



The Role of a Terrestrial Ecologist in Natural Channel Design

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Natural Channel Systems

4th International Conference



Overview

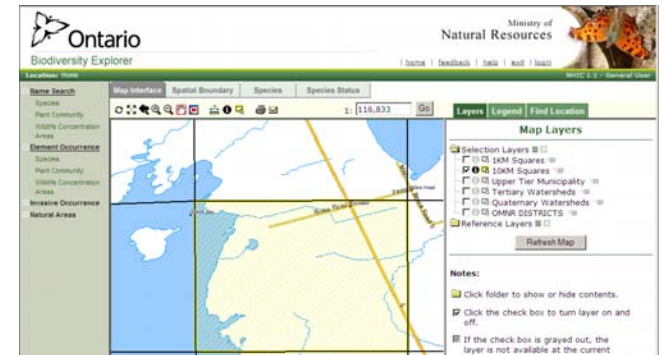
- Prior to channel design
 - Background review
 - Field surveys
 - Existing Conditions Report
- Planting Plans
 - Considerations for species selection
- Timing Windows and Impact Mitigation





Background Information

- MNR
- Conservation Authority
- NHIC



Ontario Natural Heritage Information Centre Biodiversity Explorer

Species Element Occurrence Search (16 records found) Sort Order: Phylogenetic Ascending

Taxon	Family	Scientific Name	Common Name	Rank		At Risk Status			
				Global (G-rank)	Ontario (O-rank)	Committee on the Status of Endangered Wildlife in Canada (COSEWIC)	Species At Risk in Ontario (SARO)	# of EOs	EO Summary Report
Reptiles and Turtles	Coleubidae	Lamprolepis triangulum	Milksnake	G5	S3	SC	SC	1	Report
Reptiles and Turtles	Coleubidae	Thamnophis sauritus	Eastern Ribbonsnake	G5	S3	SC	SC	2	Report
Reptiles and Turtles	Viperidae	Sistrurus catenatus	Massasauga	G3G4	S3	THR	THR	1	Report
Slugs and Snails	Pupilloidae	Vertigo parvioria	Classification Uncertain	G4G5G	S2S3			1	Report
Dicotyledons	Asteraceae	Anagallis plantaginifolia	Tuberous Indian-plantain	G4G5	S3	SC	SC	2	Report
Ferns and Fern Allies	Asplenaceae	Asplenium ruta-muraria	Wallnut Spinewort	G5	S2			1	Report
Ferns and Fern Allies	Asplenaceae	Asplenium scolopendrium v.	Hart's-tongue Fern	G4T3	S3	SC	SC	1	Report
Dicotyledons	Asteraceae	Cirsium hillii	Hill's Thistle	G3	S3	THR	THR	4	Report
Monocotyledons	Orchidaceae	Cypripedium arietinum	Ram's-head Lady's-slipper	G3	S3			1	Report
Monocotyledons	Cyperaceae	Eleocharis rostellata	Beaked Spike-rush	G5	S3			1	Report
Monocotyledons	Iridaceae	Iris lacustris	Dwarf Lake Iris	G3	S3	THR	THR	3	Report
Dicotyledons	Linaceae	Linum medium var. medium	Stiff Yellow Flax	G5T3T4	S3?			1	Report
Dicotyledons	Asteraceae	Pectera obovata	Round-leaved Groundsel	G5	S3			1	Report
Ferns and Fern Allies	Pteridaceae	Pellaea atropurpurea	Purple-stemmed Cliff-brake	G5	S3			2	Report
Ferns and Fern Allies	Thelypteridaceae	Phegopteris hexagonoptera	Broad Beach Fern	G5	S3	SC	SC	1	Report

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Export by Spatial Boundary | Export by Element | Export All EOs



Ecological Land Classification (ELC)





Other Surveys

- Breeding birds
- Frogs and toads (MMP)
- Salamanders
- Snakes





Survey Times

- ELC: between May and September
- Salamanders: mid-March – end of April
- Amphibians: 1 night in April, May and June
- Breeding birds: 2 visits more than ten days apart between June 1 and July 7

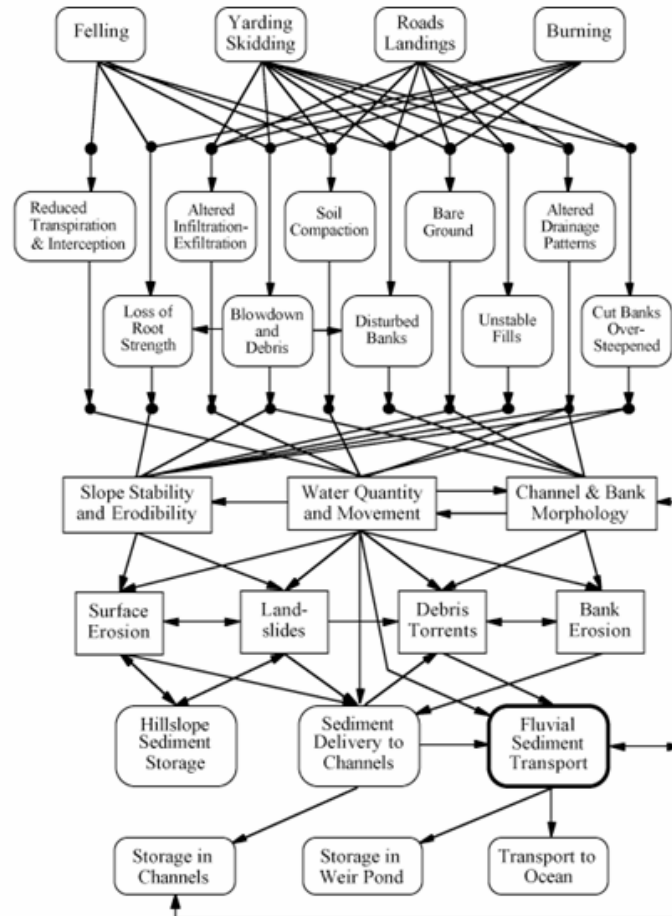


Existing Conditions and Constraints

This is what you are all hoping for:



When you don't get the blank slate





The Plants

- Not rare
- Not have high coefficient of conservatism (cc)
- Suitable soil moisture tolerance
- Collectively emulate a naturally occurring species assemblage
- Be available through local nurseries

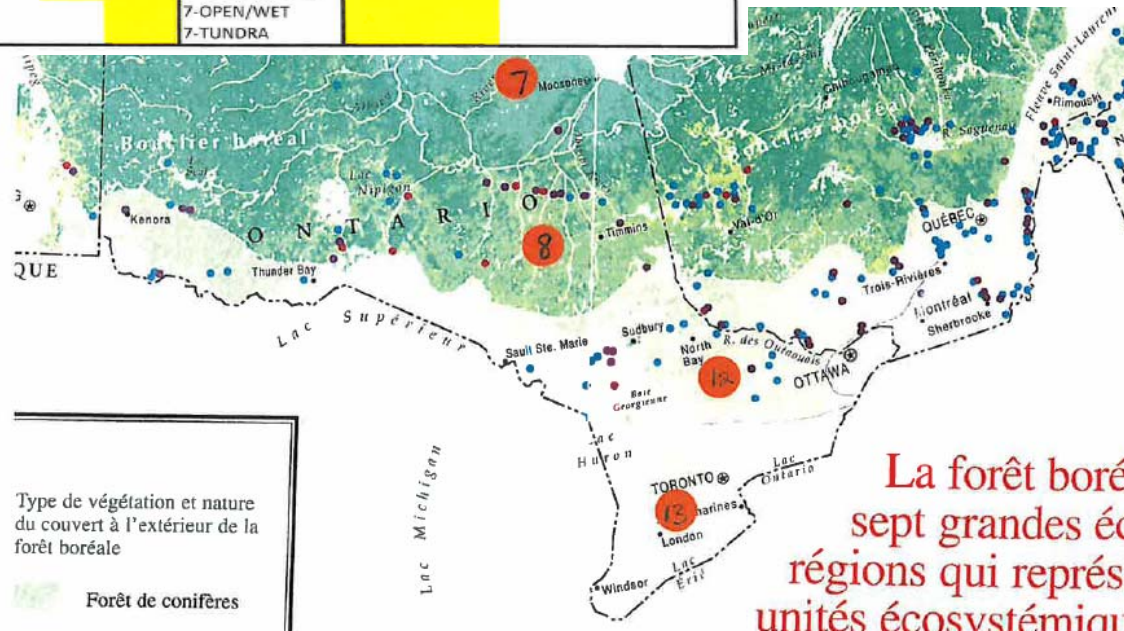




Timing Windows

CLOSED TIME FOR MBCA SPECIES 90% PERCENTILE

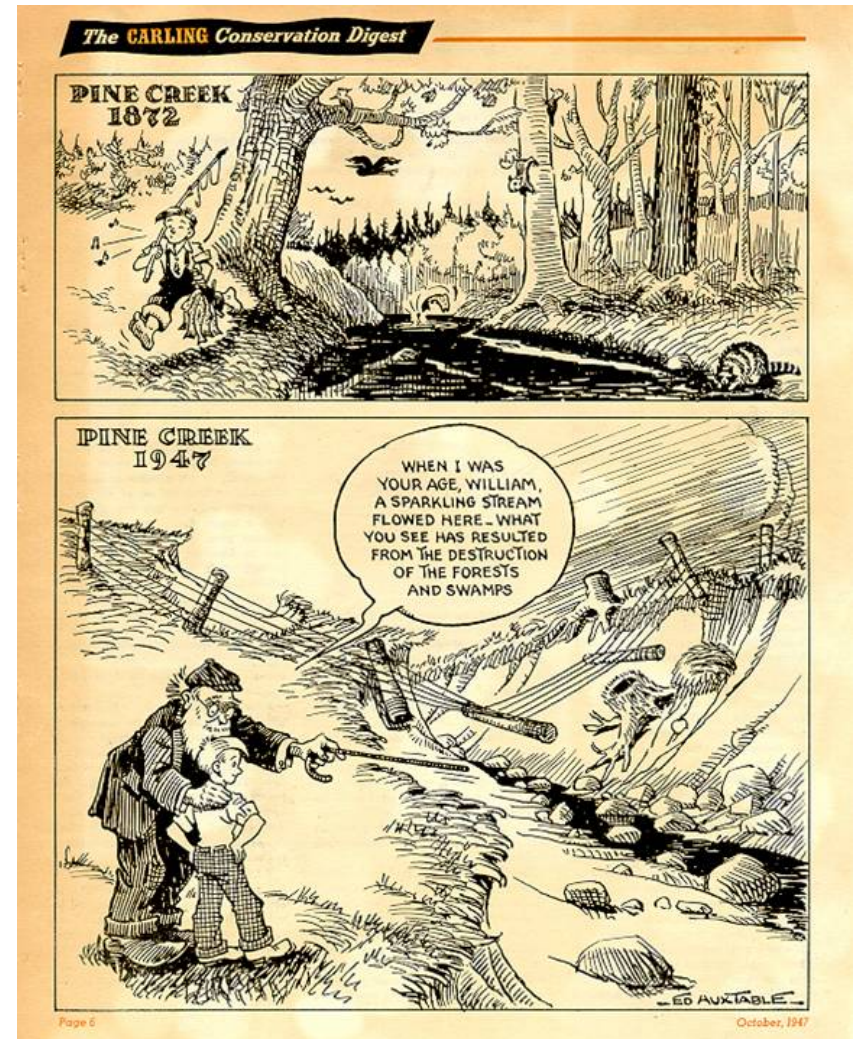
AP 16-23	AP 24-30	MA 1-8	MA 9-15	MA 16-23	MA 24-31	JN 1-8	JN 9-15	BCR-HABITAT	JL 16-23	JL 24-31	AU 1-8	AU 9-15	AU 16-23
[Yellow shaded area]								13-FOREST	[Yellow shaded area]				
								13-SCRUB					
								13-OPEN					
								13-WETLAND					
[Yellow shaded area]								12-FOREST	[Yellow shaded area]				
								12-SCRUB					
								12-OPEN					
								12-WETLAND					
[Yellow shaded area]								8-FOREST	[Yellow shaded area]				
								8-SCRUB					
								8-OPEN					
								8-WETLAND					
[Yellow shaded area]								7-FOREST/SCRUB	[Yellow shaded area]				
								7-OPEN/WET					
								7-TUNDRA					





So What

- Who says we don't know any better?
 - The Role of Terrestrial features on rivers
 - (Carling Conservation Digest - October 1947)





Conclusion

Questions?