy 2 - Manage our regional water resources for current and future	Strategy 2 - Work with municipal partners to implement flood remediation, erosion monitoring, maintenance work, stormwater system retrofits, low impact developments, green infrastructure, and water quality and habitar testoration projects to realize more sustainable developments (e.g. The Portland's, Vaughan Metropolitan Centre, Brampton Riverwalk, Markham Centre), Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping areas. , Strategy 3 - Secure, restore, and where appropriate, provide more accessible greenspace as part of the technical review of proposed projects and plans.	Watershed Planning and Ecosystem Science	Namrata Shrestha, Jonathan Ruppert, Meaghan Eastwood	Engineering, GIS
Improve, and support application of, the Low Impact Development Treatment Train Tool Update the LID Treatment Train Tool (V2.2) by: 1. adding trees to the suite of Green Infrastructure assessed. 2. Adding the ability to estimate the capital and maintenance costs of proposed GI measures for a site. 3. Conduct a literature review to Identify ecosystem services (co-benefits) provided by green infrastructure and outline a framework for conducting a cost-benefit analysis. This is a multiyear project. The 2020 Geliverables are outlined in column B. In partnership with STEP, continue to support the growing international demand for and application of the LID Treatment Train Tool through webinars/tutorials, training workshops and help desk support. 2020 support will focus on internal training for staff involved in land use and infrastructure planning.	The LID Treatment Train Tool can model the pre- and post-development water balance and pollutant transport of sites taking into account the impact of proposed LID measures. 1. Conduct a background study on the water balance of trees by Q1 2. Based on the above study findings, scope an implementation strategy for calculating the influence of trees on the water balance within the LID TIT by Q2 3. Conduct case studies to validate calculation methods by Q4 4. Engage with stakeholders through presentations and training ongoing. 5. Complete an exploratory study researching the co-benefits and quantification of GI by Q3 6. Summarize findings of the study and develop an approach for integration into LID TIT by Q4 7. Initiate integration of co-benefit valuation into the LID-TITI by Q4.	Strategy 2 - Manage our regional water resources for current and future generation, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 10 - Accelerate innovation	Strategy 1 - Seite opportunities for integrating more sustainable technologies and sustainable development certifications in the design and construction of new development and in retrofits of existing communities in the jurisdiction, Strategy 4 - Assist landowners and government partners to realize complete communities and environmental best practices in new developments and existing neighborhoods, Strategy 2 - Reduce flood risks and protect communities through continuous improvements to TRGA's flood forecasting and warning program, Strategy 10 - Develop user-friendly planning tools that identify how flood risks can be reduced and how ecosystems can be protected and restored, recognizing urban growth and climate change, Strategy 4 - Engage with member municipalities, academic institutions, the development industry, and professional developments to deliver professional development programs, conduct design charrettes and forums to achieve integrated sustainable community design in projects and plans.	Watershed Planning and Ecosystem Science	Yuestas David	STEP

Goals/Initiatives to be Completed in 2020 (SMART)	Additional Comments	Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan - Strategic Priorities	Relationship to Building the Living City, the TRCA 2013-2022 - Projected Accomplishments	Accountable Business Unit(s)	Accountable Lead/Staff Contact	Other Divisional and/or Business Unit Support Required
Peel Climate Change Partnership Provide technical expertise to support the Peel Climate Change Partnership, with an emphasis on co-leading the strategic planning, implementation and reporting of the Green Natural Infrastructure Strategy. This is an on-going initiative. Specific 2020 deliverables are outlined in column B.	impact of new tree canopy (in partnership with Ryerson and Greenbelt Foundation) by Q2 2. Complete a literature review and model co benefits provided by trees in three priority neighbourhood (in partnership with Wester University and Ryerson) by Q4 3. Project manage research partnerships with U of T that will develop a framework for community-based action plans for the heat vulnerable neighbourhoods identified, as well as a framework for data collection, monitoring and reporting that can be applied across all priority neighbourhoods by Q4 5. Develop, with all partners, tree planting plans for the priority neighbourhoods (spring planting Q2 - fall planting Q3 6. Develop a list of specific, tangible ecosystem management actions that can be implemented by Peel Region, its lower-lier municipalities and conservation authorities to build resilience of natural systems to the potential impacts of climate change, following the	Strategy 8 - Gather and share the best sustainability knowledge, Strategy - Create complete communities that integrate nature and the built environment, Strategy 10 - Accelerate innovation	Strategy 8 - Bring together agencies, professional organizations, and academic institutions working on protection and restoration in the jurisdiction to maximize efficiencies and to ensure the best science and data is leveraged in the delivery of programs, Strategy 4 - Engage with member municipalities, academic institutions, the development industry, and professional associations to deliver professional development programs, conduct design charrettes and forums to achieve integrated sustainable community design in projects and plans, Strategy 10 - Work closely with member municipalities, academic institutions and private industry to monitor, evaluate, and pilot new innovative technologies in TRCA's work.	Watershed Planning and Ecosystem Science	Meaghan Eastwood	Policy Planning, SNAP, STEP, Resource Management Projects, Government and Community Relations, Water Resources/Flood Forecasting
Review of Seaton Monitoring Program Undertake a five-year evaluation of the Seaton Watershed Monitoring Research program to ensure the program is running effectively, efficiently and making progress on achieving the objectives. The evaluation will provide recommendations for how to modify/adapt the program to ensure success. Completed and presented to SLT for endorsement Q4.		Strategy 10 - Accelerate innovation, Strategy 4 - Create complete communities that integrate nature and the built environment, Strategy 8-Gather and share the best sustainability knowledge	Strategy 10 - Work closely with member municipanities, academic institutions and private industry to monitor, evaluate, and pilot new innovative technologies in TRCA's work. , Strategy 8 - Bring together agencies, professional organizations, and academic institutions working on protection and restoration in the jurisdiction to maximize efficiencies and to answer the best science and data is leveraged in the delivery of programs and projects. Strategy 4 - Provide value-added advice to protect natural heritage, reduce risk from flooding and erosion, reduce greenhouse gas emissions and restore habitats in the design of new communities and redeveloping	Watershed Planning and Ecosystem Science	Jonathan Ruppert	STEP, Engineering, Source Water Protection, Planning