

PERSPECTIVE

2021 ANNUAL REPORT





Message from the Chair, Board of Directors and Chief Executive Officer

Toronto and Region Conservation Authority (TRCA), its partners, stakeholders, and communities have continued down a path of adaptation and resiliency in 2021. While the ongoing pandemic has caused intermittent disruptions to businesses and services throughout the Greater Toronto Area (GTA), TRCA continued to build upon the successful business models that we adopted in the previous year. From our perspective, the pandemic has affirmed the strength and resiliency of our communities – qualities that will continue to serve us well as we face additional challenges in the future.

Throughout the pandemic, TRCA has strived to embody the adaptiveness and endurance of the communities it serves. Building on strong relationships with all three levels of government and local businesses, TRCA continued to deliver uninterrupted essential services and community programming to its constituents. Many of the provisional measures introduced at the beginning of the pandemic began to crystallize into more permanent fixtures of our daily lives and work. TRCA seized the opportunity to advance efficient approaches to manage our region's natural resources and protect the people and businesses that call it home.

Additionally, closures of TRCA properties and facilities to paid public visitation provided a unique opportunity to promote TRCA to production companies and offset revenue losses from closures. TRCA's scenic locations can be seen by discerning viewers of numerous television shows in the current year, including *See*, *The Handmaid's Tale*, *The Boys*, *Private Eyes* and *Titans*, as well as the big screen in Oscar hopeful *Nightmare Alley* and the upcoming *The Man From Toronto*.

By quickly adapting to new public health measures, many of TRCA's parks remained open to public visitation, providing residents of the GTA with vital access to nature. According to a recent Nature Conservancy of Canada poll, 85% of respondents stated that access to nature has been an important measure to maintain their mental health throughout the pandemic, and 95% credited time spent in nature with relieving their stress and anxiety. TRCA is proud to have provided safe natural recreation opportunities in compliance with public health regulations.

With the assistance of our partner municipalities and charitable support, TRCA also continued to adapt its operations to provide relief to vulnerable communities impacted by the pandemic by serving healthy prepared meals out of our field centres and offering targeted community improvements through initiatives such as Sustainable Neighbourhood Action Plan (SNAP).

We always make it a priority to keep our staff, visitors and stakeholders safe, and to this end we have implemented a suite of COVID-19 protocols at TRCA sites. TRCA's mandatory vaccination policy has been overwhelmingly successful, with 100% compliance among the organization's active work force.

We are grateful to work among such outstanding municipalities, businesses, government organizations, non-profits and other community stakeholders. These relationships drive our efforts to build and maintain critical infrastructure to protect people and property, conserve and restore our region's natural heritage, and deliver safe and healthy recreational and educational programming to our communities. With the perspective granted by the pandemic, it has never been clearer that with the continued support of our stakeholders and the public we serve, these goals are within reach.



John MacKenzie
Chief Executive Officer

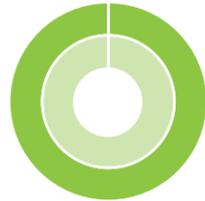


Jennifer Innis
Chair, TRCA Board of Directors

Progress on Strategic Accomplishments (2018-2022)

In November 2018, TRCA's Board of Directors approved a Five-Year Update to Building the Living City 2013-2022 Strategic Plan with the addition of measures and outcomes. The following outlines TRCA's progress in 2020 (inside) and 2021 (outside) on achieving strategic plan objectives.

1 - Green the Toronto region's economy



7 - Build partnerships and new business models



2 - Manage our regional water resources for current and future generations



8 - Gather and share the best sustainability knowledge



3 - Rethink greenspace to maximize its value



9 - Measure performance



4 - Create complete communities that integrate nature and the built environment



10 - Accelerate innovation



5 - Foster sustainable citizenship



11 - Invest in our staff



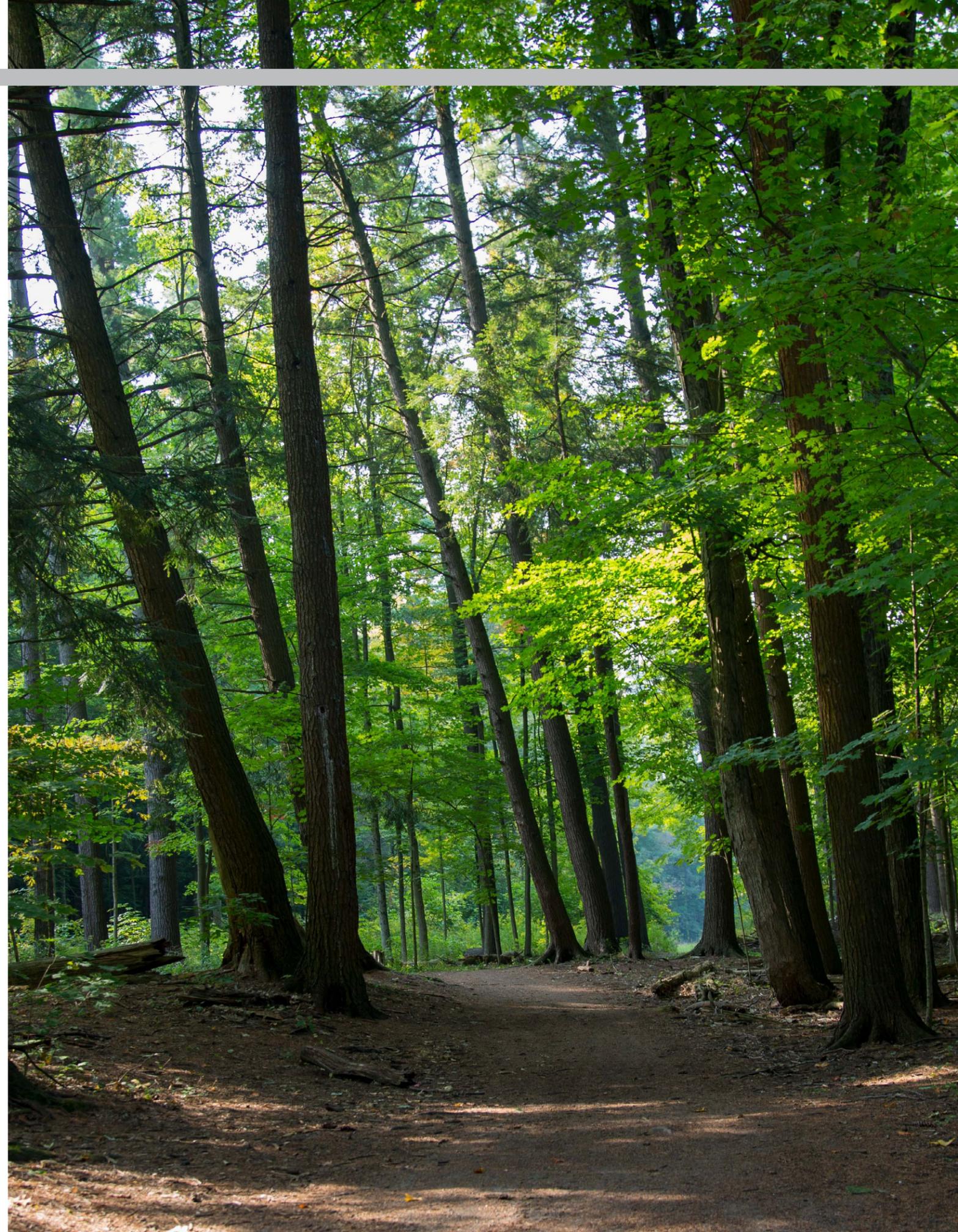
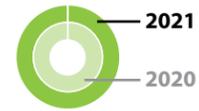
6 - Tell the story of the Toronto region



12 - Facilitate a region-wide approach to sustainability



■ Project/Program is started and on track
 ■ Project/Program has an issue identified
 ■ Project/Program has not yet commenced



1

Green the Toronto region's economy



Supporting the transition to a strong, green economy continues to be a critical priority for TRCA's partners. Long-term prosperity in the jurisdiction and global sustainability requires industries, businesses and consumers to achieve planned employment and economic objectives while reducing the environmental footprint of the economy. It is also important to recognize that the green infrastructure industry and restoration economy, of which TRCA is a part, makes major contributions to regional economic development and community wellbeing.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)

Be at the forefront of providing input into the development of provincial and municipal policies and guidelines relating to land use and environmental planning and sustainable development related to TRCA's core objectives.

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.

Seize 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.

Expand the Partners in Project Green Eco-Zone program to include emerging employment areas across the jurisdiction subject to partner funding.

Sustainable Neighbourhood Action Program (SNAP)

SNAP held **50** events, engaged over **2,750** stakeholders and increased active partnerships by **50%** (from **60** to **90**), to help deliver neighbourhood-based solutions for urban renewal and climate action. Partnerships included municipalities, local businesses and agencies, community organizations and universities.

2 new SNAPs were launched in the Thornhill and Bramalea neighbourhoods in Vaughan and Brampton, and **2** others were advanced in Rexdale and "The Pocket" neighbourhood in Toronto, totaling **5** active SNAPs. Neighbourhood-based Climate Resilience Strategies were developed alongside the action plans for Thornhill and Rexdale.

Collaborative implementation initiatives were delivered across the **5** neighbourhoods, totaling **647** retrofit actions. **13** green infrastructure projects were implemented on public and private land, including pollinator gardens, vegetable gardens, eco-landscaping on multi-unit residential properties and improvements of stormwater management ponds. **475** trees, **528** shrubs and **717** native plants were planted, **163** microgreen balcony garden kits and **14** rain barrels were distributed.

Provincial Policy

TRCA staff responded to **22** Environmental Registry of Ontario postings, **3** federal public consultation initiatives, and **27** municipal planning documents.

Sustainable Technologies Evaluation Program (STEP)

13 technologies were evaluated by the STEP, including different types of soil cells tested to yield data that will inform the City of Toronto's standards specifications, and heat pump technologies that can reduce carbon emissions associated with home heating and cooling relative to conventional natural gas furnaces.

Partners in Project Green (PPG)

PPG secured **12** new members for a total of **109** active members and program participants working to advance environmental action and economic prosperity. **1,657** learner hours were delivered through **36** events. **33** Material Exchanges resulted in **22** tonnes diverted from landfill and over **\$1M** saved. Through employee engagement programs, **500** trees were planted and **657** environmental actions were completed.

Stormwater Pond Inspection and Maintenance Training

A Stormwater Management Pond Inspection and Maintenance Workshop was offered to municipalities in the fall of 2021. The multi-day event included both virtual and field training sessions and a municipal staff roundtable discussion focused on addressing key issues and solutions associated with pond maintenance and stormwater asset management. Event feedback was excellent and the event sold out, with over **100** municipal staff in attendance.

Small-to-Medium Enterprises (SME) Energy Consortium

Leveraging funds from the Independent Electricity System Operator (IESO), Partners in Project Green worked with a consortium of small-to-medium sized manufacturers to install energy monitoring and verification equipment in their facilities. Results included: **288.5** learner hours delivered; **95%** attendance rate; **4** recorded incidents of participants following up with each other to share experiences on specific projects; **5** connections to solution providers made; **100%** stated commitment to continuing to participate in consortium sessions; and movement in all four main components of Strategic Energy Management by participants.

Private Erosion Hazards

363 private sites were inspected as part of TRCA's Erosion Risk Management Program.

Natural Green Infrastructure

TRCA contributed to the development of **5** urban forest best practices guides and an Executive Summary in partnership with Peel Region, their consultants, the City of Mississauga, the City of Brampton, the Town of Caledon, and Credit Valley Conservation. These guides will inform partner municipalities in building a healthy and climate-resilient urban forest in Peel Region.

2 Manage our regional water resources for current and future generations



Clean water is a precious and limited resource that needs to be valued and protected. Flooding, urban development and unsustainable agricultural and industrial practices continue to negatively impact rivers, streams and Lake Ontario. To safeguard drinking water supply, the health of aquatic ecosystems, and to protect communities from flooding, TRCA must continue working with its municipal partners to prioritize the protection, restoration, and safe management of water resources.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)



Develop a bold work plan that includes TRCA's Erosion and Hazard Mitigation Strategy comprising over \$500 million in projects to address known erosion, flooding and required infrastructure upgrades at over 250 sites.

Engage with local communities to increase awareness about issues facing water resources and their importance to the health and well-being of the jurisdiction.

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 Port Lands, Vaughan Metropolitan Centre, Brampton Riverwalk, Markham Centre).

Monitor the health of the watersheds through the Regional Watershed Monitoring Program and through work with academic institutions.

Reduce flood risks and protect communities through continuous improvements to TRCA's flood forecasting and warning program.

■ Project/Program is started and on track ■ Project/Program has an issue identified ■ Project/Program has not yet commenced

● 2020 progress status ● 2021 progress status

Tagging Trash to Protect Our Lake

The University of Toronto Trash Team initiated its Trash Tagging project, with TRCA's Aquatic Monitoring and Management team retrieving **16** tags in 2021! This project will help identify the path travelled by floatable trash in the Toronto Harbour and help TRCA and other partners determine where to install future plastic waste trapping technology. This information will also help inform the future Toronto Inner Harbour Floatables Strategy.

Stormwater Management

TRCA continued its stormwater management partnership with the City of Toronto's Solid Waste Management Division in 2021 by executing maintenance agreements for two stormwater management facilities - the Disco Road SWMP and Beare Road SWMP - in the approximate amount of **\$750,000**.

Erosion Risk Management Program

Erosion Risk Management staff inspected **5,689** hazard sites or erosion control structures. **573 m** of valley and shoreline have been stabilized at **8** high priority sites.

Regional Watershed Monitoring

TRCA completed monitoring in the Rouge, Duffins, and Carruthers watersheds as part of the Regional Watershed Monitoring Program, and completed **1,800 ha** of terrestrial inventories across our jurisdiction.

Infrastructure Projects

TRCA staff completed environmental compliance monitoring and reporting for **12** major projects along our waterfront and **13** major projects within our watersheds, including the Cherry Street Lakefill (part of the Don Mouth Naturalization project), Ashbridge's Bay Landform project, and Fishleigh Drive erosion control project.

Tracking the Salmon Migration

TRCA's monitoring team has been capturing great photos of salmon as they migrate upstream through our new storymap! There were **100** public observations of salmon submitted through the storymap, **4,000** page views.

Visit <https://trca.ca/salmonfestival> to view the storymap.

Flood Mitigation

TRCA, in partnership with the City of Toronto, initiated the Rockcliffe Riverine Flood Mitigation EA, which will determine a preferred riverine flood mitigation strategy for the Rockcliffe-Smythe neighbourhood – the highest ranked area in TRCA's jurisdiction in terms of riverine flood risk. This study will build upon recent advancements in the understanding of the causes of flooding within the community. Meanwhile, TRCA also completed the Broadview and Eastern Flood Protection EA, and the Highland Creek Markham Branch Feasibility Study, while also providing ongoing input into key municipal flood remediation projects, including the Port Lands Flood Protection and Enabling Infrastructure project and the Dixie-Dundas Flood Mitigation EA.

Invasive Species Management

SEA LAMPREY

953 invasive Sea Lamprey were caught and removed from **2** traps in the Humber River and Duffin's Creek in partnership with Fisheries and Oceans Canada. The number of Sea Lamprey captured in the Humber trap in 2021 continues to be significantly lower than previous years. This may be due to water temperatures this spring, lower lake levels or the attractiveness of other rivers for spawning Sea Lamprey.

ASIAN CARP

112 sites were sampled through the Asian Carp Early Detection program in Frenchman's Bay, Duffin's Creek, Rouge River, Humber River Coastal Marshes and the Toronto Islands. No Asian Carp were found — This project is being completed in partnership with Fisheries and Oceans Canada through their Aquatic Invasive Species Program.

Looking at Changes in Water Quality

TRCA staff published a *Spatial Patterns (2016-2020) and Temporal Trends (1966-2020) in Stream Water Quality across TRCA's Jurisdiction* report, discussing regional stream water quality trends. The data shows that water quality is generally poor in urban areas. Low-impact development and effective stormwater management is needed to protect our water resources.

3 Rethink greenspace to maximize its value



The extensive ravine network and greenspace system of the Toronto region, which provides linkages through communities and nature experiences within minutes of Toronto’s downtown and Urban Growth Centres throughout the jurisdiction, is key to the region’s appeal and prosperity. Evidence from around the world increasingly demonstrates a clear connection between greenspace and the health and well-being of communities. As the population of the region continues to grow rapidly, TRCA needs to sustain, improve, expand, and program the system of protected greenspace in order to meet the needs of communities while protecting natural heritage.



PROJECTED ACCOMPLISHMENTS (2018 – 2022)

2020 Achieve the most appropriate use of TRCA’s inventory of lands and facilities while respecting cultural heritage and environmental values.

2021 Invest in aging infrastructure across TRCA’s Conservation Areas and public spaces in order to provide safe, accessible, and functional facilities to the public.

2021 Secure, restore, and where appropriate, provide more accessible greenspace as part of the technical review of proposed projects and plans.

2021 Update TRCA’s Terrestrial Natural Heritage System Strategy, the Regional Trail System Strategy, TRCA’s Living City Policies and their associated technical guidelines to inform reviews of projects and the timely execution of projects.

2020 Advance priority greenspace and community initiatives of Toronto and Region Conservation Foundation (TRCF), member municipalities and partners on priority projects such as The Meadoway, Tommy Thompson Park, Bolton Camp Redevelopment, and Black Creek Pioneer Village revitalization.

Western Chorus Frog

TRCA partnered with Environment and Climate Change Canada through a grant from the Canadian Wildlife Service (CWS) to restore wetland habitat and identify populations of western chorus frogs (a federally listed Species at Risk) in selected areas in Peel Region. Of the wetlands where calls were recorded, **80%** were within our restored wetlands. This will help to inform future restoration projects in support of the Western Chorus Frog Recovery Strategy.

Trail Counters

TRCA installed **23** new trail counters at **6** Conservation Parks and **8** new trail counters at the East Duffins Headwaters Properties in 2021. TRCA now manages **70** trail counters on TRCA-managed lands, plus **15** more on behalf of the City of Toronto. **146,000** visitors were counted at **8** benchmark TRCA sites, a **20%** increase over 2020.

Greenspace Securement Management Plan

Over **1M** parcels of land in the region were analyzed to determine the presence or absence of environmentally sensitive features. With this information, TRCA can provide an easily-accessible and transparent rationale for land acquisition and mitigation in the context of proposed infrastructure.

Trail Visitors

1,078,000 visitors were counted at TRCA trails and at City of Toronto trails through TRCA’s Trail Counter Program.

Enhancing Habitat Connectivity and Wildlife Movement

TRCA staff assessed wildlife movement patterns and evaluated the effectiveness of implemented mitigation measures (ecopassages and fencing). Turtle tracking and eco-passage trail camera surveys at Heart Lake Road and salamander tracking and overwintering habitat identification at Stouffville Road were used to inform natural heritage conservation, land management, and infrastructure planning, design, and maintenance.

Invasive Species Management Strategy

TRCA successfully leveraged capital funding with grants and fee for service projects to plant a total of **350,000** native trees, shrubs and herbaceous plants across its jurisdiction in partnership with municipalities, community groups, corporate groups, schools, provincial and federal agencies, and non-governmental organizations, resulting in a total of **130 ha** of terrestrial natural cover managed or restored.

Big on Bats

TRCA partnered with the University of Toronto (Scarborough) to pilot the use of new acoustic devices called “Audiomoths” at **11** sites across the jurisdiction. If the technology proves viable, it will help us gather additional bat acoustic data at various sites within the urban areas of our jurisdiction to further understand bat ecology and how to better protect these animals.

Greenspace Acquisition Project

TRCA, with funding support from the Region of Peel, is proud to announce the acquisition of **62.6 ha** of environmentally sensitive greenspace lands near Albion Hills Conservation Park. The acquisition of these parcels has been the first major expansion of the Albion Hills Conservation Park in years and will be a legacy for future generations.

Monitoring the Meadoway

TRCA published The Meadoway: Vegetation, Bird and Butterfly Monitoring 2016, 2018-2020. This report analyzed the monitoring activities at the Meadoway to document changes in species composition related to vegetation, breeding birds, and butterfly presence. The data supports the success of the Meadoway project in introducing a variety of meadow flora through seeding and providing habitat for meadow birds and foraging opportunities for butterflies.

Exploring Wetland Critters

TRCA staff analyzed current monitoring data collected at 10-year-old wetlands to determine what species are now present and to gain further insight into how various management techniques can enhance biodiversity in the future.



4 Create complete communities that integrate nature and the built environment



Complete communities support the well-being of each resident by providing a full range of housing, transportation, community infrastructure and open space opportunities. In order to create complete communities, TRCA needs to incorporate livability and sustainability into new developments, while supporting the transformation and retrofitting of existing neighbourhoods to reduce their environmental footprint and increase their resilience.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)

-  Assist landowners and government partners to realize complete communities and environmental best practices in new developments and existing neighborhoods.
-  Assess TRCA's development review process with member municipalities, industry and other stakeholders to identify opportunities to facilitate more timely reviews.
-  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.
-  Work with industry, private businesses and municipal partners to integrate natural heritage, elements of the Trail Strategy for The Greater Toronto Region, and green infrastructure into the design of new communities, and the redevelopment of older communities, at the earliest stage of the planning process in order to achieve vibrant award winning public spaces and multiple community benefits.
-  Engage with member municipalities, academic institutions, the development industry, and professional associations to deliver professional development programs, and conduct design charrettes and forums to achieve integrated sustainable community design in projects and plans.

■ Project/Program is started and on track
 ■ Project/Program has an issue identified
 ■ Project/Program has not yet commenced
● 2020 progress status ● 2021 progress status

Urban Forest Studies

TRCA commenced the urban forest field season to collect data for the York Region Forest Studies. Urban forestry data has been collected for over **400** plots located in Richmond Hill and Markham to help inform tree canopy improvements and the creation of more sustainable and resilient communities.

Watershed Plans

TRCA staff completed the Etobicoke Creek Watershed Plan characterization stage and advanced the impact analysis stage to assess current conditions and identify impacts of future potential land use and climate change scenarios on watershed health.

Updated Natural Heritage System and Water Resource System

Draft mapping of TRCA's updated Natural Heritage System and Water Resource System was completed, covering **100%** of the jurisdiction to assist municipalities conform with updated provincial policies. This science-based data will inform TRCA and municipal initiatives, including Official Plan updates, watershed planning, ecosystem restoration, and land use and infrastructure planning processes. TRCA has held stakeholder workshops with **21** partner municipalities, **2** provincial ministries, and **11** Indigenous groups to share and discuss this information.

Real Property Acquisitions

More than **37.4 ha** of land were acquired to support TRCA's programs and services via the Greenspace Acquisition Project (2021-2030).

Trail Strategy

TRCA advanced over **40** trail and amenity capital projects through planning, design, and construction phases of work on behalf of our partner municipalities. **5** of these projects were completed through to construction, including: Albion Hills Riverview Trail Project (Phase 2); Etobicoke Creek Trail (Kennedy Valley Trail Improvements); Highland Creek Trail (Phase 1); Humber Trail (Nashville Conservation Reserve Phase 2); and Lambton Woods.

Advancing Uptake of Low Carbon Technologies

The STEP energy team entered into a new partnership with the City of Toronto, The Atmospheric Fund, Enbridge, Durham Region, Windfall Ecology Centre and the Clean Air Partnership. The organizations involved will work together to fill knowledge gaps and develop a communications campaign to drive uptake of low-cost high-impact carbon reduction opportunities in single-family homes.

Wetland Restoration

TRCA has had a successful year implementing **17 ha** of wetland restoration across our jurisdiction.

Community Restoration

111 community events through partnerships with municipalities, federal agencies, NGO's, community groups, and private land owners that increased natural cover in greenspaces, improved biodiversity, water quality, and the resiliency of our jurisdiction.

Enhancing Flood Infrastructure

The Bolton Berm Major Maintenance project was completed (as seen in the photo to the left), restoring **800m** of protective infrastructure in one of TRCA's most flood vulnerable areas, and leveraging **\$710,000** in Provincial Water and Erosion Control Infrastructure funding towards the total project cost of over **\$1.8M**.

Implemented over 822 restoration, resource management and stewardship projects across our jurisdiction.



5 Foster sustainable citizenship



To foster engagement of community members, TRCA needs to build civic capacity by providing the tools and opportunities needed for community members to transition from participants into advocates and leaders. TRCA can also facilitate a two-way dialogue with community members to ensure that local knowledge, ideas and concerns are integrated into decision-making by governments and agencies.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)

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.

Work with Toronto and Region Conservation Foundation (TRCF) to secure funding, community awareness and involvement around TRCA and TRCF priority projects including The Meadoway, Tommy Thompson Park, Black Creek Pioneer Village, Bolton Camp redevelopment and the "Look After Where You Live" program.

Develop a greater diversity of nature-based programs to attract a wider range of community participants in TRCA programs.

Engage school boards and governments in discussions on how to achieve cost efficient and equitable access for students to curriculum out of class nature – science based education activities.

■ Project/Program is started and on track ■ Project/Program has an issue identified ■ Project/Program has not yet commenced

● 2020 progress status ● 2021 progress status

Toronto Community Learning

33,675 student learner hours and an additional **2,260** learner hours were achieved through community programs. TRCA's community programs included the Native Plants Program (NPP), Watershed on Wheels (WOW) livestreams, WOW e-resources, the Meadoway school program, and community learning events and online videos posted through social media (e.g. Facebook and YouTube).

Youth Council

The TRCA Youth Council led **5** different online events, initiatives or campaigns on topics that include climate change, Indigenous reconciliation and inclusivity in greenspace access and conservation careers. Initiatives included social media campaigns, online panel discussions, documentary screenings, and youth-led discussion groups. During 2021, the Youth Council also grew to almost **200** members. TRCA is also proud to congratulate Youth Council Executive member, Wai Ying Lam, on winning the Water's Next Young Professional Award in 2021.

Professional Access Into Employment (PAIE)

PAIE successfully provided virtual training, coaching, employment and mentoring opportunities to clients throughout 2021. **80%** of participants secured employment in their field, with an estimated **420%** increase in earnings. **100%** of clients reported making significant gains in their knowledge and skills. PAIE participants received **96** interviews as a result of their work in the program and with their coordinator.

Newcomer Programs

The Newcomer Program team continues to deliver virtual training, coaching and field trips to participants in the Multicultural Connections, Newcomer Youth (NYGEP) and Professional Access into Employment (PAIE) Programs while reaching over **3,200** participants collectively with an **80%** or greater employment outcomes for PAIE and NYGEP.

Regional Watershed Alliance (RWA)

The Regional Watershed Alliance (RWA), a multi-stakeholder advisory committee to TRCA's Board of Directors, provided input on **10** different TRCA-led or supported initiatives. This included **3** different projects or initiatives from partner municipalities. The RWA was also kept informed on TRCA's input on emerging provincial policy changes through **3** additional reports outlining TRCA submissions to the Province on proposed policies or regulation.

Education Programs

TRCA's Education Division provided high-quality virtual programs to **6,572** participants as well as safe in-person programs for **578** participants.

Multicultural Connections

Throughout 2021, the Multicultural Connections Program (MCP) delivered high quality virtual presentations to English as a Second Language classes and has reached over **3,100** participants. "Indigenous People in Canada" was the most delivered MCP online presentation.

Over **90%** "Excellent" responses were received from teachers and newcomer participants for online presentation delivery. MCP staff have attended **12** cultural and faith-based events to help connect newcomers to nature.

Youth Eco-Action Project

TRCA successfully pivoted the Youth Eco-Action Project to offer both safe in-person planting activities and virtual programs where appropriate. The program engaged **865** participants and planted **2,455** native trees, shrubs and wildflowers in the Brock Lands in Durham Region.

Summer Camp Success

TRCA safely delivered in-person summer camp at Black Creek, Clairville, Claremont Nature Centre, Kortright, Swan Lake, and Tommy Thompson Park, employing **23** camp counsellors. **1,705** camp participants were engaged through **62,370** learner hours.

1,165,000

visitors connected with nature by accessing Conservation Parks and Golf programs in 2021

👤 = 20,000



6 Tell the story of the Toronto region



Equipped with a strong sense of place, community members are more likely to be champions for their communities, for their local environment, and for conservation. TRCA will help to tell the story of the region's rich history through a range of voices and perspectives that fully represent the region's cultural diversity and rich heritage. By engaging communities in this conversation, TRCA will remember, teach and celebrate the experiences that form individual and shared identities.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)



2021 progress status Develop a clear and consistent identity and corporate brand for TRCA and build TRCA's visibility through formal and informal communication channels.

2020 progress status Update TRCA's Master Plans including our Archaeological Master Plan and Master Plans for specific Conservation Areas with new information obtained from relevant reviews and studies.

2021 progress status Integrate cultural heritage broadly throughout TRCA programming with a focus on fun, learning, and personal stories including those of indigenous community members.

2020 progress status Seek historic designations for TRCA's buildings, as well as new sources of funding for their restoration, re-use, and maintenance, where applicable.

2021 progress status Continue to engage the region's diverse communities to tell their stories and recognize their contributions, and develop community events that celebrate cultural heritage.

2020 progress status Focus on developing information that is accessible and engaging using a variety of mediums, including digital technology.

■ Project/Program is started and on track ■ Project/Program has an issue identified ■ Project/Program has not yet commenced

● 2020 progress status ● 2021 progress status

Humber River Canadian Heritage River System 10-Year Report

The Canadian Heritage River System (CHRS) Board unanimously approved TRCA's 10-Year CHRS Monitoring Report for the Humber River watershed as part of its efforts to maintain the Humber's CHRS designation. The report summarizes TRCA's extensive efforts in maintaining the Humber River's CHRS designation, including TRCA initiatives that celebrate the Humber's cultural and recreational values and reports on the status of the values on which the Humber was designated.

Indigenous Engagement

Through the guidance and consultation of Indigenous Elders, TRCA continued to expand and strengthen its relationships with Indigenous groups, working together to raise awareness, knowledge and understanding of Indigenous Treaties, culture, customs, traditional knowledge, and ceremonies.

In 2021, TRCA hosted a National Indigenous People's Day Summer Solstice Celebration at the Kortright Centre, engaging **48,400** online viewers in a sacred fire, sunrise ceremony, water ceremony, traditional dancing and drumming. Staff also planted an Indigenous Teaching Garden at Kortright Centre's Nature School outdoor classroom.

This year, we also worked with York Region Nature Collaborative to host monthly online webinars focusing on Indigenous sacred ceremonies and traditional teachings, engaging **698** participants.

5 First Nations joined the Changing the Narrative Research Committee to guide research and creation of Indigenous History Gallery at Black Creek Pioneer Village.

The Meadoway

The Meadoway, located in Scarborough, is revitalizing **16** linear kilometres of hydro corridor between the East Don River and the Rouge National Urban Park, transforming it into a vibrant stretch of urban greenspace with multi-use trails and meadow habitat. Restoration accomplishments this year include: **28 ha** of native meadow seeding, **68 ha** of maintenance and adaptive management, **33 ha** of existing meadow maintenance mowing, **27 ha** of buffer mowing around the existing meadow, **4.62 ha** of infill seeding, **71** monitoring plots, **33** bird and butterfly transects, **54** water infiltration tests, **882** native bee monitoring samples were completed. Construction of the multi-use trail connection at Highland Creek is currently underway with completion targeted for summer of 2022. This **2 km** trail connection will not only expand the existing Meadoway multi-use trail but it will also open up a significant trail network by connecting to the Upper Highland Creek trail which heads south through Morningside Park to the Lake Ontario waterfront.



National Awards

The Meadoway continues to be recognized for its vision and contributions to biodiversity. In April 2021, The Meadoway received the "Design Award" in the "Merit" category by AIA Canada Society which is the Canadian Chapter of the American Institute of Architects. In September 2021, The Meadoway received the Toronto Urban Design Award under the category of "Visions and Master Plans" for redefining our understanding of public and recreational open space by transforming **16 km** of underutilized hydro corridor and creating new amenities and trails, in spaces once considered off limits. Restoration efforts were also acknowledged in 2021 by the North American Pollinator Protection Campaign (NAPPC) at their annual international conference (October 2021) focused on collaborative conservation. NAPPC's mission is to promote the health of pollinators in Canada, the U.S., and Mexico. This year, TRCA was awarded the Pollinator Electric Power Award. This initiative recognizes electric power projects who are leading the field in pollinator friendly initiatives.

Leveraged Funds

In 2021 TRCA, in partnership with the City of Toronto, was successful in securing **\$2.744M** to continue to advance The Meadoway. This funding leverages **\$11.348M** in grants committed to the project by the Weston Family Foundation.

Archaeology

Archaeology staff assessed **95** individual projects for archaeological potential, surveyed over **44 ha** of land, identified **8** previously unknown archaeological sites, and collected approximately **350** artifacts in their efforts to protect and preserve heritage resources on TRCA lands.

3,695 community wildflowers planted

1,753 community participants

7 Build partnerships and new business models



Securing stable funding and resources to carry out TRCA's mandate remains an ongoing priority for the organization. New opportunities for funding and collaborative arrangements are emerging, but at the same time, competition for funding and resources is increasing. The economic landscape that supports TRCA and its work is shifting, and TRCA must continually assess and respond to changes affecting funding and resources.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)

Continue to diversify TRCA's financial capacity by leveraging government funding to attract private sector funding through TRCF.

Raise the profile of TRCF, by working together to advance priority initiatives.

Advance new business models to maintain assets and ensure efficient program delivery.

Develop a clear and consistent identity and leadership voice for TRCA and build TRCA's visibility through the Corporate Branding Strategy, media exposure, events, conferences and partnerships.

Establish service rates consistent with other service providers as part of the plan for growing TRCA's fee-for-service work.

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 ● 2021 progress status

Carruthers Creek

In September 2021, the TRCA Board approved the Carruthers Creek Watershed Plan (CCWP), which was endorsed by Durham Regional Council in June 2021. This represents a major achievement that showcases the strong partnership between these two organizations. The purpose of a watershed plan is to understand the current conditions of the watershed, and identify measures to protect, enhance and restore its health in the long-term. Ontario's provincial planning framework recognizes that watershed planning is important for informing land use and infrastructure planning decisions.

The Region of Durham has provided **\$1M** to TRCA in support of developing the CCWP. The plan helps inform whether and how urban growth should occur within the watershed to ensure its long-term health and resilience. Using a science-based approach, the CCWP identifies opportunities to mitigate and adapt to both existing issues and potential future changes in watershed health arising from climate change and municipal land use and infrastructure development decisions.

The development of this watershed plan has been a collaborative effort between the Region of Durham, TRCA, and the local municipalities of the Town of Ajax and the City of Pickering. Additional stakeholders and members of the public have been involved throughout the watershed planning process.

Filming Partnerships

TRCA continued to strengthen its relationship with film industry partners throughout 2021, resulting in another record-breaking year with a **263%** increase over 2020 contributing to the economic recovery of our region. Over **\$2.4 M** of revenue was generated via film industry partnerships. **628** days of production occurred at TRCA sites. **53** individual filming agreements were executed.

Leveraging Funding

TRCA leveraged over **\$1.3M** in partnership funding and grants with multiple partners to advance trail capital projects. York Region provided support for both the Oak Ridges Corridor Conservation Reserve and the Nashville Conservation Reserve Multi-Use Trail. TC Energy also supported the Nashville Conservation Reserve. The City of Richmond Hill and the Gray Foundation contributed to the Macleod Estate Trail Project. Parks Canada also contributed to The Meadoway Section 7 Improvements.

Community Support

TRCA provided **15,705** community meals for vulnerable populations and 12 months of self-isolation for COVID recovery in York Region.

Jefferson-Jordan-Jayfield Parks Natural Channel Restoration and EcoPark Project

A highlight of TRCA's stream restoration program is our ongoing partnership with the City of Brampton, which facilitated Phase 1 completion of the Jefferson-Jordan-Jayfield Parks Natural Channel Restoration and EcoPark project. This project included the removal of approximately **500m** of failing concrete-lined channel; construction of a natural watercourse with associated floodplain habitat; and planting of **4,425** native trees and shrubs and **6,200** bio-engineering stakes. TRCA was also able to leverage existing funds for the project by partnering with the Bonneville Environmental Foundation, who facilitated a grant in the amount of **\$200,000**.

New Partnerships

Education staff engaged families in a story-based drive-thru event at Albion Hills Conservation Park and public-private partnerships such as the Canadian Tire Christmas Trail, which brought over **25,000** people to Black Creek Pioneer Village in 2021.

Building Sustainable Business Models

Throughout the 2021 fiscal year, TRCA's Funding and Grants program facilitated a total of **70** submissions, with a total request value of over **\$20.5M**.

\$20.5M
total request value
of 70 submissions

\$7.4M
awarded through
grant approval

\$10.9M
grant applications
awaiting review

TRCA continues to partner with municipalities to leverage our expertise in submitting joint grant applications and implementing shared priority projects.



8 Gather and share the best sustainability knowledge



TRCA is part of a network of thought leaders striving to address a range of urban sustainability issues, including watershed management, climate change mitigation and adaptation, and ecosystem conservation. TRCA is recognized for its expertise by researchers, practitioners and community members, and is well positioned to help generate and mobilize the knowledge needed to answer urgent environmental challenges.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)

Increase collaboration with senior levels of government, academic institutions, private sector and not-for-profit stakeholders to develop leading-edge sustainability knowledge.

Continue to demonstrate leading-edge community energy efficiency and sustainable design practices in TRCA facilities, including at the Living City Campus at Kortright.

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.

Deliver knowledge sharing events to professionals in the fields of environmental engineering, restoration ecology and climate change resilience.

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.

- Project/Program is started and on track
- Project/Program has an issue identified
- Project/Program has not yet commenced
- 2020 progress status
- 2021 progress status

Sharing the Story about Climate Change

TRCA hosted **4** knowledge sharing workshops in collaboration with our partner municipalities. These workshops focused on how to better prepare for the impacts of climate change. Two workshops were held with Durham Region to discuss how our new climate projections can help us build natural system and community health resilience, and two were held with Peel Region discussing the impacts of climate change and the movement of goods.

Knowledge Sharing

In 2021, TRCA's Project Management Office (PMO) staff were invited to speak at **5** events, including those hosted by Evergreen Future City Builders Program, Columbia Business School, High Line Network, Ryerson University, Urban Planning Graduate Design Studio, York Region's York South Greenway Meeting, and the 2021 OAIA Conference.

Identifying Terrestrial Climate Change Vulnerabilities in Durham

In partnership with Durham Region and other conservation authorities, TRCA completed the draft terrestrial systems vulnerability assessment for all of Durham. These data will inform Natural Heritage System planning in the Region and how to ensure it is robust and resilient to climate change.

Neighbourhood Resiliency Planning and Action

Local stakeholders participated in the development of Sustainable Neighbourhood Action Plans through interactive online workshop activities, including Toronto's first neighbourhood-based Resiliency Strategy alongside Rexdale SNAP. COVID-safe site precautions enabled green infrastructure and climate actions in the Thornhill and Bramalea SNAPs. TRCA continued to deliver programs online to foster peer-to-peer learning, collaboration and knowledge transfer among GTA businesses.

Informing Projects with Data

TRCA staff completed **3** terrestrial inventory reports and **20** technical memos to establish baseline conditions, inform land and infrastructure management decisions, and highlight restoration successes in support of TRCA and its partners' projects.

Informing Official Plan Updates

TRCA provided **45** datasets to our partner municipalities to share our updated scientific knowledge and inform Municipal Comprehensive Reviews and Official Plan Reviews.

Leadership in Green Infrastructure Training

STEP embarked on a new collaboration with McMaster University's W. Booth School of Engineering to offer an exciting new Sustainable Infrastructure Professional Certificate program centered around low impact development and climate resilience. STEP developed the curriculum and led the delivery of the Low-Impact Development and Climate Resiliency program, which is comprised of **8** online (livestream) courses and was completed by over **60** professionals.

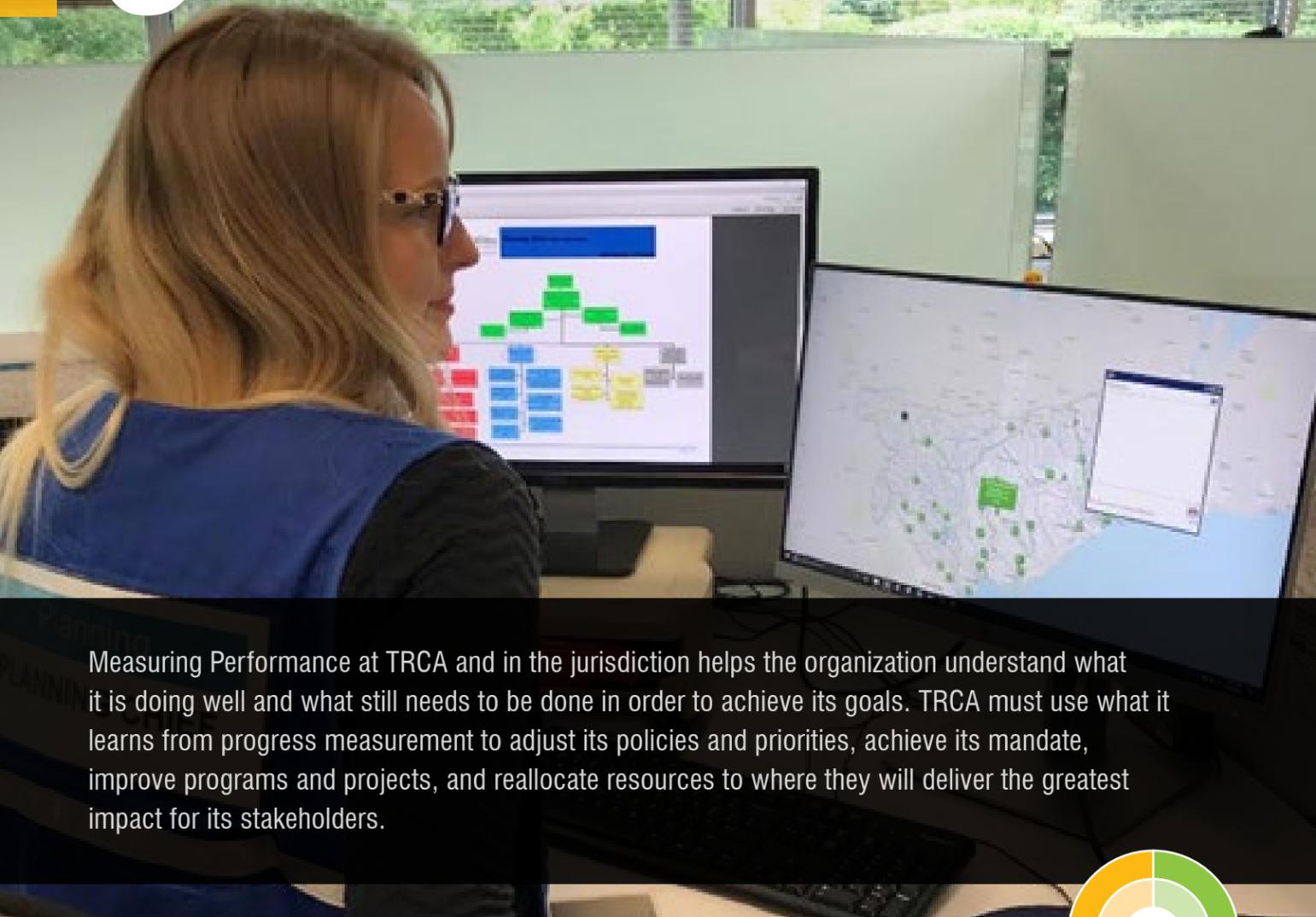
Terrestrial and Aquatic Monitoring Programs

TRCA collected over **21M** data records this year, including more than **162,000** biodiversity records from approximately **2,000** environmental monitoring sites. Data and information was presented in **53** documents, including monitoring reports and technical memos to share this knowledge.

Advancing Research Priorities

TRCA's Research Agenda proactively itemized **62** priority research questions that can be used to develop partnerships with researchers and academics. The research questions align with TRCA's strategic priorities and will strengthen TRCA and its partners' knowledge base to affect meaningful change for healthy watersheds and ecosystem.

9 Measure performance



Measuring Performance at TRCA and in the jurisdiction helps the organization understand what it is doing well and what still needs to be done in order to achieve its goals. TRCA must use what it learns from progress measurement to adjust its policies and priorities, achieve its mandate, improve programs and projects, and reallocate resources to where they will deliver the greatest impact for its stakeholders.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)

-  Invest in digital technologies which will allow the organization to better measure and communicate TRCA's value proposition.
-  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.
-  Improve and enhance the Centralized Planning and Reporting (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.
-  Work with industry, government, academic institutions and partners to highlight successful and innovative projects in journals and publications.

 Project/Program is started and on track  Project/Program has an issue identified  Project/Program has not yet commenced

 2020 progress status  2021 progress status

Watershed and Ecosystems Reporting

TRCA successfully launched its Watershed and Ecosystems Reporting Hub. This is TRCA's modern and interactive approach to reporting on the conditions and trends of environmental indicators within the Toronto region. Since its launch, there have been **2,005** page views of the Reporting Hub landing page on the TRCA website, helping increase traffic to the Reporting Hub. There have been **11,603** page views of the Reporting Hub itself! For more information visit: <https://storymaps.arcgis.com>

Environmental Assessments (EAs)

TRCA reviewed **49** EAs in 2021 and issued **403** permits for projects approved through the EA process.

Monitoring the Durham Nearshore

TRCA established **3** collaborations with universities and **3** manuscripts have been submitted to scientific journals as part of a continued partnership with Durham and York Regions to monitor nearshore water quality in Western Durham. Since 2007, **76** regional surveys and **12** maintenance surveys have been conducted to collect data.

Annual Audit

TRCA's 2020 audited financial statements were issued with a clean auditor's report.

Ontario Lands Tribunal

TRCA was involved in **50** OLT cases. **29** appeals were settled by the end of the year, reducing the caseload from **50** to **21**.

Asset Management

TRCA staff completed Building Conditional Assessments for **49** Residential Buildings and **12** Conservation Parks' Buildings to implement a long-term financial planning framework that will safeguard existing service levels by ensuring state of good repair projects are appropriately budgeted.

Enforcement and Compliance

TRCA staff conducted **4,693** permit inspections and issued **156** violations on **144** properties. We received **578** complaints, resolved **50** violations and conducted **1,086** inspections relating to violations and complaints.

Online Planning and Development

The Planning and Development homepage received **24,133** pageviews from January 1 to December 31, 2021, a **17.3 %** increase over the 2020 total **20,579**.

Planning and Permit Applications

1,363 permits were issued of the **1,672** permit applications submitted to TRCA in 2021 - an average increase of **35.8%** over 2020. TRCA reviewed and commented on **1,213** planning and concept applications.

Regulated Area Mapping

39% of all Planning and Development webpage views engaged the Regulated Area Search tool to determine if a property is located within TRCA's Regulated Area. This tool allowed users to access new, more accurate regulatory area screening mapping.

Flood Plain Data

95% of flood plain data (**1,735 km** of watercourse) currently meets the service delivery standard of ensuring that data is no more than 10 years old, which is an improvement over the **94%** achieved in 2020.

Freedom of Information Requests

TRCA received **60** Freedom of Information Requests in 2021, and worked on **66** requests including those carried over from 2020. **51** requests were closed in 2021, with work on the remainder of requests ongoing.

10 Accelerate innovation

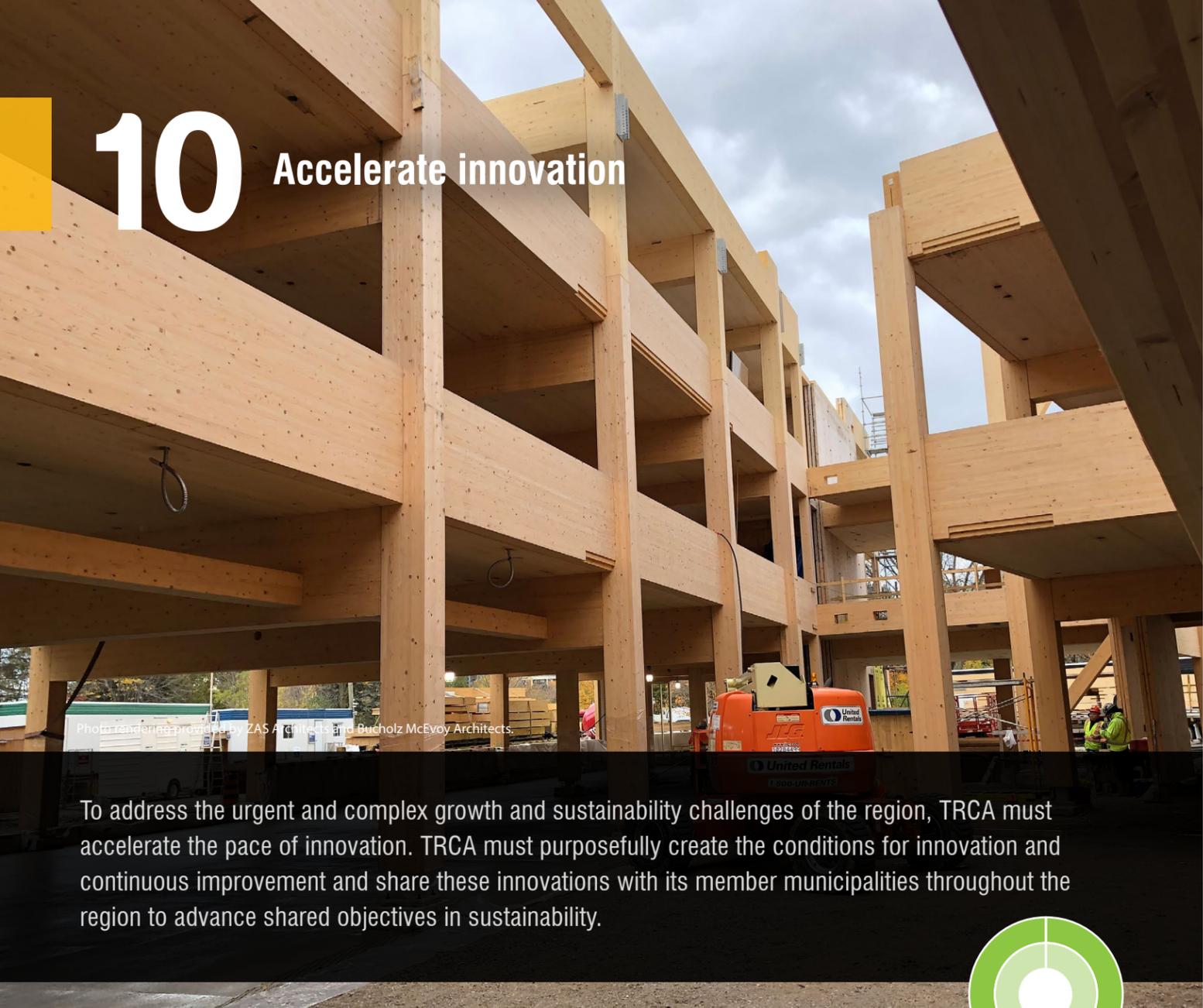


Photo rendering provided by ZAS Architects and Buchholz McEvoy Architects.

To address the urgent and complex growth and sustainability challenges of the region, TRCA must accelerate the pace of innovation. TRCA must purposefully create the conditions for innovation and continuous improvement and share these innovations with its member municipalities throughout the region to advance shared objectives in sustainability.



PROJECTED ACCOMPLISHMENTS (2018 – 2022)

-  Open TRCA's head office by 2022, which will demonstrate innovative green building practices.
 -  Expand TRCA's fee-for-service consulting work to help address member municipality and partner objectives in a financially sustainable way.
 -  Continue to host knowledge sharing events such as the TRCA and International Erosion Control Association (TRIECA) Conference.
 -  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.
 -  Work closely with member municipalities, academic institutions and private industry to monitor, evaluate, and pilot new innovative technologies in TRCA's work.
 -  Seek input from TRCA staff and support their efforts to develop innovations that improve program delivery.
 -  Conduct a staff survey on a regular basis to highlight progress on staff related initiatives and to determine opportunities for continuous improvement.
-  Project/Program is started and on track  2020 progress status
 Project/Program has an issue identified  2021 progress status
 Project/Program has not yet commenced

Downscaling Climate Projections

TRCA's Ecosystem and Climate Science team developed a standardized approach to retrieve and analyze region-specific climate projections to the end of the century for municipal partners within its jurisdiction. This innovative approach supports policy and program development including watershed planning, risk and vulnerability assessments and adaptation planning. TRCA also developed climate projections for its partners at Niagara Region.

Administrative Office Building

TRCA's new administrative office building, currently under construction, continues to meet the highest standards in sustainability and design. An article on the project was published in the August 2021 issue of Business Elite Canada magazine including an interview with the Construction Manager and TRCA staff. TRCA and Design Team staff were interviewed for an article on mass timber in the August 3, 2021, Globe and Mail. TRCA and Design Team staff were interviewed for an article published August 18, 2021, on Toronto.com, Toronto Star and North York News on the new administrative building. The project team is working with Queens University Engineering and the Canadian Wood Council on course materials and learning tools for engineering students and the Canadian Wood Council. Instructors from the University of Toronto School of Architecture have met with members of the design team in order to use the building for a course on energy modeling and design.

Flood Mitigation and Mapping Projects

TRCA staff advanced key flood mapping, warning, and mitigation projects, including the Shoreline Hazard Mapping and Jurisdictional Spills Assessment projects, which are expected to cost close to **\$800,000**, and leverage close to **\$400,000** in National Disaster Mitigation Program funding. Staff also completed flood plain mapping extensions for the Etobicoke Creek in the Region of Peel.

Natural Asset Management

TRCA helped **5** municipalities integrate natural assets into their corporate asset management processes and plans. TRCA's novel and innovative natural asset management approach includes research and workshops on how to develop levels of service, state of infrastructure, lifecycle management and financial strategies for natural assets.

Geothermal Technology

As part of a City of Brampton pilot project investigating innovative ways to mitigate thermal impacts of stormwater ponds on aquatic life, STEP developed a new cost and space efficient method to cool stormwater with geothermal technology.

Engaging Industry Professionals

The STEP Water Webinar Series offered in 2021 was successful and highly attended, achieving enrollment of over **700** participants. The **13**-webinar series offered by **23** industry experts covered a range of compelling topics from research on the fate of microplastics in bioretention areas, to solutions for integrating green infrastructure in constrained urban sites.

Advancing Brownfield Redevelopment Technologies

TRCA was awarded "Best Overall Project" at the 2021 Brownie Awards on November 23, 2021 for our efforts on the Don Mouth Naturalization and Port Lands Flood Protection Project Treatment Technology Evaluation Program, completed in partnership with Waterfront Toronto and the City of Toronto. The Brownie Awards are an annual celebration of outstanding work in remediation and redevelopment of brownfield sites across Canada.



The **\$1.25 Billion** Don Mouth Naturalization Project and Port Lands Flood Protection Project is one of the most significant active brownfield redevelopment projects in Canada with funding from all three levels of government. Construction on the Don Mouth Naturalization and Port Lands Flood Protection Project began in 2017. The new river mouth is expected to open in 2024!

To minimize the project's environmental and social impacts, the Treatment Technology Evaluation Program, funded in part through the City of Toronto and the Federation of Canadian Municipalities Green Municipal fund considered technologies for minimizing the volumes of soil exported from the site because of chemical contamination and/or geotechnical properties, as well as technologies for the treatment of dewatering effluent.

11 Invest in our staff



TRCA employees build and deliver programs, provide service to clients and the public, and respond to the challenges and opportunities that allow TRCA to achieve its mandate. TRCA needs knowledgeable, talented, and motivated staff equipped with tools to undertake complex work efficiently and effectively. With talented workers being increasingly discerning, it is more important than ever for TRCA to invest in hiring, developing, supporting, and retaining high performing staff.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)

- Prepare new policies, procedures, standards and guidelines for how TRCA employees interact with the organization and customers.
- Strengthen HR and Corporate Services teams to ensure necessary training for staff and to better support employee performance and wellness.
- Introduce streamlined methods for communicating the organization's key successes and areas for improvement, both internally and for stakeholders.
- Encourage interdisciplinary and interdepartmental teams on projects and plans.
- Implement a Human Resources Information System (HRIS) to streamline human resources and payroll services.
- Create a TRCA Succession Plan that identifies future leaders and ensures business continuity.

■ Project/Program is started and on track
 ■ Project/Program has an issue identified
 ■ Project/Program has not yet commenced
● 2020 progress status ● 2021 progress status

Sharing our Knowledge

A new Scientific Knowledge Sharing platform was launched on TRCA's Staff Hub, where staff can learn about and engage in TRCA's scientific work. Since its launch in June, the platform has been visited **800** times and is ranked the 19th most visited page (out of **9,821** pages) on the Staff Hub.

Years of Service Awards

TRCA held its 3rd annual Staff Service Recognition Awards with a virtual ceremony in September. The CEO provided remarks and recognized **98** staff for reaching these important years of service milestones.

Health and Safety

26 human resources and health and safety policies were developed and updated.

Staying Social

TRCA's Social Committee kicked off a series of **23** events and social activities to engage staff in new ways during the COVID-19 pandemic, including trivia, games, a book club, a paint night event, a cupcake decorating event and contests. There were over 400 registrations for social events and over **2,500** page views for social engagement activities!

Flexible Work Arrangements

Incorporating employee feedback and best management practices, TRCA's Senior Leadership Team has developed a new hybrid working model which will allow eligible staff to work remotely up to **50%** of the month moving forward, as well as introducing flexible work hours.

Corporate Policy Updates A New Ride!

50 new and updated policies and guidelines were approved and went into effect, with others being advanced by the interdepartmental Policy Committee.

Rapid Restoration Assessments

TRCA developed an assessment methodology for our ecological restoration projects to ensure that restored sites are on a positive trajectory in terms of its ecological function objectives. Sites are visited three times over five years and each restoration component is assigned a score based on its restoration response. This allows staff to quickly identify and remediate issues to ensure the restoration project's success. The data are collected using ArcGIS Collector, which can be viewed by internal teams via an ArcGIS Dashboard, which provides a summary overview and allows for a deeper dive into specific projects. This tool integrates well with TRCA's Restoration Projects database, as well as metric reporting and performance measurement.

Modernization

TRCA implemented the Okta platform to manage user access, enhancing the protection of **134** applications through Multi-Factor Authentication (MFA). TRCA also installed fibre connectivity at Glen Haffy Conservation Park to provide reliable network services between **3** buildings within the site; updated the Conservation Parks Membership system to use digital cards, enabling touchless transactions at TRCA facilities; and completed a major update to the Flood Notification System to allow for Shoreline and Riverine flood notices to be posted simultaneously.

TRCA received a new electrofishing vessel, named Night Heron III. The vessel has been built with modernized equipment and features, including a modified V hull to better handle water conditions on Lake Ontario and improve our ability to collect fish data on the lake.

Staying Engaged

TRCA's Senior Leadership Team launched **10** Employee Engagement Initiatives based on staff feedback. The initiatives were incredibly successful, with **9** out of **10** initiatives completely implemented and the final initiative at **90%** completion. TRCA's Employee Engagement Initiatives targeted progress in key areas including: TRCA's Learning and Development Program; increased transparency and communication; compensation review; flexible work arrangements; and more.

Staying Safe

TRCA continued to enforce robust COVID protocols for field, operations and programming staff to ensure their health and safety during the ongoing pandemic. TRCA achieved **100%** COVID-19 vaccination compliance among its active workforce in 2021.

Staying Informed

TRCA invested in its staff by providing **90** learning opportunities including E-Learning courses, webinars, and instructor-led courses. TRCA staff completed on average **13** hours of training in 2021 in subjects including health and wellness, technical training, leadership development and soft skills development.

12 Facilitate a region-wide approach to sustainability



Around the world, urban regions are becoming connected across their constituent municipal boundaries to tackle pressing sustainability challenges, including greenhouse emissions reduction, climate resilience, transit and transportation, food security, waste management and watershed conservation. TRCA plays an important coordination role on matters that cross municipal boundaries. To achieve shared goals of a green, sustainable, prosperous region, TRCA must build on its history of bringing stakeholders together from across watersheds in the jurisdiction to ensure regional-scale cross boundary collaboration on today's challenges.

PROJECTED ACCOMPLISHMENTS (2018 – 2022)

Develop Master Service Agreements and Fee-For-Service Arrangements with member municipalities to help achieve their sustainability objectives.

Ensure that updated TRCA plans and strategies are leveraged in amendments to municipal official plans and in provincial and regional infrastructure initiatives.

Publish the Living City Report Card and Watershed Report Cards to provide clear indicators of environmental health within the jurisdiction.

Expand the Partners and Project Green Eco-Zone program to include emerging employment areas in the jurisdiction subject to partner funding.

■ Project/Program is started and on track ■ Project/Program has an issue identified ■ Project/Program has not yet commenced

● 2020 progress status ● 2021 progress status

Scarborough Waterfront Project

The Scarborough Bluffs are an iconic natural wonder located at the doorstep of Canada's largest city. In partnership with the City of Toronto, stakeholders and senior levels of government, TRCA continues to advance the Scarborough Waterfront Project to provide safe public access to the bluffs and an enjoyable waterfront experience, while protecting and enhancing the natural environment. Detailed design of the multi-use trail at Brimley Road South and the western shoreline at Bluffers Park is currently underway. TRCA also received funding confirmation to undertake a new study for the shoreline from Bluffers Park west to R.C. Harris Water Treatment Plant. **\$2.9M** was committed by the City of Toronto over three years to advance an Individual Environmental Assessment starting in 2022. This section of the waterfront is characterized by the unique and provincially significant "Needles" bluff formation, located immediately west of Bluffer's Park; and steep slopes dividing the shoreline from inland areas, with limited public access to and along the water's edge.

Conservation Authorities Act Regulations

In order to communicate the implications of the finalized Phase 1 *Conservation Authorities Act* regulations, TRCA reached out to the CAOs, City Managers and relevant staff of all **6** participating (upper/single) and **15** lower-tier municipalities within TRCA's jurisdiction through formal letters, as well as through staff-to-staff communications.

Emergency Hazard Sites

64 emergency hazard sites were reported to TRCA's partner municipalities to inform budgetary and future workplans.



Jim Tovey Lakeview Conservation Area

Through a long-term partnership with Credit Valley Conservation, the Region of Peel and the City of Mississauga, TRCA is supporting its partners in their aim to restore and re-create natural coastal habitats, encourage public use of the waterfront, and facilitate sustainable city building along the Mississauga waterfront through this important project.

Major accomplishments in the completion of the Jim Tovey Lakeview Conservation Area project include:

- completion of the Applewood Wetland and Creek, including over **33,000** aquatic plantings
- completion of the Serson Creek connection, including **150** linear metres of creek construction
- substantial progress in construction and underwater habitat restoration on Central and North Island

To complete these projects, TRCA placed **25,000 tonnes** of armour stone and **5,000 tonnes** of cobblestone, as well as **1,029** truckloads of recycled concrete and brick/block rubble and over **1M m³** of fill material!

Conservation Authorities Act

In June, staff comments and recommendations on the Phase 1 Regulatory proposals under the *Conservation Authorities Act* were approved by the Board of Directors and submitted to the Environmental Registry of Ontario. Phase 1 regulations were issued in October and their implications and requirements reported on to the Board and communicated to partner municipalities.

Informing Official Plan Updates

TRCA participated in over **50** consultations with our partner municipalities to provide advice informing Municipal Comprehensive Reviews and Official Plan Reviews.

Flood Forecasting and Warning Workshop

Due to the COVID-19 pandemic, the 2021 Ontario Flood Forecasting and Warning Workshop moved to a digital format and featured **5** streams showcasing **18** presenters, **5** facilitators and over **10** hours of comprehensive Flood Forecasting and Warning content engaging **809** participants an average attendance increase of **36%** over 2020, highlighting topics on flood forecasting and warning, emergency management, flow measurement and data collection.

Challenges

PEOPLE AND PROPERTY

With the support of key stakeholders, TRCA strengthened its commitment to reducing risks posed to people and property by flooding, pollution and erosion hazards in 2021. TRCA has responded to increasing erosion hazard risks by successfully delivering projects supported through the National Disaster Mitigation Program and the federal Disaster Mitigation and Adaptation Fund to update flood mapping and mitigate erosion in regional ravines and waterfronts.

TRCA has also continued to leverage existing municipal funding, wherever possible, to maximize the protection offered by its existing inventory of flood infrastructure while implementing capital improvements wherever possible. This includes working with municipalities to undertake Environmental Assessments and implement projects to protect people and property from natural hazards in priority areas. In addition, TRCA will continue to work closely with municipalities to leverage official plan review processes to enhance policy support for natural systems, green infrastructure, climate change adaptation, and natural hazard resilience. Watershed plans will also be updated to utilize the latest science, knowledge, and experiences to inform greenfield as well as redevelopment and urban renewal planning and management decisions to protect, enhance, and restore our watersheds.

Through monitoring and inventory, TRCA continues to upgrade its flood infrastructure region-wide, while mobilizing its public engagement programs to increase awareness of water risks (as well as the importance of water resources) throughout its jurisdiction.

TRCA remains committed to administering the Humber River's Canadian Heritage River Systems (CHRS) designation and plays a principal role in maintaining the Humber's heritage designation. Initiatives such as the Moccasin Identifier Project – an education and awareness initiative involving stenciling of moccasins with supporting resources to promote public awareness of significant cultural historic sites and the ancestral presence of First Nations, Métis and Indigenous Communities at TRCA sites.

In addition, Truth and Reconciliation Day commemoration activities contribute not only to the Humber's heritage designation, but also to increased awareness of Indigenous cultural heritage within TRCA's jurisdiction. In 2021, TRCA also completed work on the Humber River 10-Year CHRS Monitoring Report.

COLLECTIVE IMPACT

The population within TRCA's jurisdiction has grown immensely within the past decade and will continue to grow, with an expected population of 5.4 million by 2031. This growth will stimulate incredible economic development within the region, but it does not come without challenges. TRCA has continued its focus on regional-scale coordination to collectively address growing environmental and public health challenges.

The global average surface temperature has warmed approximately 1°C above pre-industrial levels, with Canada warming at two to three times this rate. Rapid and unprecedented changes in our climate will continue to produce extreme weather events with pervasive impacts on people and ecosystems within TRCA's jurisdiction. Urban heat island effect, our aging and highly interdependent infrastructure, an aging population and rising socio-economic inequality will further intensify the impacts of climate change in the Toronto region.

In response to these challenges, TRCA continues to work with its partners and stakeholders to reduce greenhouse gas (GHG) emissions and create more climate-resilient communities. TRCA's regional climate projections will help guide actions within our watersheds and partner jurisdictions to prepare for warmer temperatures, more extreme heat, and more variable precipitation. These projections demonstrate the importance of regional efforts to manage flood and erosion risk, protect natural systems, and enhance green infrastructure.

TRCA's climate data can inform land-use planning that protects people and property from natural hazards. Guidance from provincial standards will help TRCA ensure that climate projections are translated into tangible

design requirements suitable for our watersheds, or a framework for managing the uncertainty of our climate future. A perspective that balances the increased exposure of a growing population and the pressures of urbanization will require novel solutions. Historical alterations to the watersheds in the GTA have resulted in many urban spill areas, necessitating a risk-based approach to hazard management. The unpredictability of convective storms and the many impervious areas of our watersheds mean that flooding can occur with little warning. Investments in Flood Forecasting and Warning tools, together with capital works that remediate existing flood risk, can help to protect people and property. Nature-based solutions such as restoring wetlands, enhancing the urban forest, and working with partners to reduce emissions will further bolster these efforts. Together, these actions will increase our region's resilience to climate change and decrease anthropogenic GHG emissions.

In the past year, TRCA has engaged with its partner municipalities and other stakeholders to ensure that conservation, sustainability, infrastructure and other resource management initiatives are aligned to increase the efficiency of service delivery throughout the region and province. TRCA staff have worked closely with partners and stakeholders to track a series of metrics and performance indicators to assess both TRCA's Strategic Plan priorities and collective priorities.

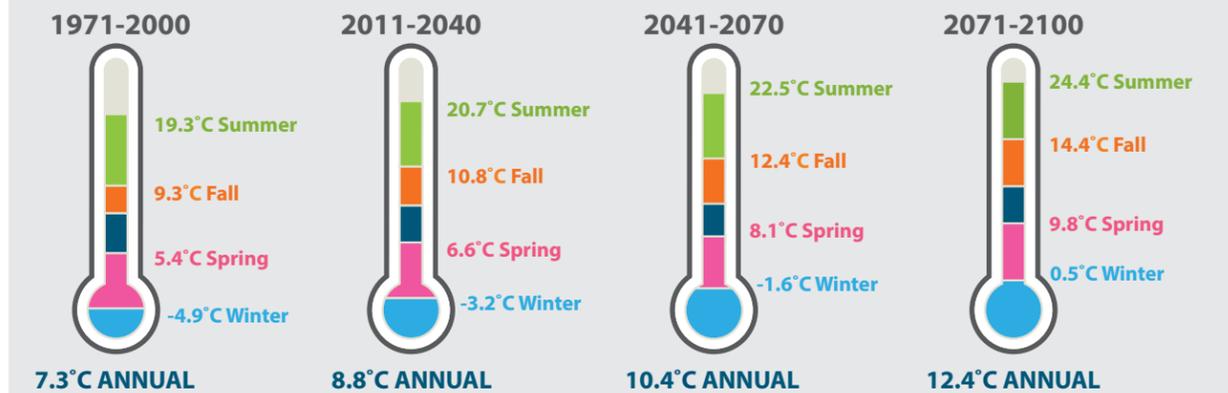
TRCA's new 12-Year Strategic Plan, launching in 2023, will help TRCA and its partners to adapt quickly and efficiently to changes in the environment over its three 4-year phases, which are aligned with partner municipalities' terms of council. This living document will ensure that TRCA's roadmap for change can be adjusted to accommodate any unexpected challenges that may arise from our region's unprecedented growth.

CLIMATE TRENDS FOR TORONTO AND REGION CONSERVATION AUTHORITY

UNDER THE CURRENT PACE OF GREENHOUSE GAS EMISSIONS

MEAN TEMPERATURE

By the end of the century, the Toronto region is expected to warm by 5°C, leading to more variable and extreme weather



DAYS ABOVE 30°C



A 6-fold increase in the number of extreme heat days is expected by the end of the century, which will pose significant risks to people's health and well-being

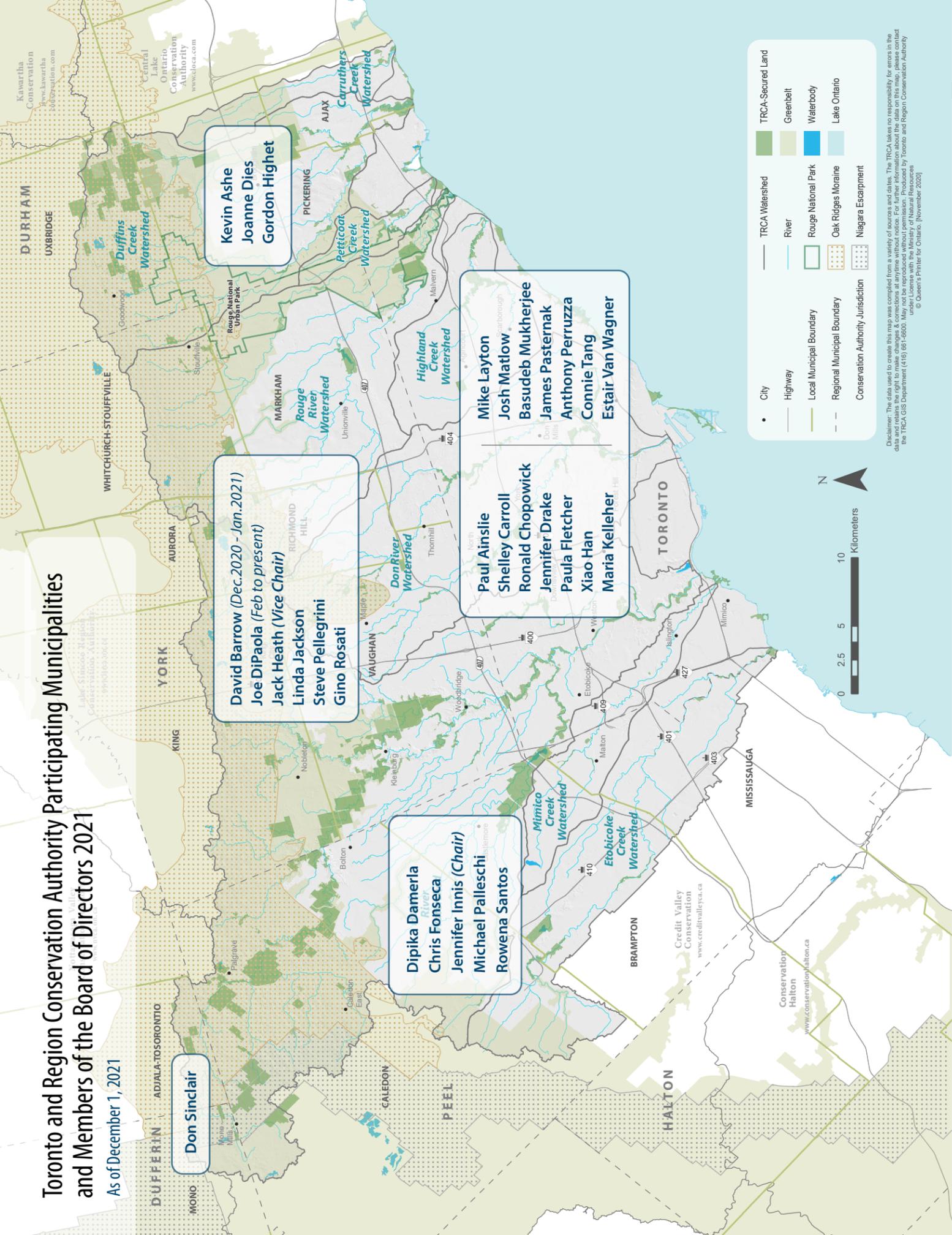
DAYS BELOW -20°C



As winters become warmer, less snow and ice conditions are expected with more precipitation falling as rain instead of snow, which increases the risk of flooding among other impacts

Toronto and Region Conservation Authority Participating Municipalities and Members of the Board of Directors 2021

As of December 1, 2021



Don Sinclair

David Barrow (Dec.2020 - Jan.2021)
Joe DiPaola (Feb to present)
Jack Heath (Vice Chair)
Linda Jackson
Steve Pellegrini
Gino Rosati

Kevin Ashe
Joanne Dies
Gordon Hightet

Dipika Damerla
Chris Fonseca
Jennifer Innis (Chair)
Michael Palleschi
Rowena Santos

Paul Ainslie
Shelley Carroll
Ronald Chopowick
Jennifer Drake
Paula Fletcher
Xiao Han
Maria Kelleher

Mike Layton
Josh Matlow
Basudeb Mukherjee
James Pasternak
Anthony Perruzza
Connie Tang
Estair Van Wagner

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Toronto and Region Conservation Authority Senior Leadership Team 2021



Chief Executive Officer
John MacKenzie



- CORPORATE SERVICES**
Michael Tolensky
Chief Financial and Operating Officer
- RESTORATION AND INFRASTRUCTURE**
Anil Wijesooriya
Director
- CONSERVATION PARKS AND LAND**
Richard Ubbens
Director
- EDUCATION AND TRAINING**
Darryl Gray
Director
- DEVELOPMENT AND ENGINEERING SERVICES**
Sameer Dhalla
Director
- POLICY PLANNING**
Laurie Nelson
Director
- HUMAN RESOURCES**
Natalie Blake
Chief Human Resources Officer

OUR VISION

The quality of life on Earth is being determined in rapidly expanding city regions. Our vision is for a new kind of community — The Living City — where human settlement can flourish forever as part of nature's beauty and diversity.

OUR MISSION

To protect, conserve and restore natural resources and develop resilient communities through education, the application of science, community engagement, service excellence and collaboration with our partners.

OUR CORE VALUES

- INTEGRITY**
We are honest, ethical, and professional.
- COLLABORATION**
We achieve shared goals through a solution-oriented approach.
- ACCOUNTABILITY**
We are responsible for our actions, behaviours and results.
- RESPECT**
We are equitable, fair and respectful while recognizing individual contributions and diversity.
- EXCELLENCE**
We maintain a high standard of performance and customer service, consistently striving to improve and produce quality work.

