Nature for Niagara's Future Abstract

The Nature for Niagara's Future project was conducted between June 2010 and December 2011 with funding from the Region of Niagara's Water Smart Program. The project is a consensus-based, integrated, whole-system and objective approach to conceptualizing a Natural Heritage System (NHS) for the Niagara watershed. The project involves working with community members, practitioners, and other stakeholders in the twelve Niagara municipalities, County of Haldimand, and City of Hamilton to ensure a system that balances the social, environmental, cultural, and economic attributes of the area that we all value.

The purpose of this project was to evaluate the natural features identified and classified through the Natural Heritage Areas Inventory (2006-2009) for their individual and collective contributions to the health and resilience of the local ecosystem. The best available scientific data, knowledge and existing inventories were combined with input from stakeholders through an engagement process which utilized an objective and quantitative decision support tool. This has led to an improved understanding of the condition of Niagara's existing natural heritage resources.

A total of 19 Learning Scenarios were run by the project team to explore various natural heritage design options developed by the Scenario Development Team (SDT). The Learning Scenarios helped the team assess how well different spatial configurations were performing against the baseline and its achievement relative to science-based thresholds. The Learning Scenarios also allowed the SDT to obtain answers to some specific "What-if" questions about the landscape in general.

Learning scenarios were run that explored outcomes if targets were based on a percentage (e.g. from 30% to 90%) of what currently exists for each identified feature across the watershed. In addition, there was the "Best of the Best" learning scenario in which no constraints or costs were applied, and scenarios that looked at the idea of Distribution vs. No Distribution of the targets by watershed planning areas or soil landscapes. Three scenarios were run that looked at only the targets associated with: Biodiversity Representation, Ecological Function, and Hydrologic Function, and lastly, there were a series of scenarios run to look at specific options as they related to agricultural and urban lands.

The work of the Scenario Development Team and the time spent assessing the information from the Learning Scenarios resulted in the adoption of three final scenarios:

- **The Baseline Comparator Scenario**: represents the baseline targets as set by the Scenario Development Team based on best available science, knowledge, and information with Costs for Agriculture, Aggregate and Urban Areas. It is the truest representation of "What-is" on the landscape or the "status quo" in terms of current legislation and land use policies. All other Learning Scenarios were compared back to this Scenario.
- **The Most Constrained Scenario:** as the name implies is the Scenario in which the team chose to exclude large portions of the landscape from contributing to the ecological targets based on current or potential future land uses such as agriculture, aggregate extraction or urban development.
- **The Compromise Scenario:** reflects the Scenario Development Team's (SDT) best attempt at finding a middle ground solution between the two extremes of the Baseline Comparator and the Most Constrained Scenarios. Of all of the Learning Scenarios run throughout this process, it is most reflective of the overall discussion, common vision, and gathered the most support.

The relavie performance of the three final scenarios are depicted in the following charts and provide a high level quantified assessment and insight as to how Niagara's natural areas currently work together.

Figure 1 : Final Scenario Performance Relative to Science Thresholds
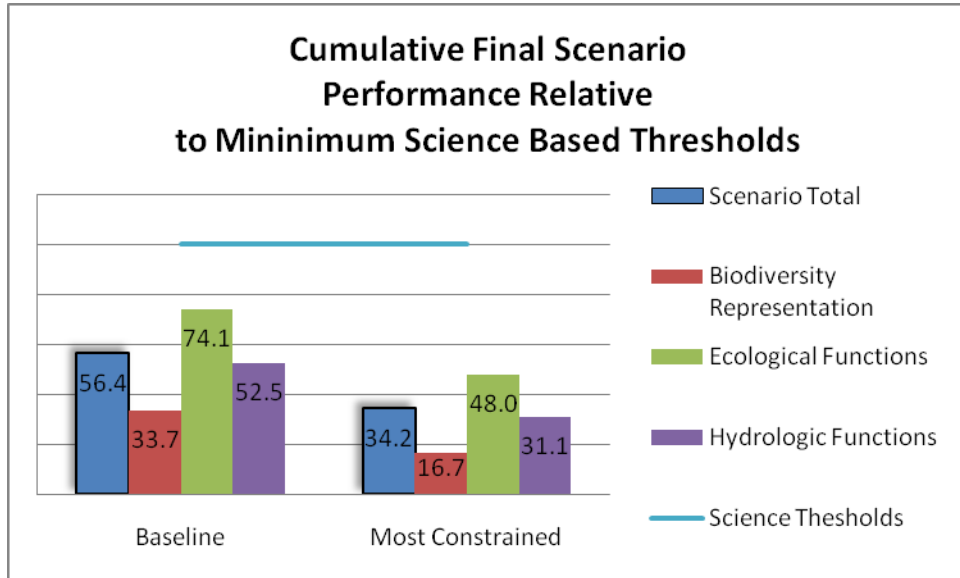
Figure 2: Final Scenario Performance Relative to Baseline Comparator
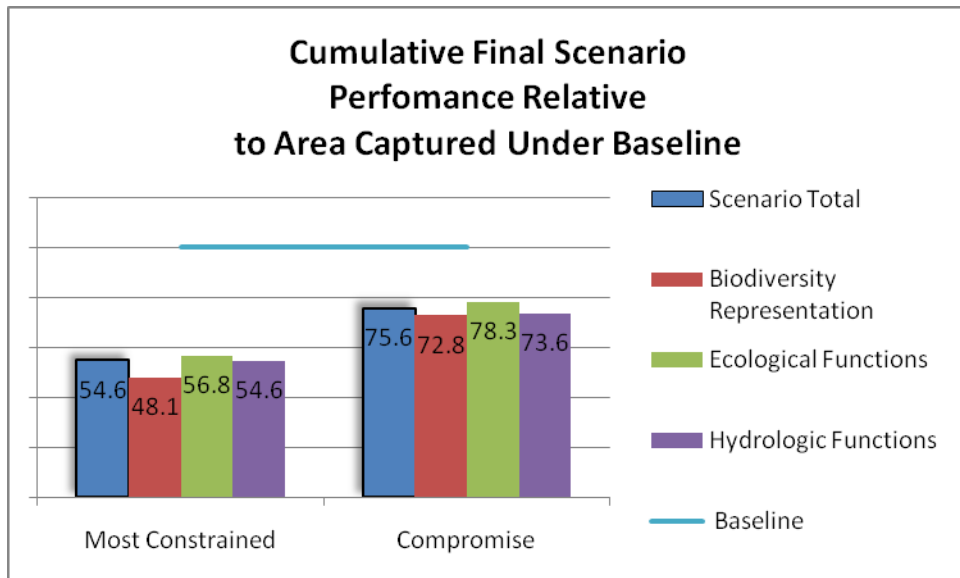
The data generated through the project has helped to foster not only an understanding of the contribution of various natural features to the landscape, but has also led to a greater environmental awareness within the stakeholder community. It is our hope that the resulting information product developed will be utilized by all of the stakeholders as a valuable tool to help guide them in their operations and interests with regards to Niagara's natural areas.

For more information, please contact the Project Coordinator:
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Acknowledgements

The Scenario Development Team members spent many grueling hours agonizing over the information and collaboratively deciding on appropriate constraints and targets.

The Scenario Development Team members included:
- Brock University
- Chamber of Commerce – St. Catharines
- City of Hamilton
- Community Awareness and Emergency Response Group
- Haldimand County
- Haldimand Stewardship Council
- Hamilton Conservation Authority
- Land Care Niagara
- Metis Nation of Ontario
- Niagara Area Planners
- Niagara College
- Niagara Escarpment Commission
- Niagara Economic Development Corporation
- Niagara Homebuilders Association
- Niagara Land Trust
- Niagara Peninsula Conservation Authority
- Ontario Federation of Agriculture
- Ontario Ministry of Natural Resources
- Ontario Power Generation
- Ontario Stone Sand and Gravel Association
- Peninsula Field Naturalists
- Region of Niagara
- Region of Niagara – Agricultural Subcommittee
- Remedial Action Plan
- Six Nations

There were many challenging discussions but you were always respectful and understanding of each other's points of view. I know we have a better product because of it. Thank you for your patience, and for graciously offering your limited time and vast knowledge.

Funding for the project came from the Region of Niagara's Water Smart Program. Without your generous support, this project would not have been possible. Thank you!

The dedication of all of the project partners helped us meet our goals. It is our hope that the data generated and shared through this work will lead to a deeper understanding of the ecosystems of our watershed. We view this work not as the end but as another step on the road to a healthier, resilient, Natural Niagara.

Mrs. Deanna L. Lindblad Project Coordinator, Natural Heritage