

TNHS Strategy


- **Philosophy**
 - emphasizes systems based approach and targets for sustainability
- **New analyses & methods**
 - evaluate the integrity of the existing natural heritage system and set targets for an improved system
- **New policies and procedures**
 - to implement target system




Toronto and Region Conservation For The Living City



Three Levels of Data

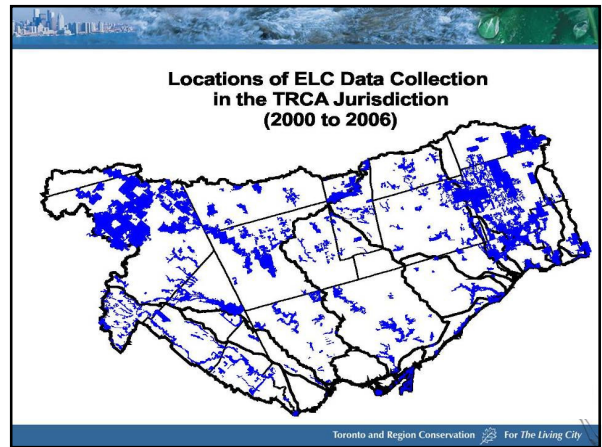


Landscape

Vegetation Communities



Species

Toronto and Region Conservation For The Living City

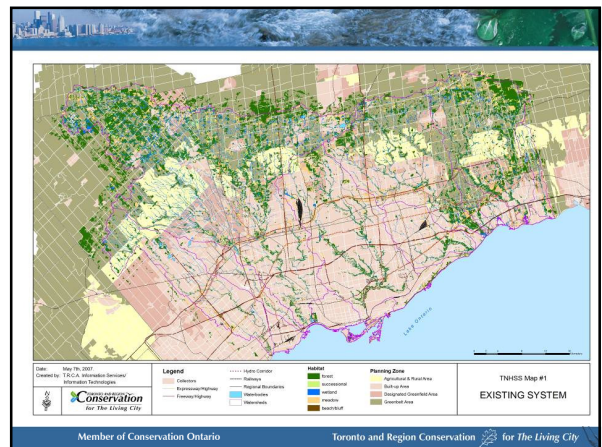


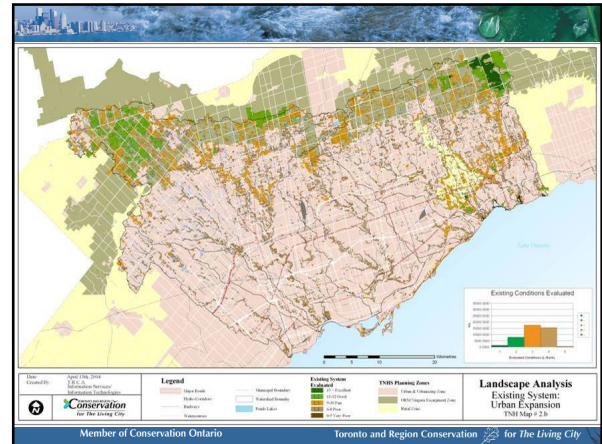
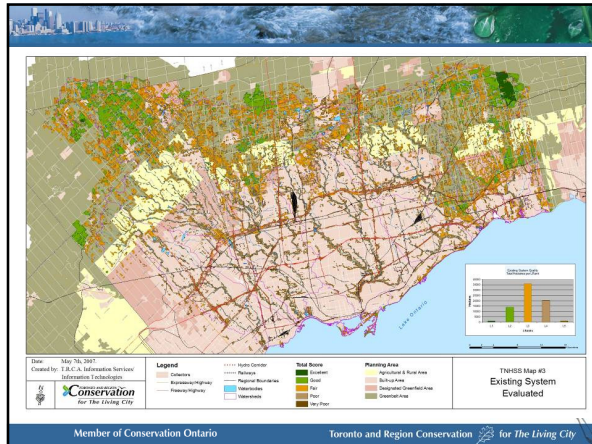
Tools and Methods

- **Landscape Analysis Model**
 - Evaluates the condition of habitat patches in the landscape using size, shape and matrix scores
- **Target System Design Model**
 - Assigns relative value to all lands in jurisdiction, using 10 x 10 m grid cells
 - Identifies the lands with the highest relative value for inclusion in terrestrial natural heritage system

Member of Conservation Ontario Toronto and Region Conservation For The Living City





What the Science Tells Us

To protect biodiversity we need to:

- Provide more natural cover
- Improve the distribution of natural cover throughout the watersheds
- Improve the quality of natural cover (size, shape and connectivity)

Member of Conservation Ontario Toronto and Region Conservation for The Living City



Design Principles

Seven design principles guided the development of the Target Terrestrial Natural Heritage System

- **Quantity** – increase regional natural cover
- **Distribution** – more even distribution
- **Size**
- **Shape**
- **Matrix Influence**
- **Biodiversity**
- **Connectivity**

Quality – fair to good condition

Member of Conservation Ontario Toronto and Region Conservation for The Living City

Tools and Methods

Landscape Analysis Model

- Evaluates the condition of habitat patches in the landscape using size, shape and matrix scores


Target System Design Model

- Assigns relative value to all lands in jurisdiction, using 10 x 10 m grid cells
- Identifies the lands with the highest relative value for inclusion in terrestrial natural heritage system

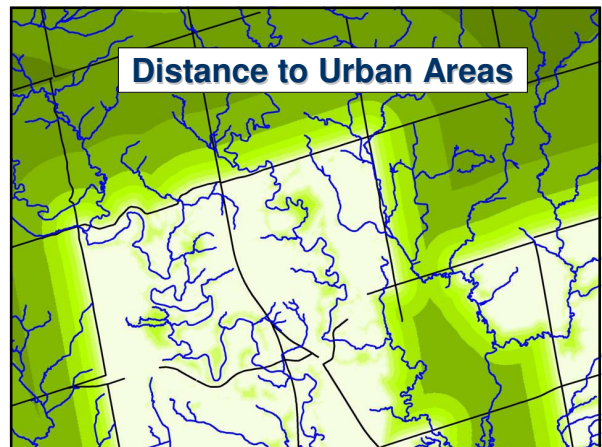
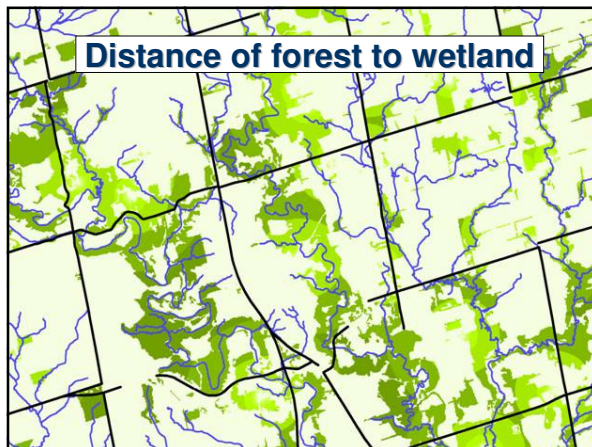
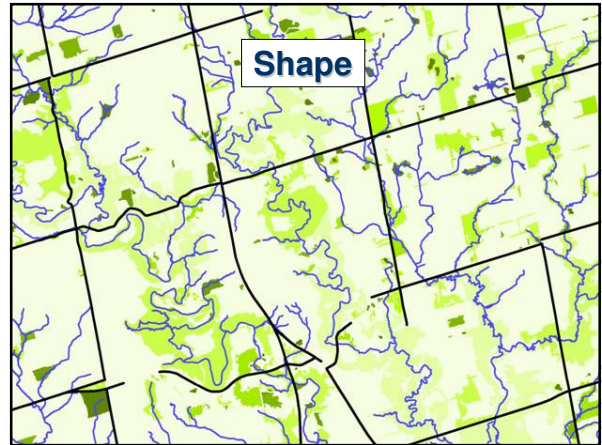
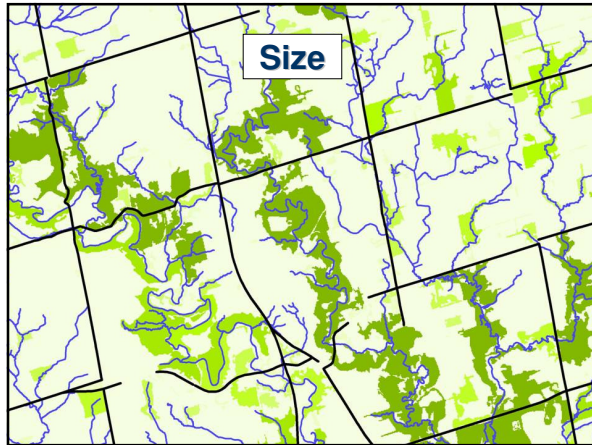
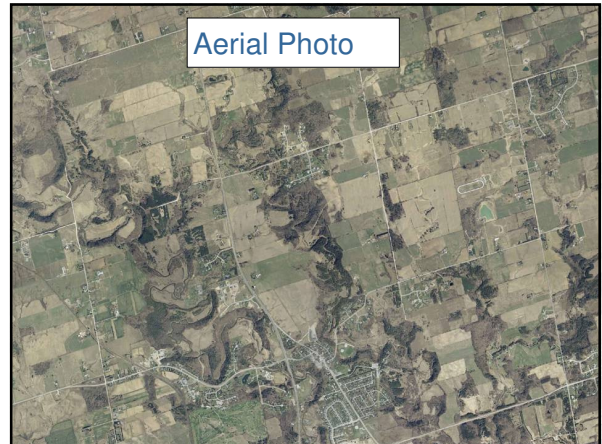
Member of Conservation Ontario Toronto and Region Conservation for The Living City

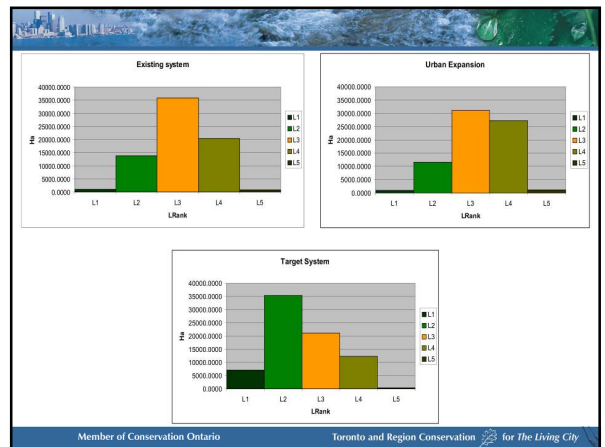
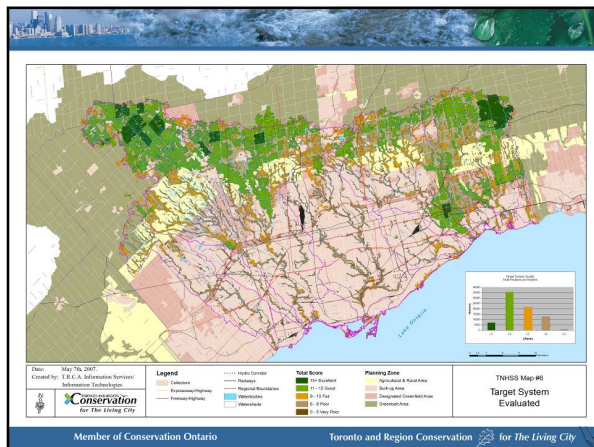
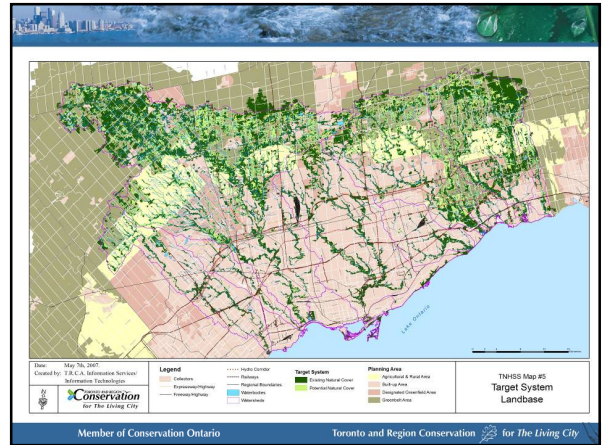
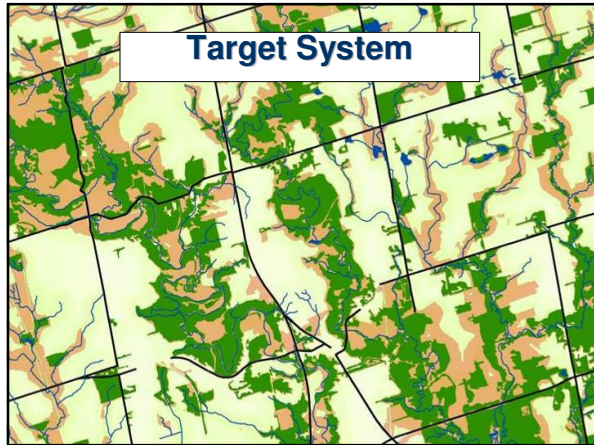
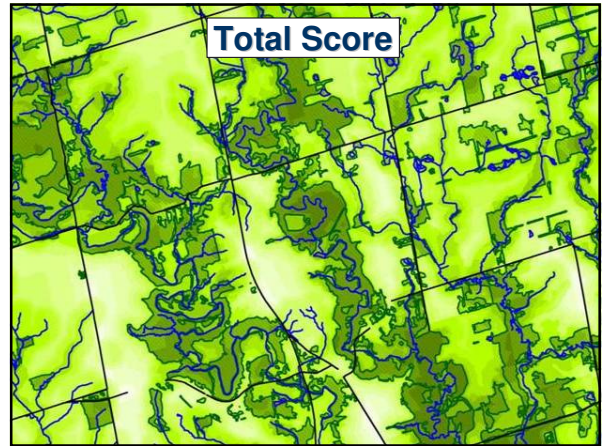
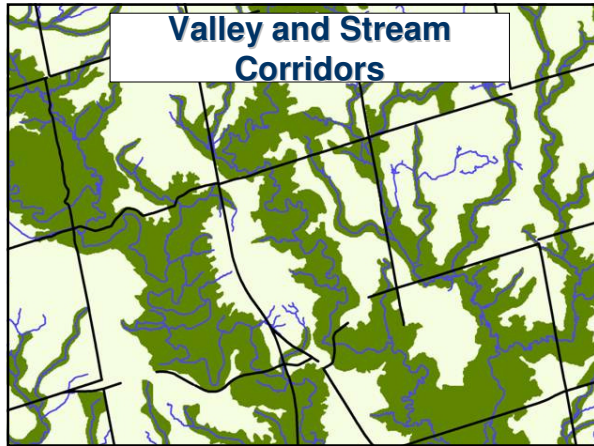
Criteria Employed in the Model

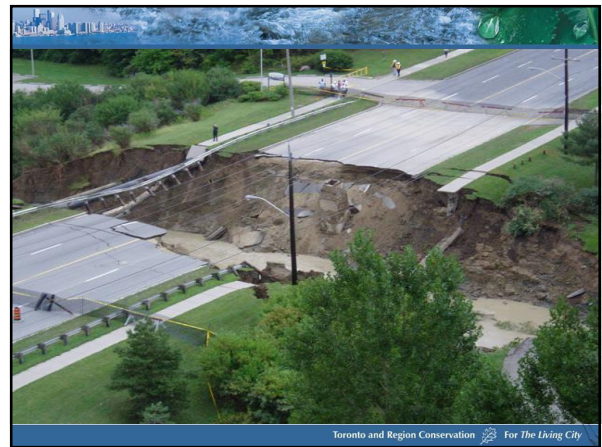
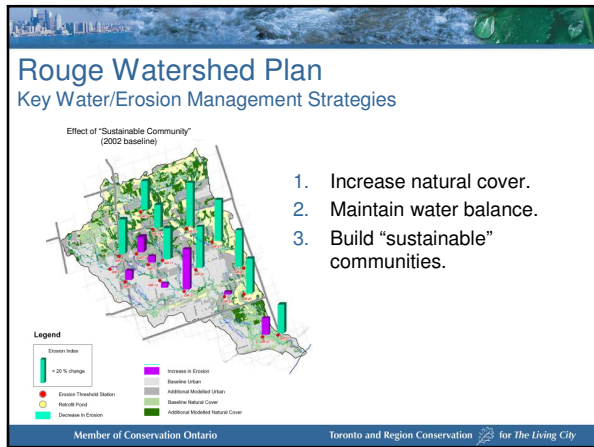
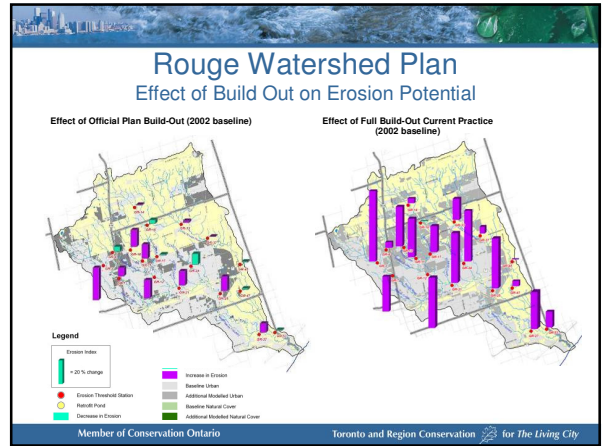
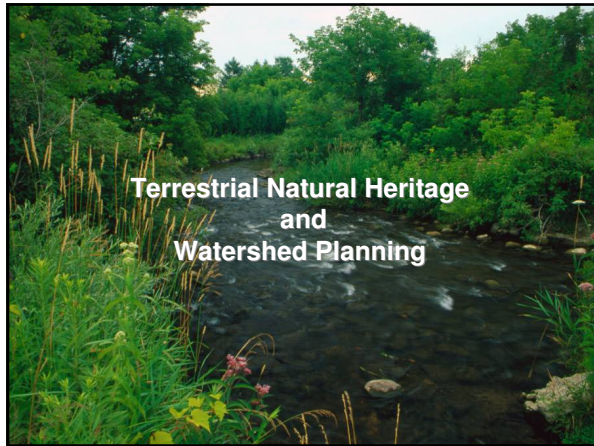
Ecologically-based Criteria	Planning/Ownership Criteria
<ul style="list-style-type: none"> Existing Habitat Condition Interior Forest Distance of Forest to Wetland Distance of Wetland to Forest Distance from urban areas Distance from natural areas Distance from roads Distance to water 	<ul style="list-style-type: none"> PSW ANSI ESA Valley and stream corridors TRCA Property Oak Ridges Moraine Greenbelt Niagara Escarpment Rouge Park



Member of Conservation Ontario Toronto and Region Conservation for The Living City







In Summary...

- Standardized science-based approach for decision-making
 - Land use and infrastructure planning
 - Priorities for securement, restoration, stewardship
- Transferable/replicable tools and methods
 - Landscape Analysis
 - System Design Model

Member of Conservation Ontario Toronto and Region Conservation *for The Living City*



Application in TRCA Programs

- watershed planning
- integration science
- source protection
- land use planning (plan input and review)
- land acquisition and securement
- land management and recreation planning
- stewardship
- restoration (Habitat Implementation Plan)
- monitoring
- database and modeling tools



Toronto and Region Conservation  For The Living City



Working with Stakeholders

- Growth Plan and other Official Plans
- Hearings on natural heritage issues
- Applied technology: regional tool at smaller scales
- Applied research: monitoring target system and ecosystem recovery




Toronto and Region Conservation  For The Living City





- Think Long Term
- Diversify
- “Hedge your bets”
- Track/Monitor
- Continue to Invest





Toronto and Region Conservation  For The Living City



Thank you

Toronto and Region Conservation  For The Living City