


*Natural. Valued. Protected.*



**Building Capacity to  
Report on the State of  
Natural Areas in Ontario**

Michael McMurtry  
Natural Heritage Information Centre  
November 18, 2011

*Natural. Valued. Protected.*

## Outline

- ❑ Making the case for state of natural areas reporting
- ❑ Examples of “state of” reports
- ❑ Sources of data
- ❑ How to access and contribute to data resources
- ❑ Working on integration
- ❑ Building capacity

*Natural. Valued. Protected.*



*Natural. Valued. Protected.*

## **Making the case for state of natural areas reporting**

- ❑ Ecosystems are changing
- ❑ Different trends in each region
  - Development pressure in southern Ontario
  - Reforestation in eastern Ontario
  - Climate change, especially in far north
- ❑ Need to plan for:
  - conservation of biodiversity
  - maintaining ecosystem health
  - provision of ecosystem services
- ❑ Making information available enables participation in conservation actions

*Natural. Valued. Protected.*

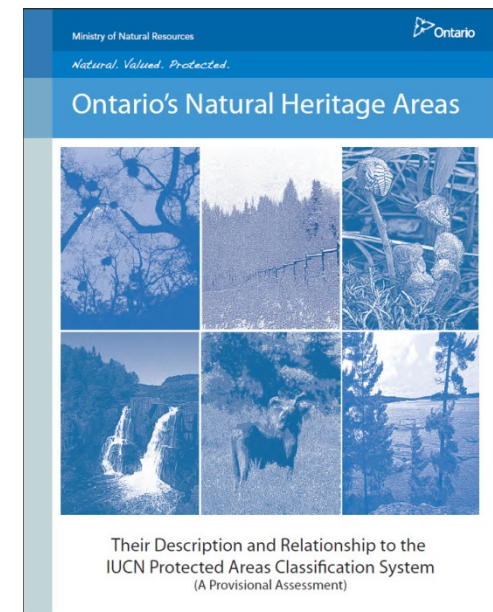
## **Landscape data allows us to measure our progress towards targets**

Targets from Ontario's 2011 Biodiversity Strategy:

- ❑ “By 2015, the proportion of private lands in Ontario that are managed for biodiversity is increased”
- ❑ “By 2020, at least 17 per cent of terrestrial and aquatic systems are conserved through well-connected networks of protected areas and other effective area-based conservation measures”

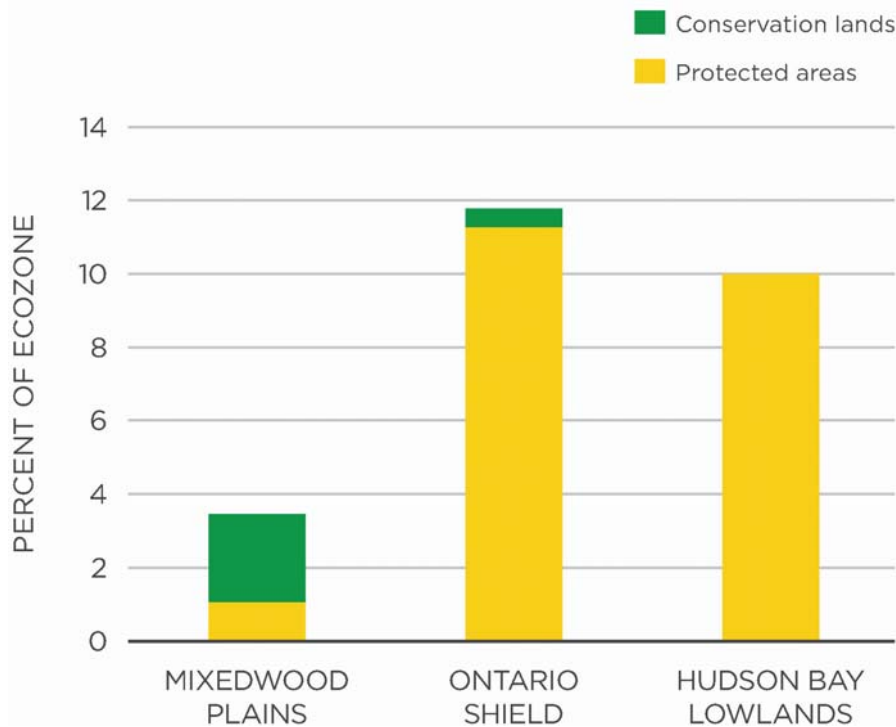
## Examples of “state of” reports

- ❑ State of Ontario’s Protected Areas Report, 2011
- ❑ Ontario’s Natural Heritage Areas by Gray et al., 2009
- ❑ Ecosystem Status and Trends Reports
- ❑ The State of Ontario’s Biodiversity 2010



*Natural. Valued. Protected.*

# Example from State of Ontario's Biodiversity Report 2010



- Protected areas include provincial and national parks, conservation reserves and wilderness areas
- Conservation lands include conservation lands and easements held by CAs, NCC, DUC, ON, OHT, OLTA members

*Natural. Valued. Protected.*

## Sources of data on natural areas

- ❑ Natural Resource Values and Information System (NRVIS)
  - Spatial and attribute data on parks, wetlands, ANSIs, crown land features
  - Includes a new Secured Conservation Lands layer
- ❑ Ontario Land Information Warehouse (OLIW)
  - Makes NRVIS data available to non-governmental partners
  - Also includes SOLRIS, Landcover, remote imagery
  - Google “Land Information Ontario” for further information
- ❑ NHIC’s Natural Areas Database (NADb)
  - Full spectrum of recognized natural areas
  - Combines data from MNR and non-MNR partners including CAs, land trusts
  - Focus on tabular information
  - Web accessible

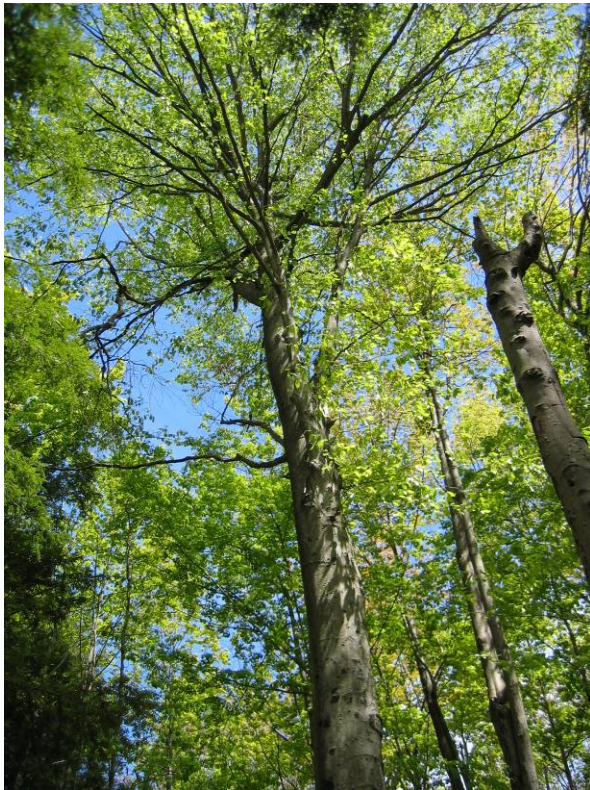
*Natural. Valued. Protected.*

## Secured Conservation Lands data

- ❑ Enables participating conservation agencies to use a secure environment to store, display and share information on lands that have been secured (acquired) for conservation purposes
- ❑ Stored in NRVIS, made available through web portal
- ❑ 46 CAs, land trusts and other ENGOs signed on
- ❑ Access limited to these groups and MNR
- ❑ Contact Ryan Petrauskas, [ryan.petrauskas@ontario.ca](mailto:ryan.petrauskas@ontario.ca), Stewardship and Conservation Incentives Section, to enquire

*Natural. Valued. Protected.*

## NHIC Natural Areas Database



Peter's Woods

- ❑ 9608 records
- ❑ 46 different area types (e.g. national and provincial parks and conservation reserves, ANSIs, evaluated wetlands, Conservation Authority areas, IBP sites, World Biosphere Reserves ...)
- ❑ Tabular data fields: location, area, vegetation communities, tracked species and vegetation communities, representation, condition, ecological function, threats, management, IUCN category ...
- ❑ Spatial data are managed in NRVIS
- ❑ Query using Biodiversity Explorer
- ❑ Contact [mike.mcmurtry@ontario.ca](mailto:mike.mcmurtry@ontario.ca) or [bonnie.henson@ontario.ca](mailto:bonnie.henson@ontario.ca) to enquire

*Natural. Valued. Protected.*

## **NHIC interest in data integration and reporting**

- ❑ NHIC has a mandate to be the central repository for natural heritage information on species, communities and natural areas in Ontario
- ❑ It is only through integration of the databases, sharing data resources and working with our partners that we can provide access to the most up-to-date, relevant and accurate information
- ❑ We want to see this information used to inform conservation actions

*Natural. Valued. Protected.*

## **You can access and contribute to these data resources**

- ❑ Your organization may be already be a member of the Ontario Geospatial Data Exchange (OGDE)
- ❑ You can query the data using Biodiversity Explorer on the NHIC website (<http://nhic.mnr.gov.on.ca/> )
- ❑ Contribute data and reports to the NHIC
- ❑ Join the SCL group
- ❑ Be part of the conservation “community of practice”

*Natural. Valued. Protected.*

## **Desired attributes of state of natural areas report**

- ❑ Repeated at regular intervals
- ❑ Cover a broad spectrum of natural heritage attributes
- ❑ Recognize the conservation accomplishments of non-governmental, as well as governmental, organizations
- ❑ Concise
- ❑ Combine spatial and descriptive information
- ❑ Are built on and contribute to reporting at other scales

*Natural. Valued. Protected.*

## What are the key things we need to know?

- ❑ Number, type and spatial extent of natural areas
- ❑ Management goals and practices
- ❑ Representation
- ❑ Biodiversity
- ❑ Ecological functions
- ❑ Condition
- ❑ Threats
- ❑ Trends



*Natural. Valued. Protected.*

## Challenges to generating such reports

- ❑ Built on a foundation of up-to-date databases containing the right information
- ❑ Require integration of multiple databases within MNR and other organizations
- ❑ Require collaboration and data-sharing
- ❑ Require appropriate metrics for biodiversity and condition of natural areas
- ❑ Sustained commitment and resources

*Natural. Valued. Protected.*

## Working on Integration

- ❑ Synchronizing records in NADb with NRVIS
- ❑ With our next NHIC data upload we plan to make digital reports available through an ODMS link
- ❑ Proposing a common set of natural heritage attribute fields for each natural area type in NRVIS
- ❑ Modelling additional natural areas in NRVIS
- ❑ Recognize that further improvements are needed in public-facing websites
- ❑ Talking with data custodians about how to integrate our databases and develop appropriate indicators

*Natural. Valued. Protected.*

## Building capacity - what's involved?

- ❑ Working with our conservation partners within and outside MNR
- ❑ Reporting on conservation achievements on private land
- ❑ Identifying/developing appropriate indicators on the condition of natural areas
- ❑ Contributing reports and data to the NHIC and SCL
- ❑ Feedback welcome

