An Update to the Terrestrial Natural Heritage System

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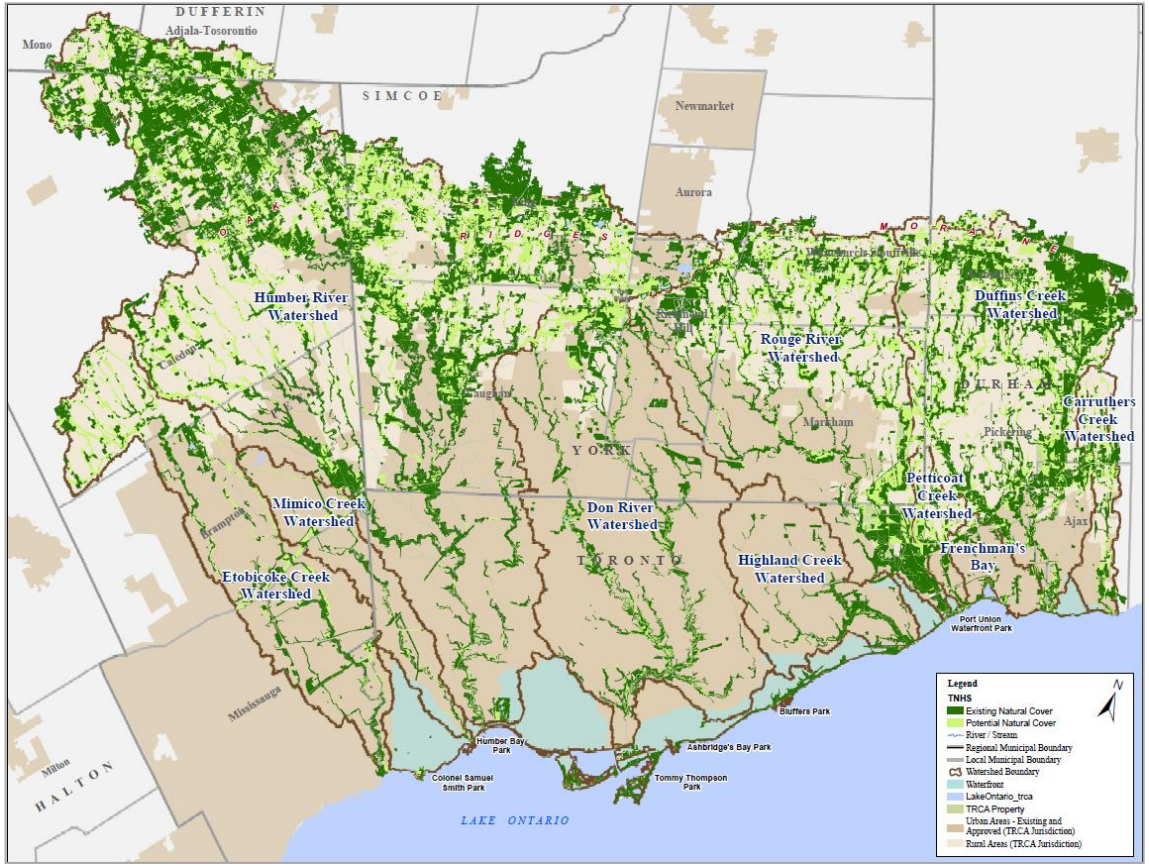
Terrestrial Natural Heritage System (2007)



Terrestrial Natural Heritage System Strategy

- Approved in 2007 to protect natural heritage function
- Aimed to increase terrestrial biodiversity (habitat and species)
- Focused on protecting existing and restoring potential natural cover
- Included various ecological and policy related criteria
- Acknowledged co-benefits to other ecosystem services
- Provided guidance to TRCA staff and partner municipalities

What have been achieved with TNHS?

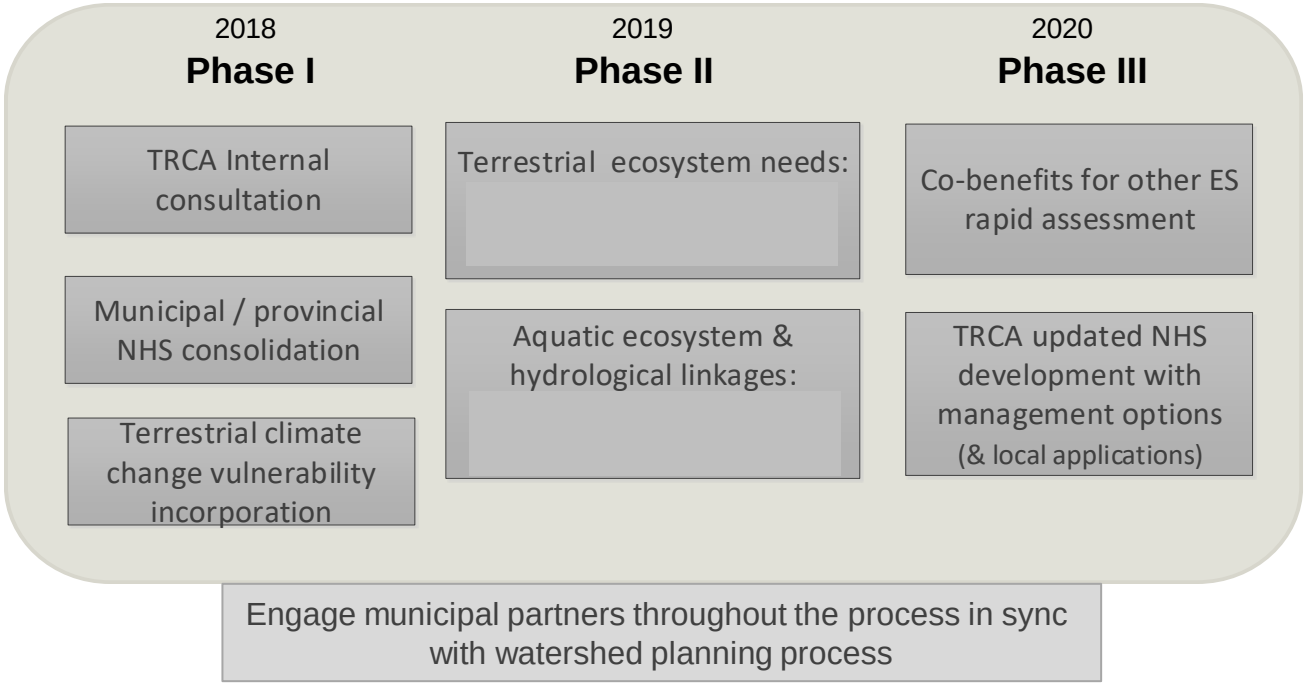
- Assisted municipal partners in development of NHS in their OPs
- Informed provincial and other CA initiatives related to NHS
- Over 1300 ha of land acquired by TRCA within TNHS since 2007
- Over 450 restoration projects completed within TNHS since 2012
- Informed various TRCA and partner municipalities initiatives

  (Watershed planning, Restoration planning, Land management, Land acquisition, Development and EA planning, MCR)

Why an update to the TNHS?

- To consolidate the municipal natural heritage systems
- To account for climate change vulnerabilities of natural systems
- To utilise updated science and practice of natural systems planning (**urban**)
- To utilise the expanded field data and analytical capacity of TRCA
- To assist TRCA and municipal partners in various strategies and initiatives

Project Scope



Phase I & II Snapshots

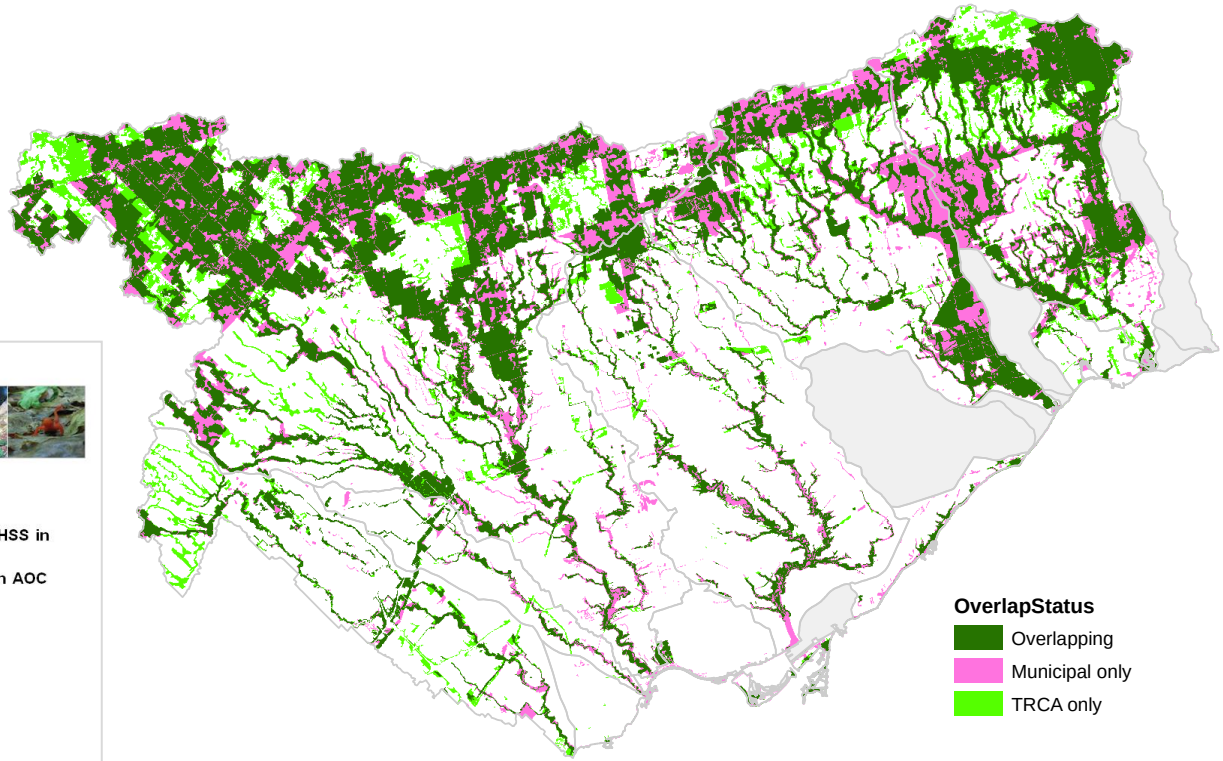
1. Municipal NHS Consolidation

Evaluating the Implementation of the TNHSS in TRCA Watersheds:
Toward Delisting the Toronto and Region AOC

DRAFT

2018

Toronto and Region Conservation for The Living City

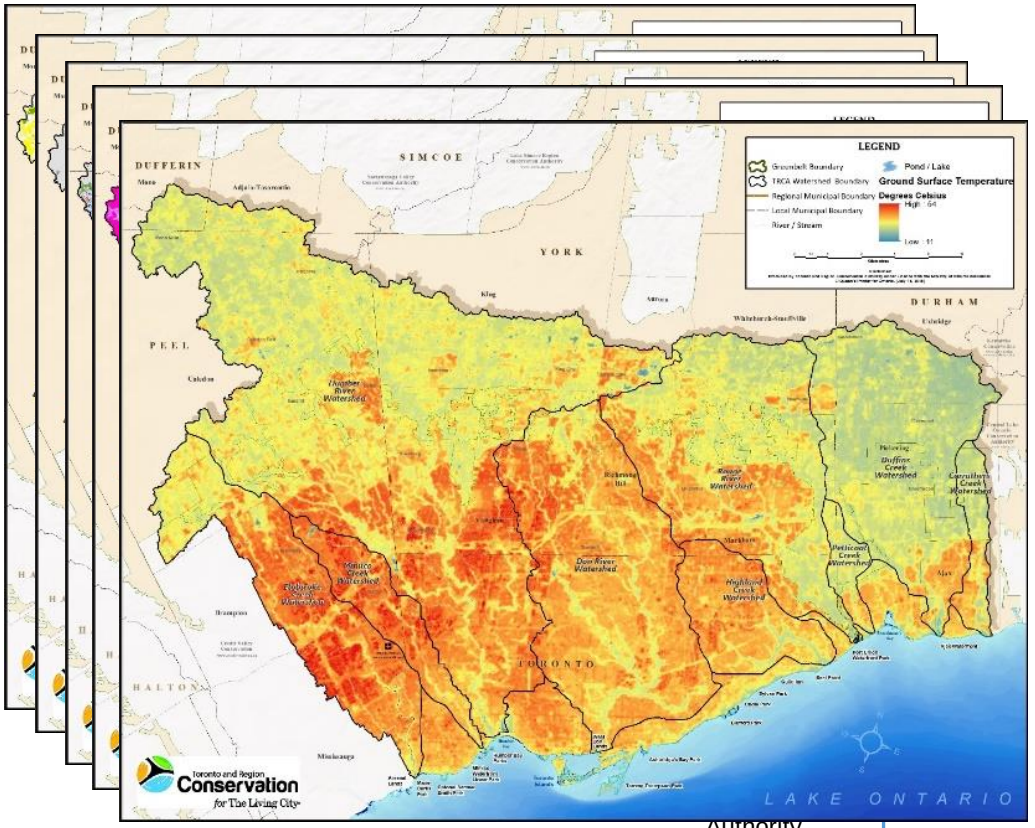


Spatial overlap between TRCA TNHS and Municipal NHS(s)
Supported by Great Lakes Sustainability Fund (GLSF)

2. Climate Change Vulnerability Assessment

Terrestrial Systems VA:

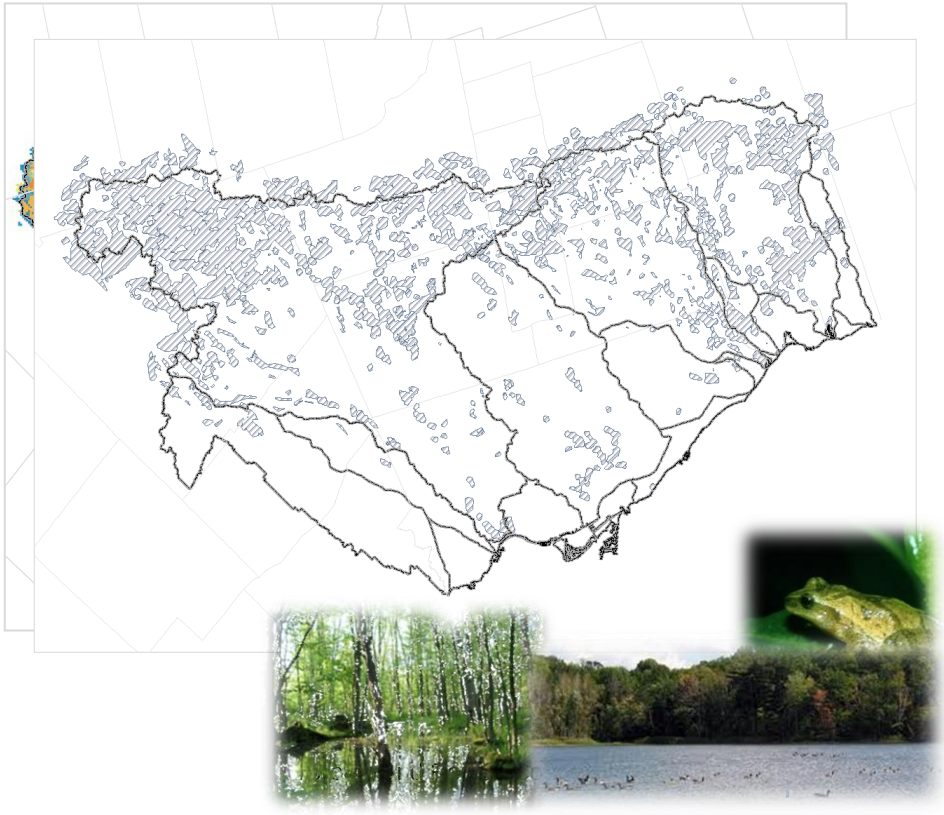
- Habitat patch quality
- Climate sensitive vegetation
- Wetland vulnerability
- Soil drainage
- Ground surface temperature



3. Updated Science and Practice

Habitat Connectivity

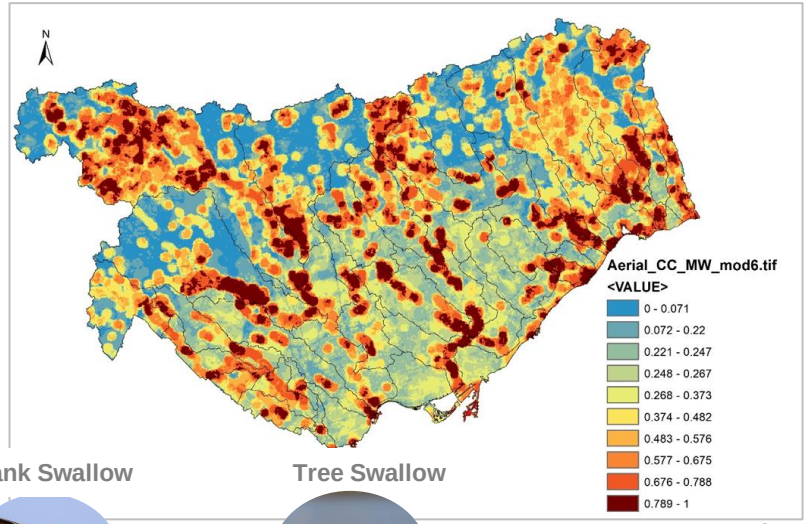
- Regional connectivity priorities for climate adaptation and gene flow for biodiversity
- Local connectivity priorities for avoiding road kills and supporting local populations of biodiversity

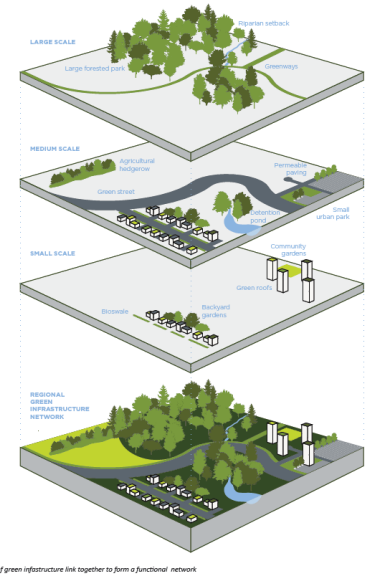


3. Updated Science and Practice

Urban Ecology Framework

- Map out contribution of entire landscape to biodiversity
- Utilize data on urban forest and other GIs
- Identifies “complementary areas” to natural cover that benefit biodiversity explicitly





Components of green infrastructure link together to form a functional network

Bank Swallow

Tree Swallow

Barn Swallow

Source: Metro Vancouver, 2016

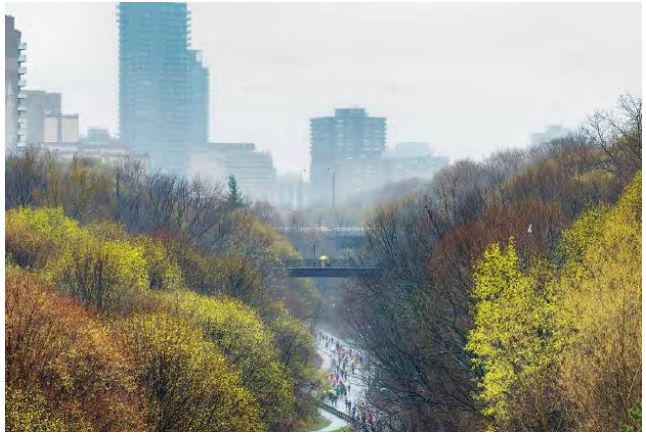
Next Steps and Relevance

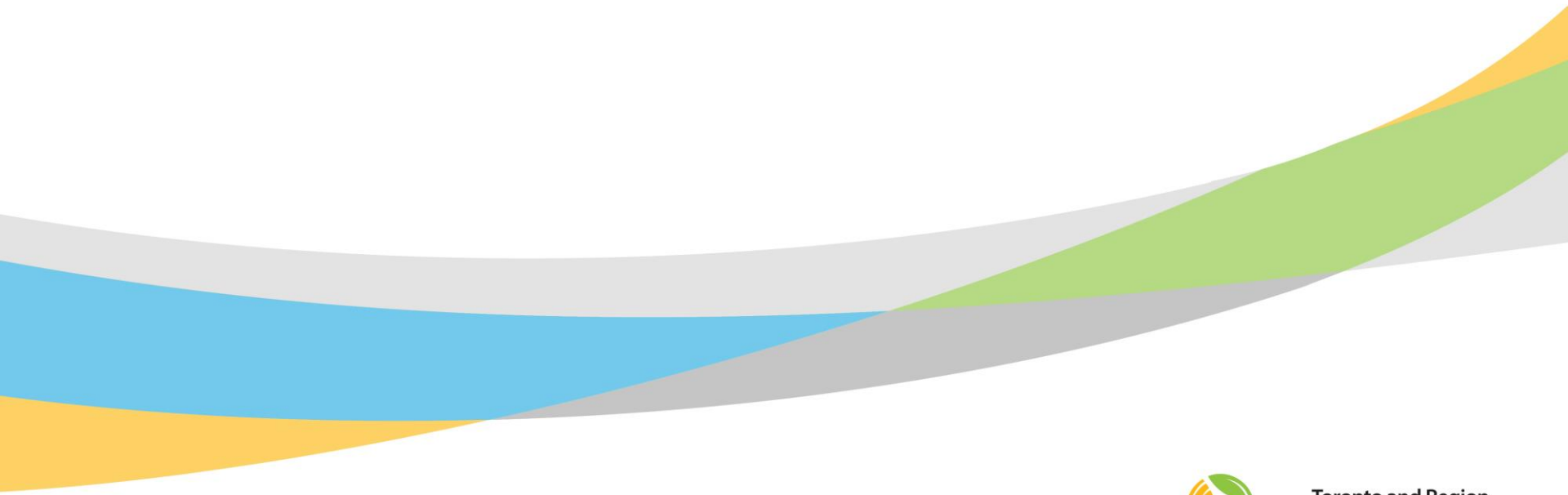
Expected Deliverables

- An updated and integrated TRCA NHS accounting for land use and climate change
- A set of expanded management options across urban – rural gradient
- Local application examples of regional methods, concepts, and NHS
- A series of timely technical outputs to meet TRCA & municipal needs
  - Consolidated municipal NHS data
  - Climate vulnerability data
  - Habitat connectivity data
  - Habitat suitability / priority data
  - Hydrological priorities data

Relevance for Toronto

- **Biodiversity Strategy**: Protect, Restore, & Design in (e.g. regional biodiversity strategy, watershed plan update, design in built environment)
- **Ravine Strategy** (e.g. climate change)
- **Green Streets Guidelines** (e.g. Eco-passages)
- **Pollinator Strategy** (e.g. habitat creation)
- **Biodiverse Green Roofs**
- **Biophilic Cities**





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