



# Ottawa's Great Forest The South March Highlands

**South March Highlands – Carp River Conservation Inc.**

*[All photos in this presentation were taken in or of the South March Highlands]*



# National Capital's 3 Major Eco-Corridors

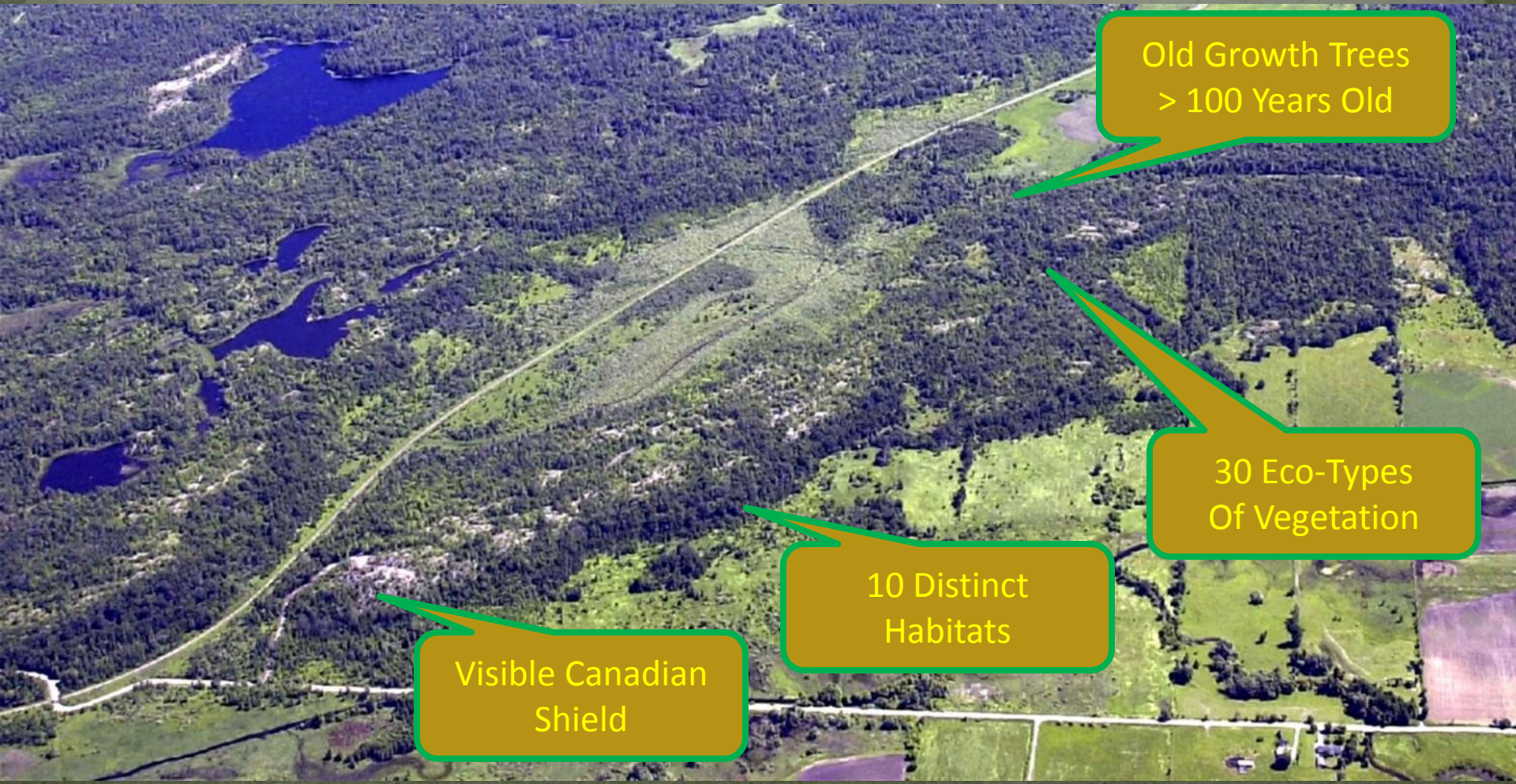




# A Wild Island Inside Ottawa

10,000 Years Old

3x Larger Than Stanley Park



Old Growth Trees  
> 100 Years Old

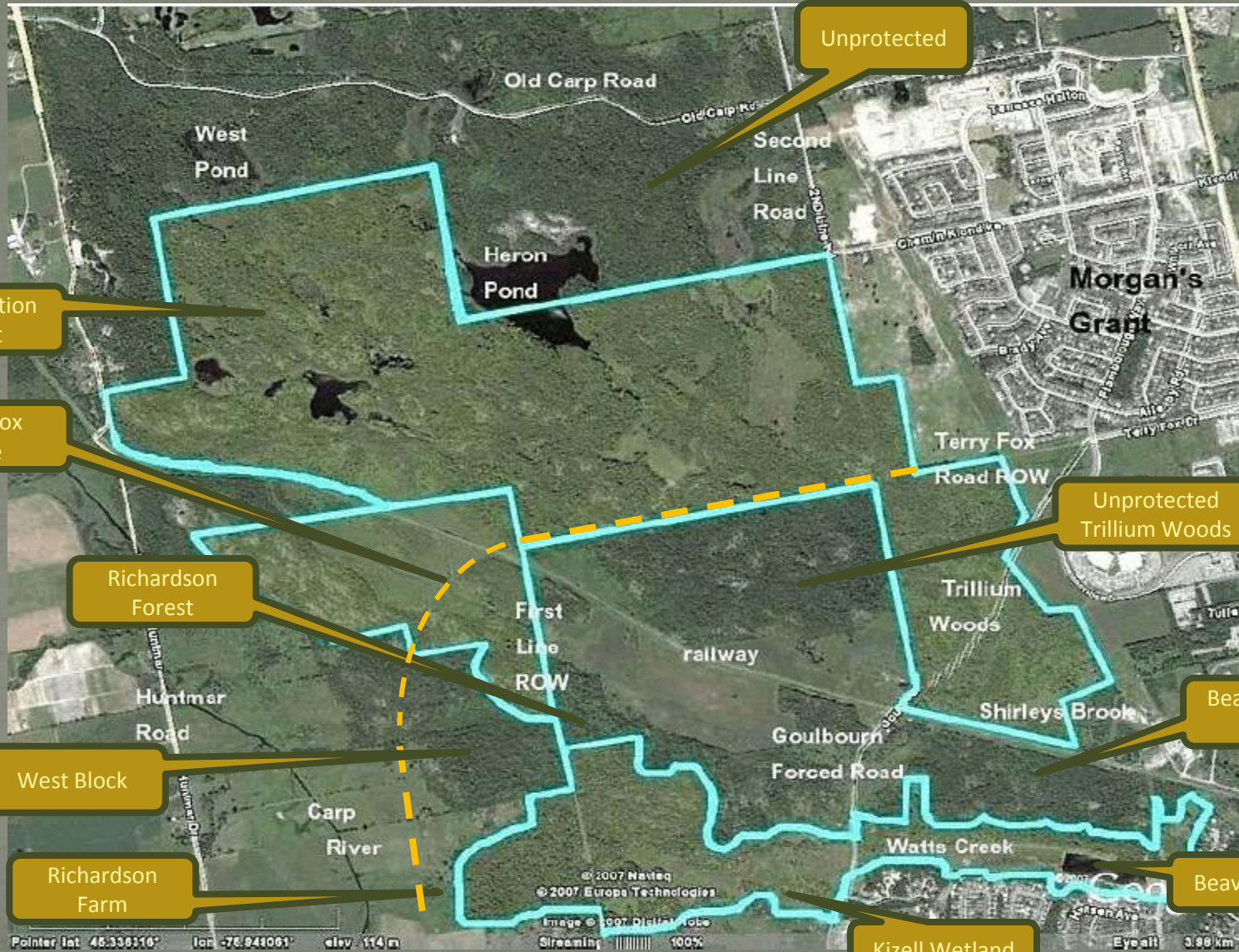
30 Eco-Types  
Of Vegetation

10 Distinct  
Habitats

Visible Canadian  
Shield



# South March Highlands



Conservation Forest

Terry Fox Drive

Richardson Forest

West Block

Richardson Farm

Unprotected

Unprotected Trillium Woods

Beaver Pond Forest

Beaver Pond

Kizell Wetland



# Rich GeoHeritage



Nepean Sandstone Pavement Barren

Shield Rock Is 1 Billion Years Old



Visible Fossils

**LEGEND**

- TERRY FOX DRIVE SITE
- ROADWAY
- RIVER OR STREAM
- WATERBODY
- FLOODPLAIN COMPENSATION AREA

**SURFICIAL GEOLOGY**

- 1a TILL, PLAIN WITH LOCAL RELIEF <5m
- 1b TILL, DRUMLINIZED
- 2a TILL, HUMMOCKY TO ROLLING WITH LOCAL RELIEF 5 TO 10 m
- 2b ICE CONTACT STRATIFIED DRIFT: GRAVEL & SAND
- 3 OFFSHORE MARINE DEPOSITS: CLAY, SILTY CLAY & SILT (GULLIES & RAVINES)
- 3\_g OFFSHORE MARINE DEPOSITS: CLAY, SILTY CLAY & SILT (GULLIES & RAVINES)
- 3\_b OFFSHORE MARINE DEPOSITS: CLAY & SILT UNDERLYING EROSIONAL TERRACES (GULLIES & RAVINES)
- 4 DELTAIC AND ESTUARY DEPOSITS: MEDIUM TO FINE GRAINED SAND (GULLIES & RAVINES)
- 5a DELTAIC AND ESTUARY DEPOSITS: MEDIUM TO FINE GRAINED SAND (GULLIES & RAVINES)
- 5b NEARSHORE SEDIMENTS: GRAVEL, SAND & BOULDERS
- 5c NEARSHORE SEDIMENTS: FINE TO MEDIUM GRAINED SAND
- 6a ALLUVIAL DEPOSITS: SILTY SAND, SILT, SAND & CLAY (GULLIES & RAVINES)
- 6b ALLUVIAL DEPOSITS: SILTY SAND, SILT, SAND & CLAY (GULLIES & RAVINES)
- 6c ALLUVIAL DEPOSITS: MEDIUM GRAINED STRATIFIED SAND WITH SOME SILT
- 6d ALLUVIAL DEPOSITS: MEDIUM GRAINED STRATIFIED SAND WITH SOME SILT (GULLIES & RAVINES)
- 7 ORGANIC DEPOSITS: MUCK & PLAT
- d DUNE
- c\_0 DUNE (GULLIES & RAVINES)
- 8 LANDSLIDE AREA
- 8\_g LANDSLIDE AREA (GULLIES & RAVINES)
- 9 BEDROCK: INTRUSIVE & METAMORPHIC
- 10 BEDROCK: LIMESTONE, DOLOMITE, SANDSTONE & LOCAL SHALE
- 11 BEDROCK: LIMESTONE, DOLOMITE, SANDSTONE & LOCAL SHALE (GULLIES & RAVINES)
- 12 WATER

**DATE:** 8 figure 13, h

**LANGER, J. R., URBAN GEOLOGICAL SURVEY OF CANADA, OPEN FILE 65266, 2007**

**Location:** Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 18

**SCALE:** 1:20,000 METRES

**PROJECT:** TERRY FOX DRIVE PERMIT TO TAKE WATER

**TITLE:** SURFICIAL GEOLOGY



# Only Location In Ottawa with Exposed Canadian Shield





# Distinctive and Unique Formations

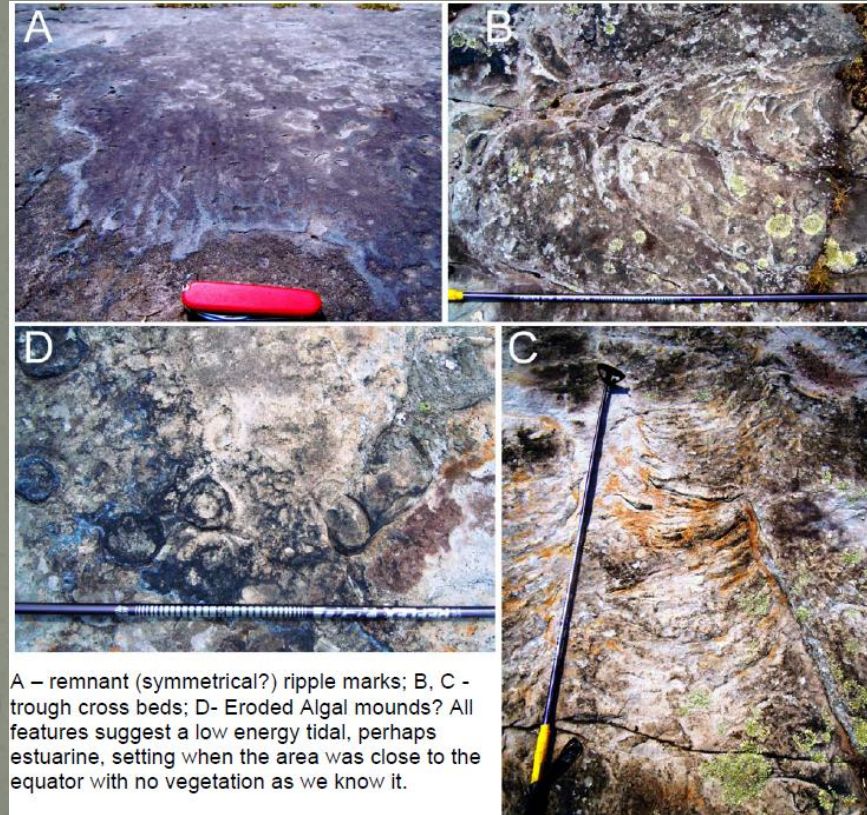




# Glaciation & Ancient Sea on Display



In area B, glacial chatter marks (above); striations (top right) and crescent gouges are evident. Only chatter marks and crescent gouges provide ice movement direction. The striated surface retains a remnant mm-thick glacial pavement of semi-fused quartz grains.

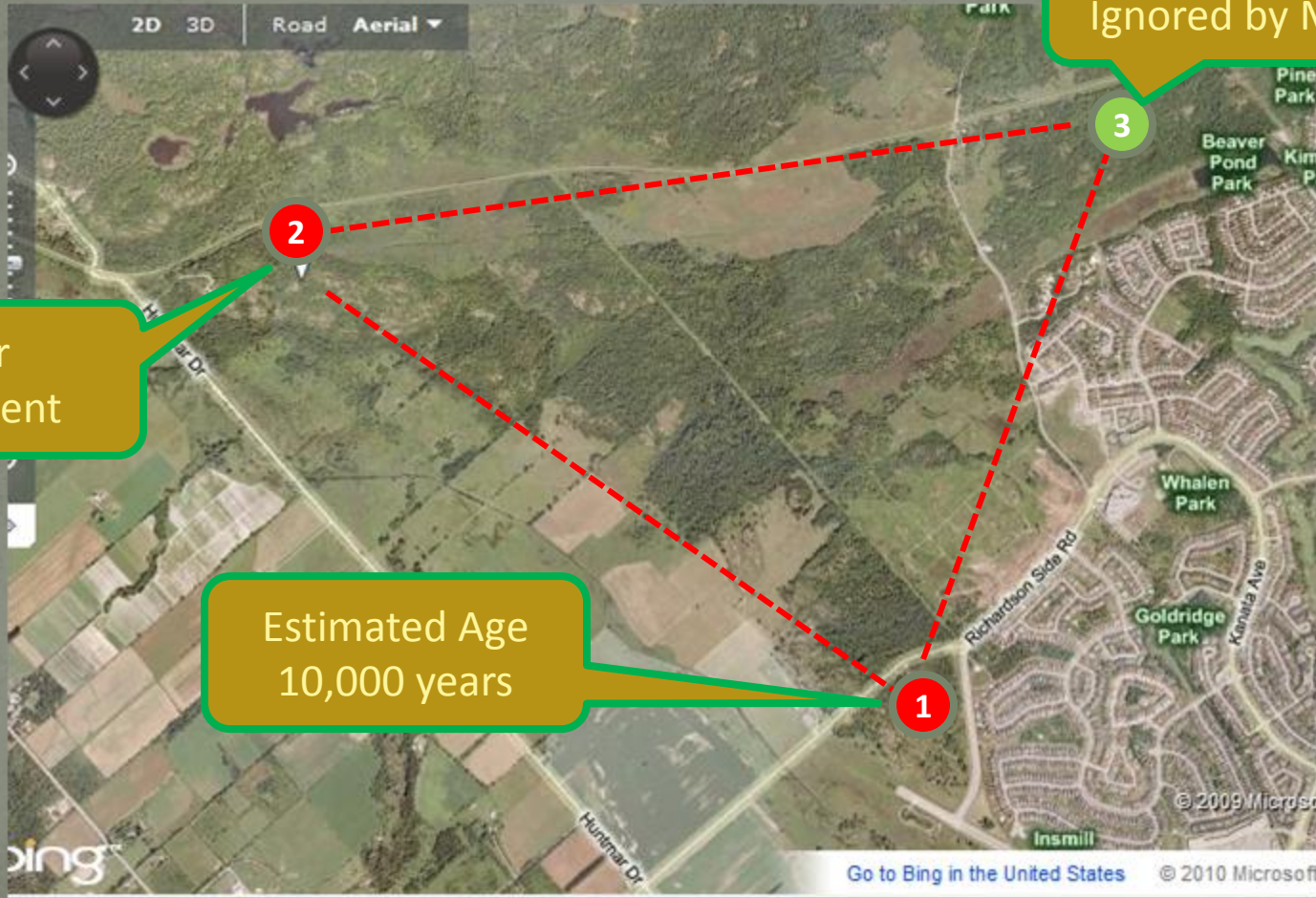


A – remnant (symmetrical?) ripple marks; B, C - trough cross beds; D- Eroded Algal mounds? All features suggest a low energy tidal, perhaps estuarine, setting when the area was close to the equator with no vegetation as we know it.



# Cultural Heritage

## Ancient Archaeological Sites





# Euro-Canadian Sites Too



**McMurtry's Tannery  
(Circa 1860)**

## **Also:**

- **Several 19<sup>th</sup> Century homestead sites dating back to 1820 (as old as Pinhey's Point)**
- **Richardson Stone House dating back to approx. 1860 (as old as the Log Farm)**
- **A Feldspar Mine dating approximately to 1919-1921 (unique in Ottawa)**



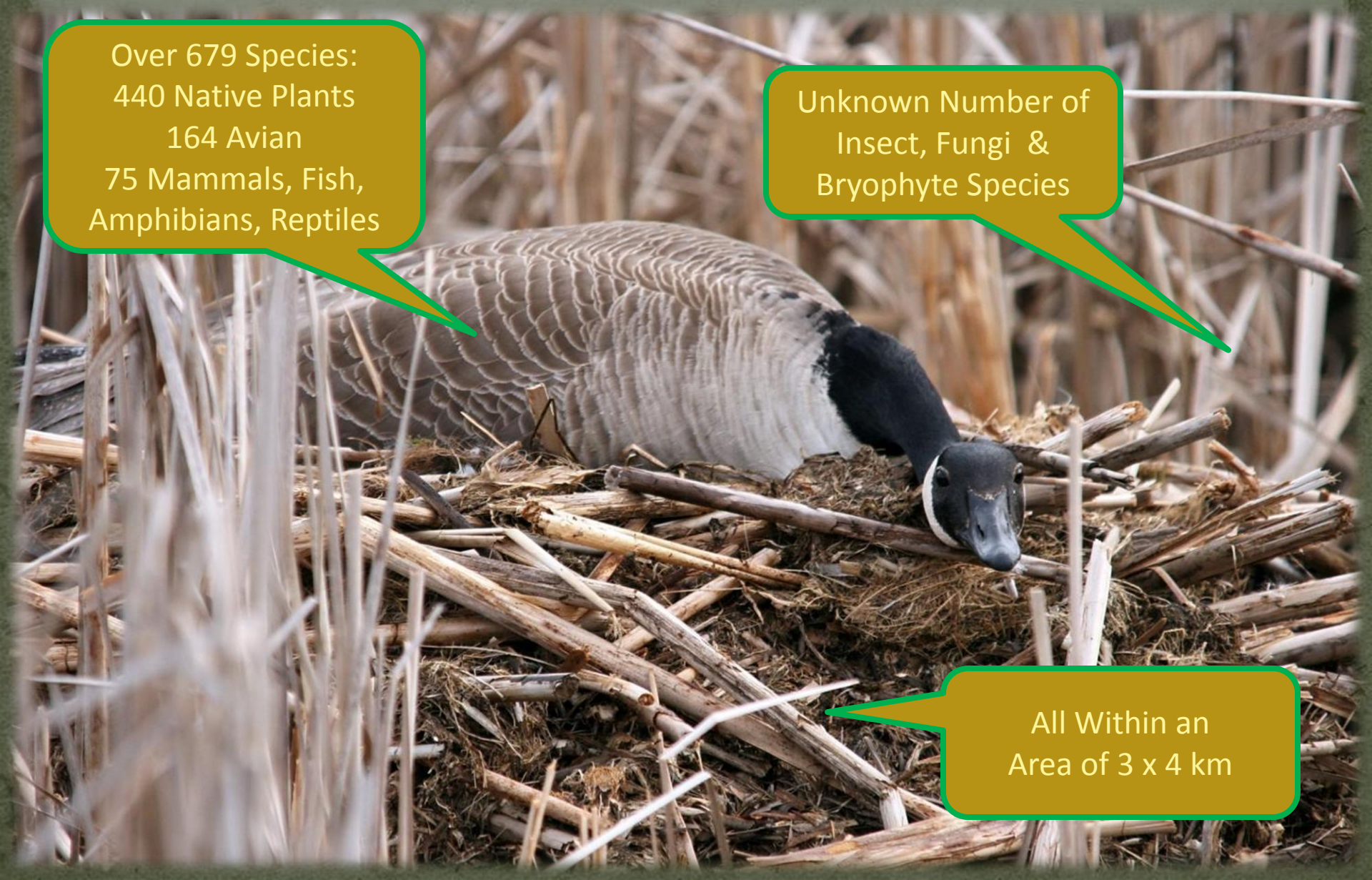
# *Natural Heritage: Densest Bio-Diversity In Ottawa*

[Brunton, 2008]

Over 679 Species:  
440 Native Plants  
164 Avian  
75 Mammals, Fish,  
Amphibians, Reptiles

Unknown Number of  
Insect, Fungi &  
Bryophyte Species

All Within an  
Area of 3 x 4 km





# Provincially Significant Life Science Area

895 Hectares  
Rated ANSI

Highest Floristic  
Diversity of Any  
Natural Area in  
Ottawa

5.08 = Highest  
Coefficient of  
Conservation in  
Ottawa

440 Species  
Native Vascular Plants

26 Species  
Traditionally Used for  
Native Medicine

2 Endangered  
6 Provincially Rare  
64 Regionally Rare  
50 Uncommon  
Native Vascular Plants





# Ponds, Meadows & Forests



*“Trillium Woods, which is like a chunk of the Gatineau in the urban landscape of Ottawa, with rich plant and animal life found nowhere else in the urban part of the City”*

Ottawa Urban Natural Areas Environmental Evaluation  
[Muncaster & Brunton, 2008]



# Old Growth Commonly Found





# No Comprehensive Biological Survey





# + Provincially Significant Wetland Complex

114 Hectares  
Rated ANSI

164 Avian Species  
Observed

1 Endangered  
4 Threatened  
5 Special Concern  
30 Regionally Rare  
Avian Species





# 136 Bird Species Nest in the SMH





# Undocumented Number of Vernal Pools

Over 26 identified species of  
Herpetofauna

3 Threatened Species  
2 Special Concern

Insect of Special Concern  
(Monarch Butterfly)





# 19 Known Species At Risk

## Endangered or Threatened

- American Ginseng
- Butternut
- Loggerhead Shrike
- Bobolink
- Whip-poor-will
- Golden Winged Warbler
- Olive Sided Flycatcher
- Western Chorus Frog
- Blanding's Turtle
- Eastern Musk Turtle

## Special Concern

- Bridle Shiner
- Short Eared Owl
- Black Tern
- Common Nighthawk
- Snapping Turtle
- Eastern Milksnake
- Monarch Butterfly
- Bald Eagle
- Red Headed Woodpecker





# 11 Species Already Extirpated From SMH

- Cathcart's Woodsia
- Oregon Woodsia
- Spiny Coon-tail
- Adder's-tongue Fern
- Back's Sedge
- Large Duckweed
- Long-spurred Violet
- Showy Orchis
- Southern Arrow-wood
- Strawberry-blight
- Virginia Spring Beauty



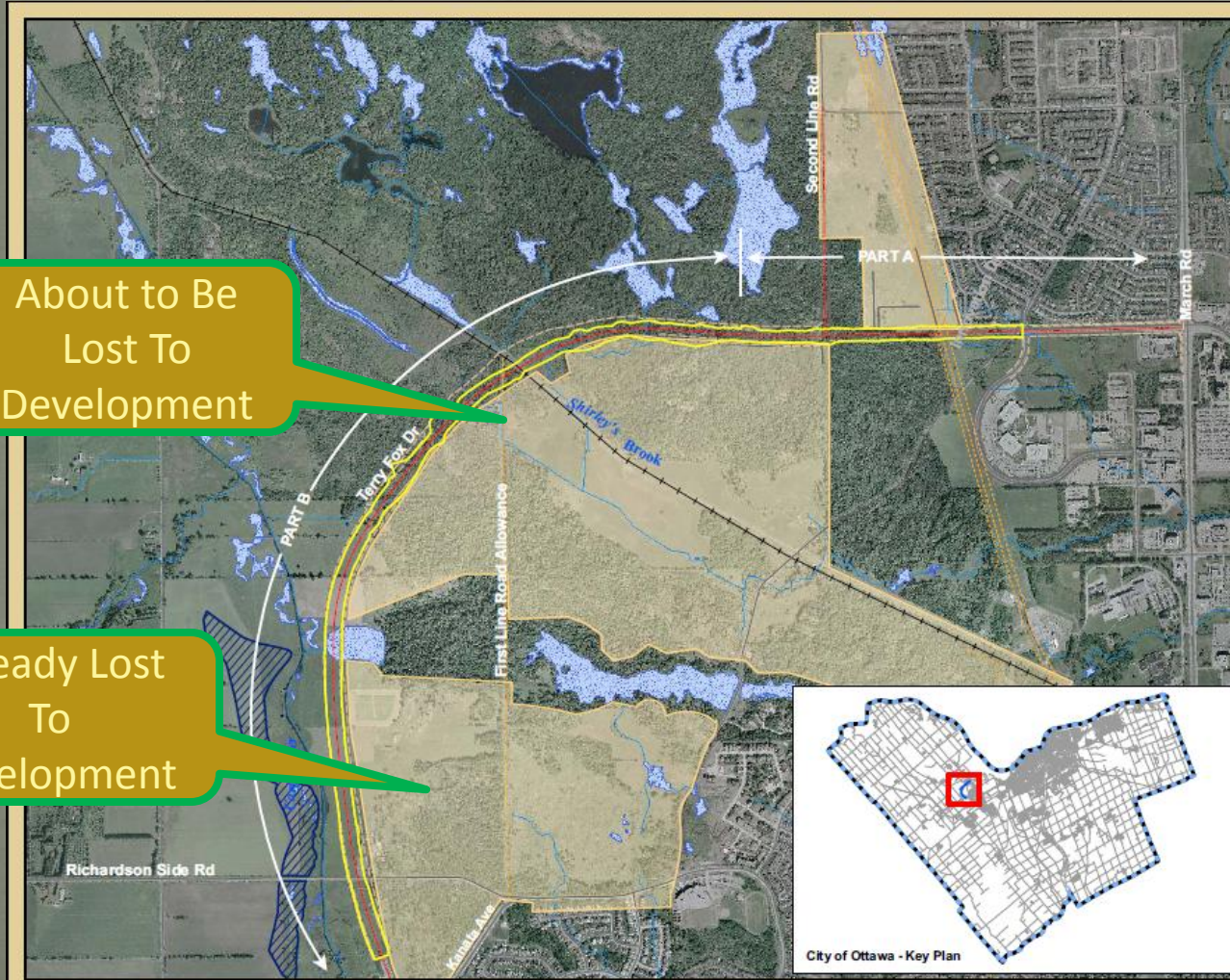


# 18 Candidate SAR Also Found in SMH

- 
- Evening Grosbeak
  - Eastern Wood Peewee
  - Wood Thrush
  - Bank Swallow
  - American Bullfrog
  - American Kestrel
  - Belted-Kingfisher
  - Eastern Red-Backed Salamander
  - Field Sparrow
  - Blue-Spotted Salamander
  - American Toad
  - Bluntnose Minnow
  - Boreal Chickadee
  - Killdeer
  - Midland Painted Turtle
  - Northern Two-Lined Salamander
  - Green Frog
  - Wood Frog



# Development Threatens ½ The SMH



Terry Fox Drive Road Corridor  
Canadian Environmental Assessment Screening  
Part A & B  
Figure 1: Study Areas

### Legend

- Grading Limit Footprint
- TFD Right of Way
- Road Centreline
- Railway
- Hydro Lines
- Wetland
- Floodplain Cut Area
- Watercourse
- Future Land Development



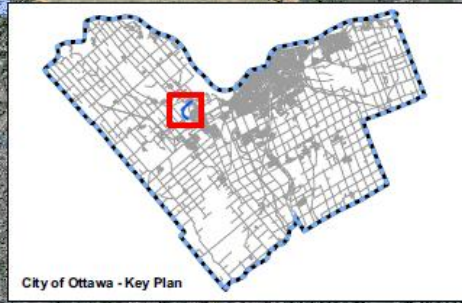
Meters  
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1:15,000

Projection: UTMNAD83, Zone 18

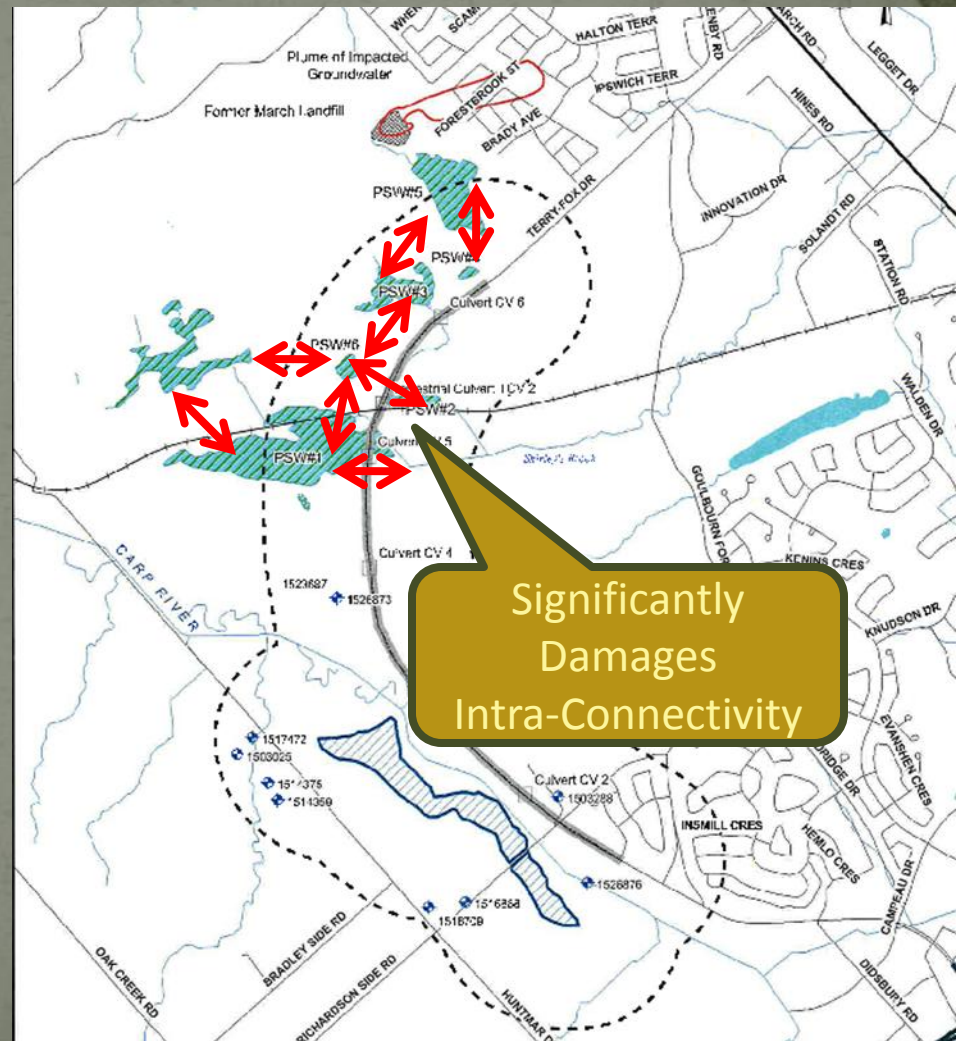
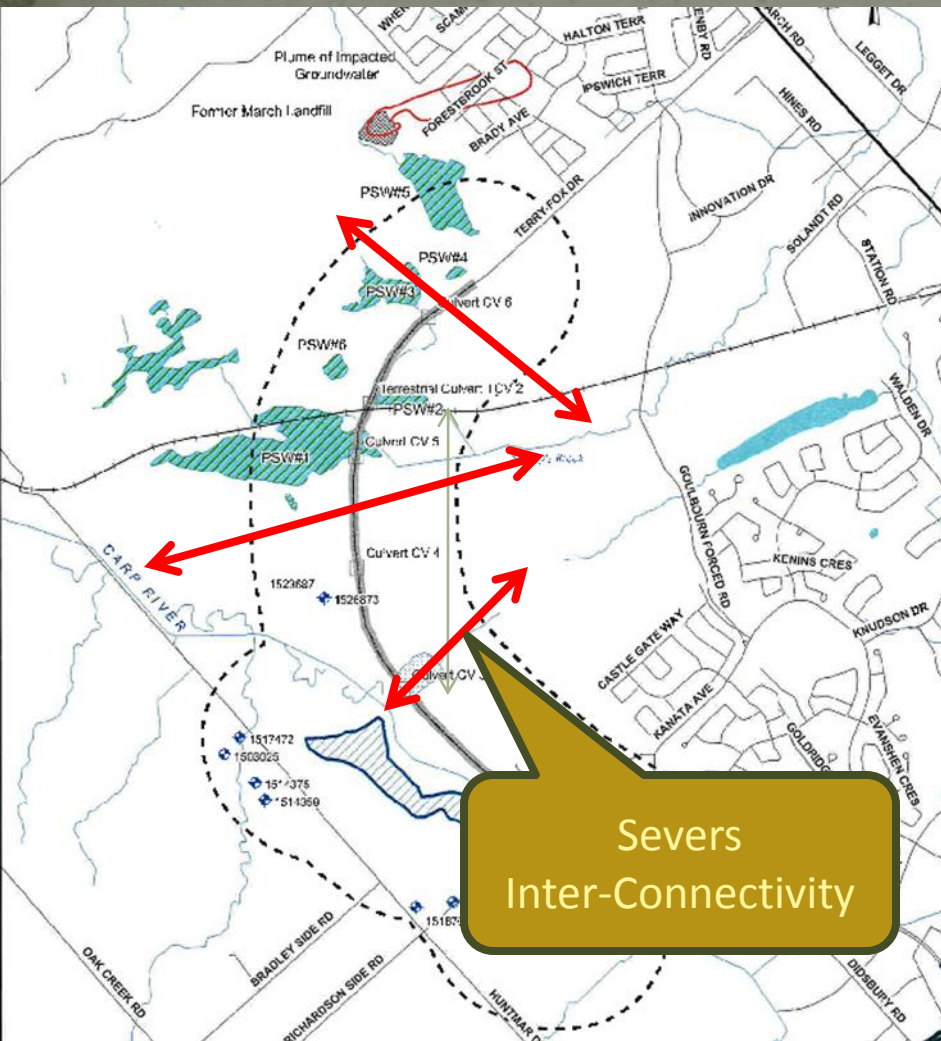


Project Name: Terry Fox Drive EA  
Map Created By: AZSFG  
Map Checked By: ST  
Date Created: July 14, 2009  
Date Modified: April 1, 2010  
File Name: HGIS091518 - Terry Fox Drive Final Design/Map.mxd/Part B Figures - CEAA 113009/ Figure 1 Study Areas.mxd





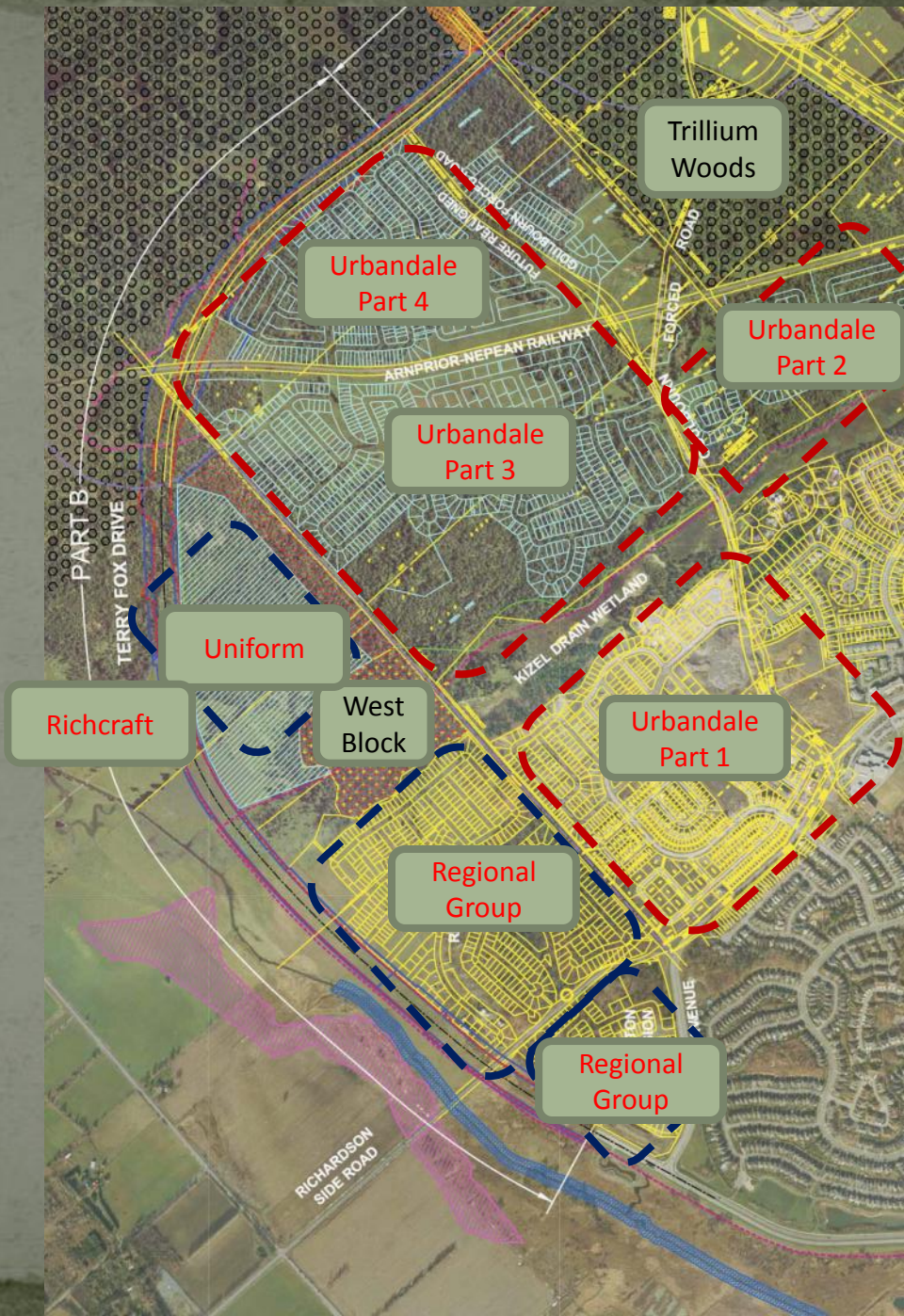
# TFDE's Unmitigated Impact on Eco-Connectivity





# Non-Sustainable Subdivisions Planned

- 1996 Beaver Pond Dam
  - No MoE Environmental Assessment
  - No MNR LIRA permit
  - No DFO permit for dredging the lake
- 2006 Kizell converted into a SWM Cell
  - No Environmental Assessment
  - No pollution control
  - Contradicts UNF wetland designation
- 2010 Regional approved locating SWM Facility in Carp River Floodplain
  - Cannot possibly function during floods
- Future plans depend on diversion of storm water from Shirley's Brook to Kizell
  - Not permitted by Subwatershed Plan
  - Increases Flood risk in areas already subject to flooding





# Flooding Risk Is Real

- 1500 Homes Flooded July 24, 2009 in Stittsville, Kanata North, Kanata South, West-Carleton
- Common Causes
  - Failure to account for cumulative storm water flows from subdivisions
  - Failure to respect recommendations of applicable Subwatershed Plans
  - Excessive removal of floodplain and wetlands
- Planned subdivisions in the SMH are NOT in accordance with applicable Subwatershed Plans



TFD  
July 24, 2009



Beaver Pond  
May 2010



# Opposition to Development

- Coalition To Protect South March (5000+ people)
- David Suzuki Foundation
- Sierra Club of Canada
- Greenbelt Coalition
- Canadian Parks & Wilderness
- Federation of Community Associations
- Green Party of Canada
- Ottawa Riverkeeper
- Ecology Ottawa
- Ottawa Valley Field Naturalists
- Ottawa Carleton Wildlife Centre
- Greenspace Alliance
- and many others





# Alternative Vision of Eco-Corridors Revitalizing The Emerald Necklace



11 Eco-Corridors  
Linking  
7 Ecological  
Reservoirs



# Stewardship for Ottawa's Great Forest

- South March Highlands is the most accessible of the major forests in Ottawa:
  - Malborough Forest
  - Larose Forest
- SMH has significant value as Green Infrastructure
- Requires active stewardship to:
  - Manage responsible use
  - Protect sensitive areas
  - Maximize educational value
  - Maximize recreational value
  - Celebrate eco-tourism value





# Stewardship Plan for Ottawa's Great Forest

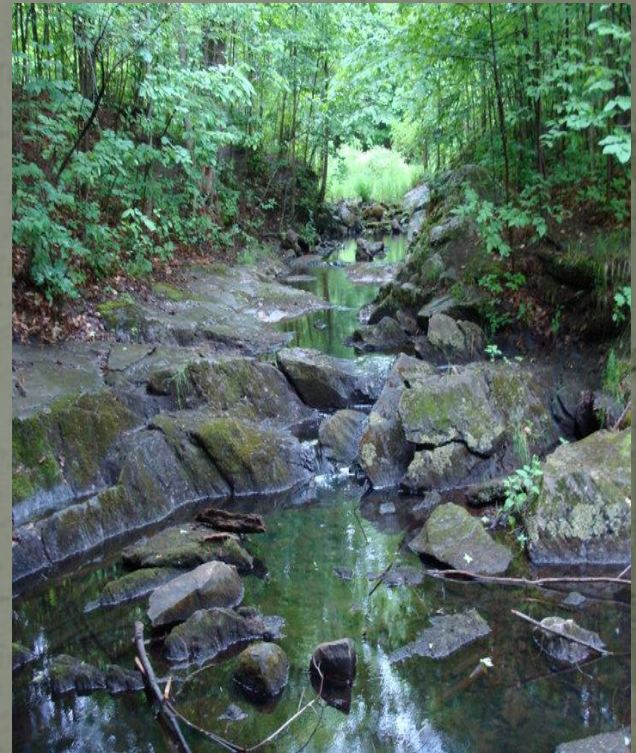
- Acquire SMH from Developers
  - City of Ottawa acquires Beaver Pond Forest
  - NCC acquires remaining areas as part of Greenbelt Master Plan
- South March Highlands Carp River Conservation will
  - Manage the area at no cost to the City using volunteers
  - Education and recreation programs in partnership with Kanata Recreation Centre
  - Eco-tourism in partnership with Ottawa Tourism Bureau
- Estimated Economic Benefit
  - \$25 Million / year
  - Zero Cost to taxpayers





# Value of Green Infrastructure

- Value of replenishing Natural Resources
  - \$2 M / year for cleaning Air & Water, pollination, resisting invasive species [Suzuki Foundation estimate]
- Educational Value
  - \$0.3 M / year ongoing reduced travel cost for school field trips based on 2 hour travel time reduction
  - \$priceless: able to experience nature rather than read about it
- Recreational Value
  - \$0.5 M / year user fees for outdoor recreation programs managed by the Kanata North Recreation Centre (KNRC) based on \$5 / person / day
- Eco-Tourism Value
  - \$25 M / year increased economic value from 1% of 7.8 M visitors staying 1 extra day to explore Ottawa's Great Forest





# Advantage of Green Infrastructure

- Black Infrastructure must be rebuilt / repaired periodically
  - Green Infrastructure is perpetually replenished by nature
- Stewardship Plan uses volunteer resources to partner & deliver Green Infrastructure value at Zero cost to taxpayers
  - Forest Management in conjunction with City staff
  - Educational Programs in partnership with School Boards
  - Recreation Programs in partnership with KNRC
  - Eco-Tourism Promotion in partnership with Ottawa Tourism





# Will You Help Defend This Forest?

4742 people via Facebook  
1025 people via Twitter  
183 people via E-Mail

All Major Ecological  
Groups in Ottawa

Ottawa School Boards  
Ottawa Macro-Ecology  
Canadian BioDiversity

All of the Community  
Associations in Ottawa