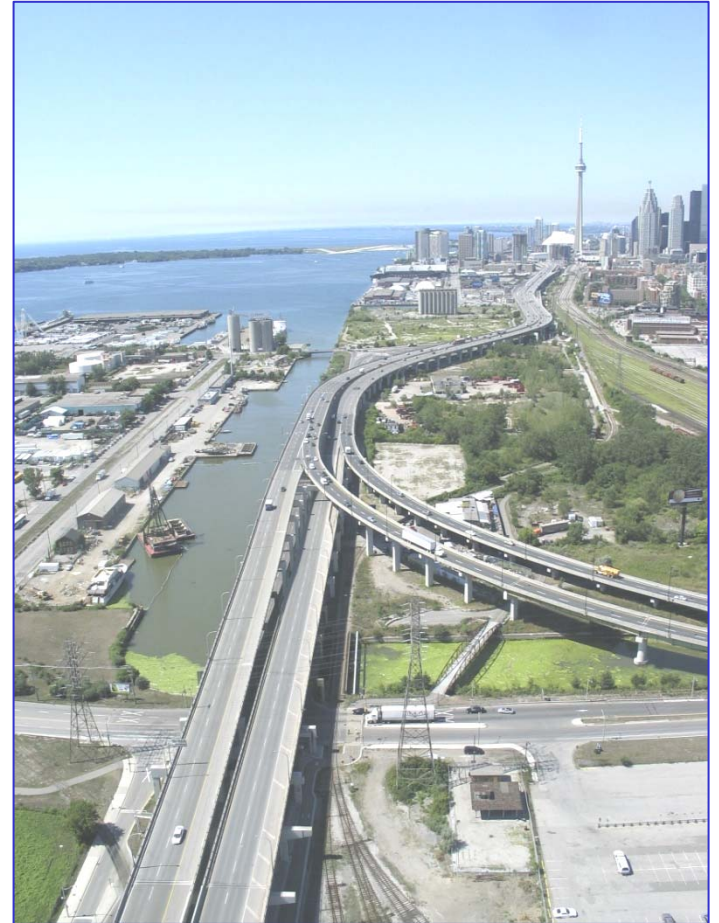


Outcome of Step 3 & 4 and Next Steps in the Environmental Assessment

Public Forum Presentation
March 29, 2008



Presentation Overview

1. Background from Terms of Reference and Steps 1 and 2 of the EA
2. Outcomes of Step 3 (Description of Alternatives)
3. Outcomes of Step 4 (Comparative Evaluation of Alternatives)
4. Next Steps

Background - Terms of Reference

Terms of Reference framework

- Terms of Reference (ToR) provides framework for Environmental Assessment (EA)
- Approved in August 2006
- Defines various elements to be addressed during EA

Background - Terms of Reference

Project Goal

- To establish and sustain the **form, features, and functions** of a natural river mouth within the context of a revitalized City environment while providing flood protection up to the Regulatory Flood.

Naturalization



*Revitalized City
environment*



Flood protection



Background - Terms of Reference

Project Objectives

1. **Naturalize and rehabilitate** the mouth of the Don River utilizing an ecosystem based approach
2. **Provide flood protection** for Spill Zones 1 and 2
3. **Maintain** the provision for **navigation** and **existing flood protection** through sediment, debris and ice management
4. **Integrate existing infrastructure functions** that could not be reasonably moved or removed
5. **Encourage** additional compatible **recreation, cultural heritage opportunities** and public/handicap **accessibility**
6. **Contribute** to the **revitalization** and **sustainability** of the waterfront and **coordinate** with and inform other planning and development efforts and associated certain and foreseeable infrastructure
7. Design and implement this project in a manner **consistent with TWRC's Sustainability Framework** and applicable provincial legislation

Background –
Terms of
Reference

Study Area



Background - Terms of Reference

Alignment of Alternatives

- Four alternatives (discharge points) identified in ToR



- ToR defines alternative 4 (W and S) as having one primary channel and an overflow spillway
- Alternative 2 reflects Central Waterfront Secondary Plan; other alternatives represent minor modifications to that plan

Background - Terms of Reference

Consideration of Alternatives in EA

- ToR allows consideration of discharge points from other planning processes
- Other discharge points already evaluated in ToR will be considered further only if a reasonable range of “alternative methods” cannot be identified

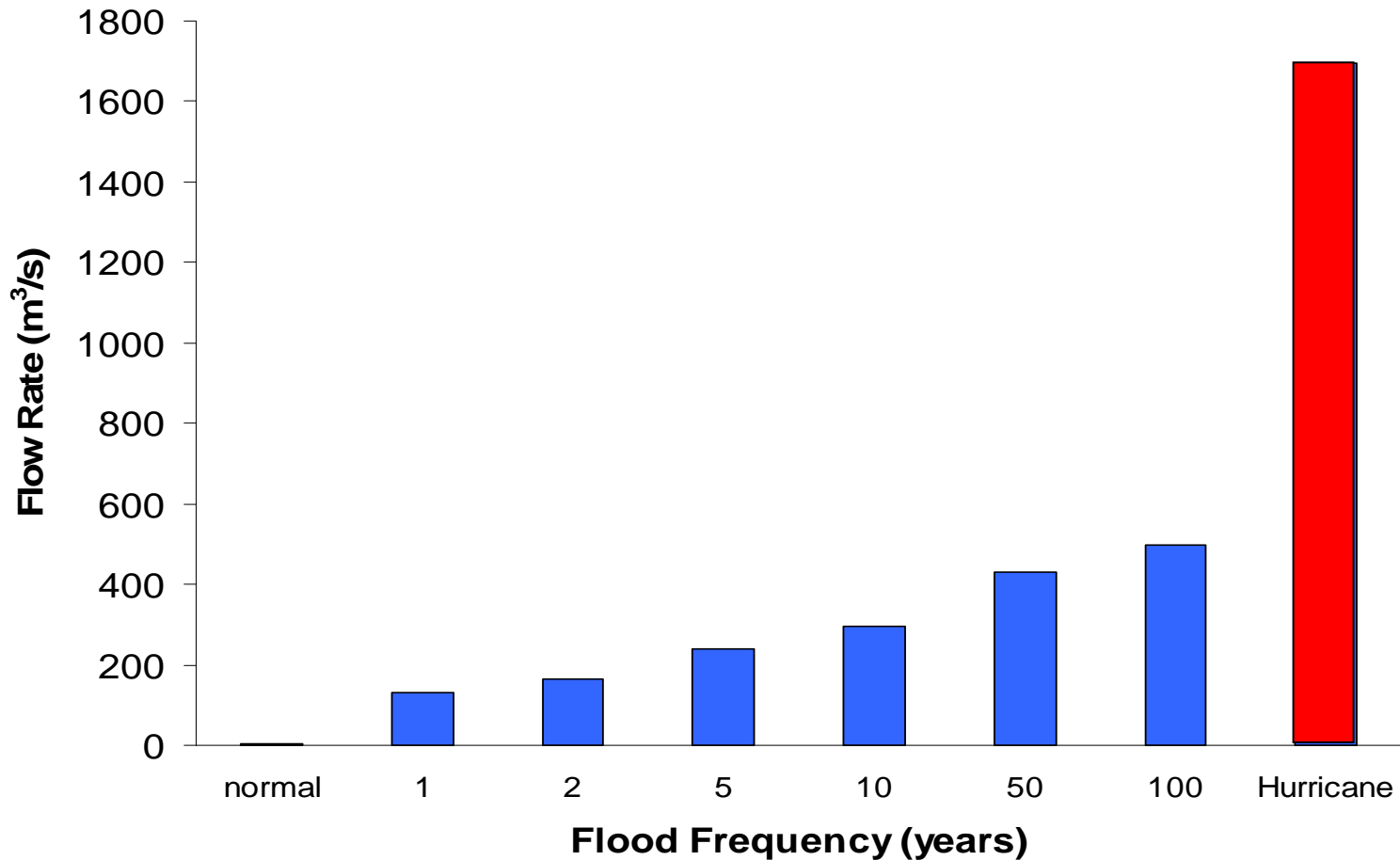
Background – Step 1

Long List of Alternatives

- Develop long list of alternatives based on:
 - Discharge points
 - River characteristics
 - Channel shape (cross-section)
 - Habitat types (what grows in the channel)

Background - Step 1

River Characteristics (Flow Rate)



Background – Step 1

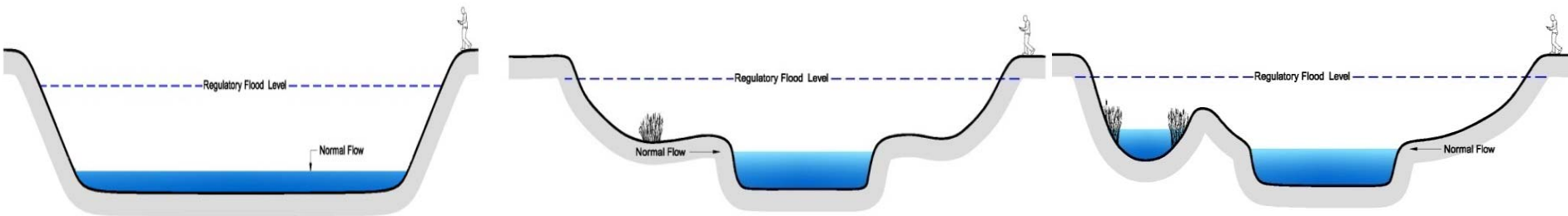
River Characteristics (Sediment and Turbidity)

- Current turbidity levels hinder plant growth
- Over 40,000 m³ of sediment trapped annually in the Keating Channel



Background - Step 1

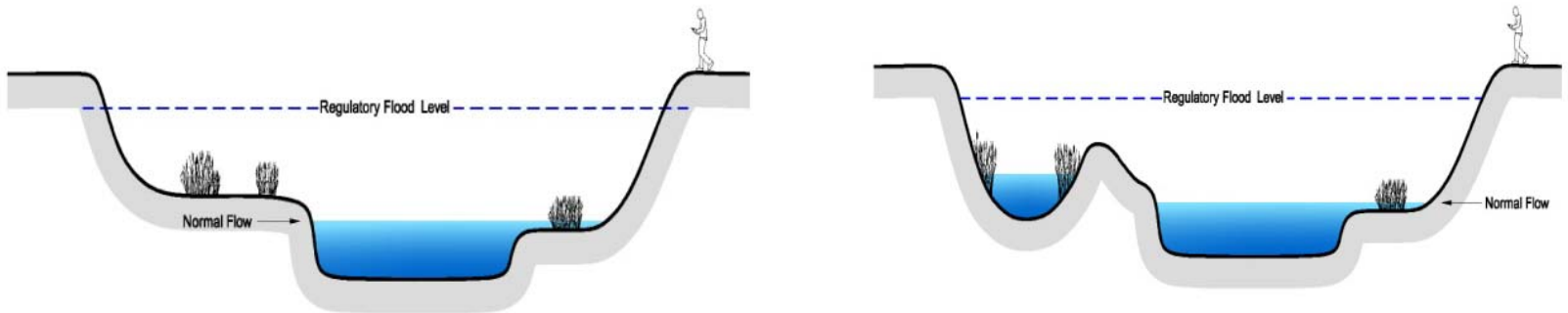
Cross-sections for Primary Channel



Lacustrine Environment (L)

Natural River Channel (R)

Created Wetland (CW)

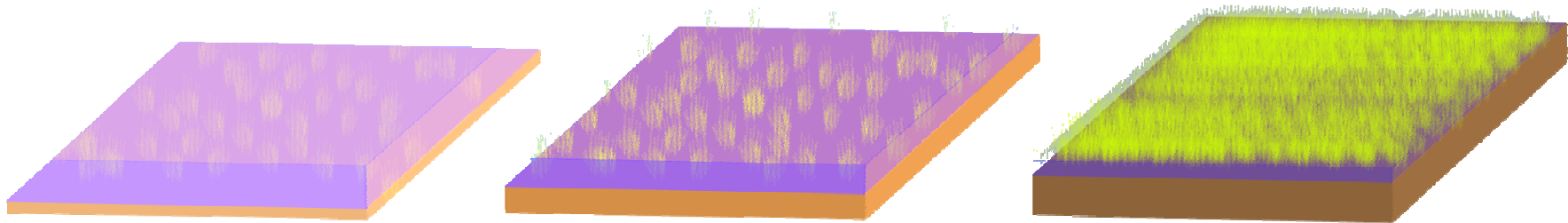


Lacustrine / Natural River (LR)

Lacustrine / Created Wetland (LCW)

Background – Step 1

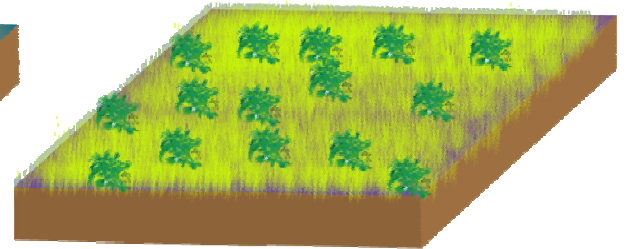
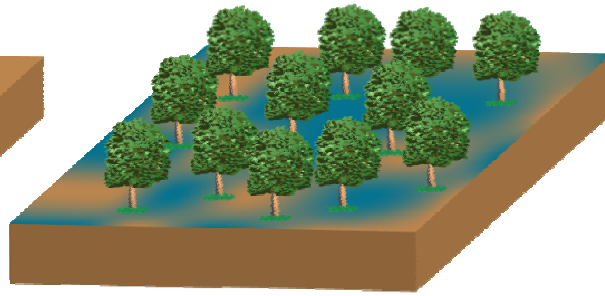
Habitats (vegetation communities)



**Submergent
Marsh**

**Emergent
Marsh**

**Meadow
Marsh**



**Upland
Forest**

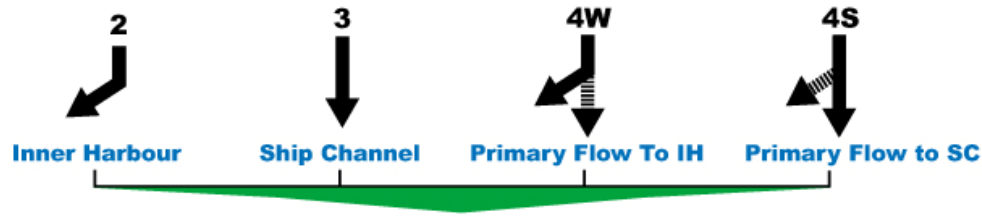
**Treed
Swamp**

**Thicket
Swamp**

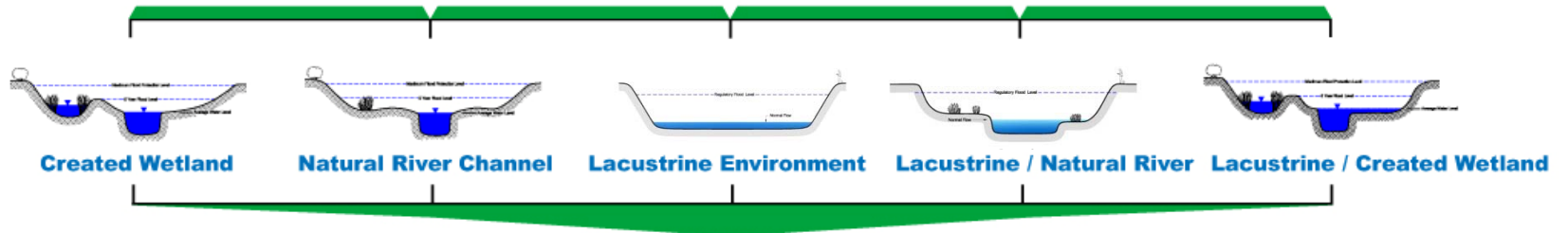
Background - Step 1

Long List of Alternative Methods

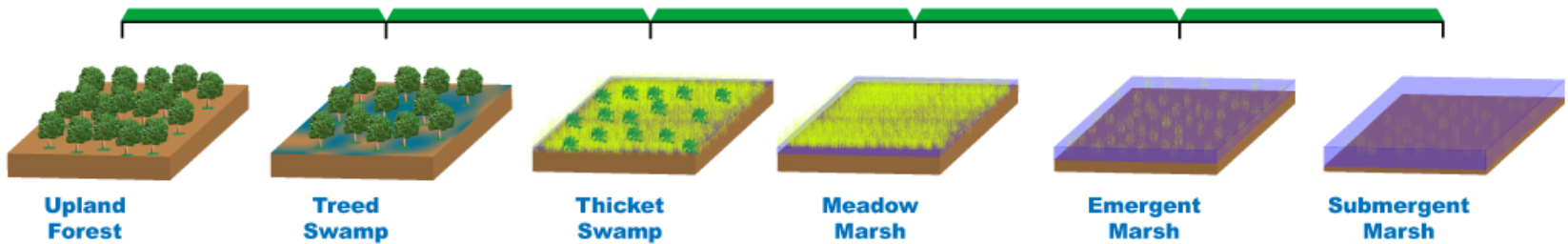
Discharge Points



Cross-Sections



Habitat (Vegetation Communities)



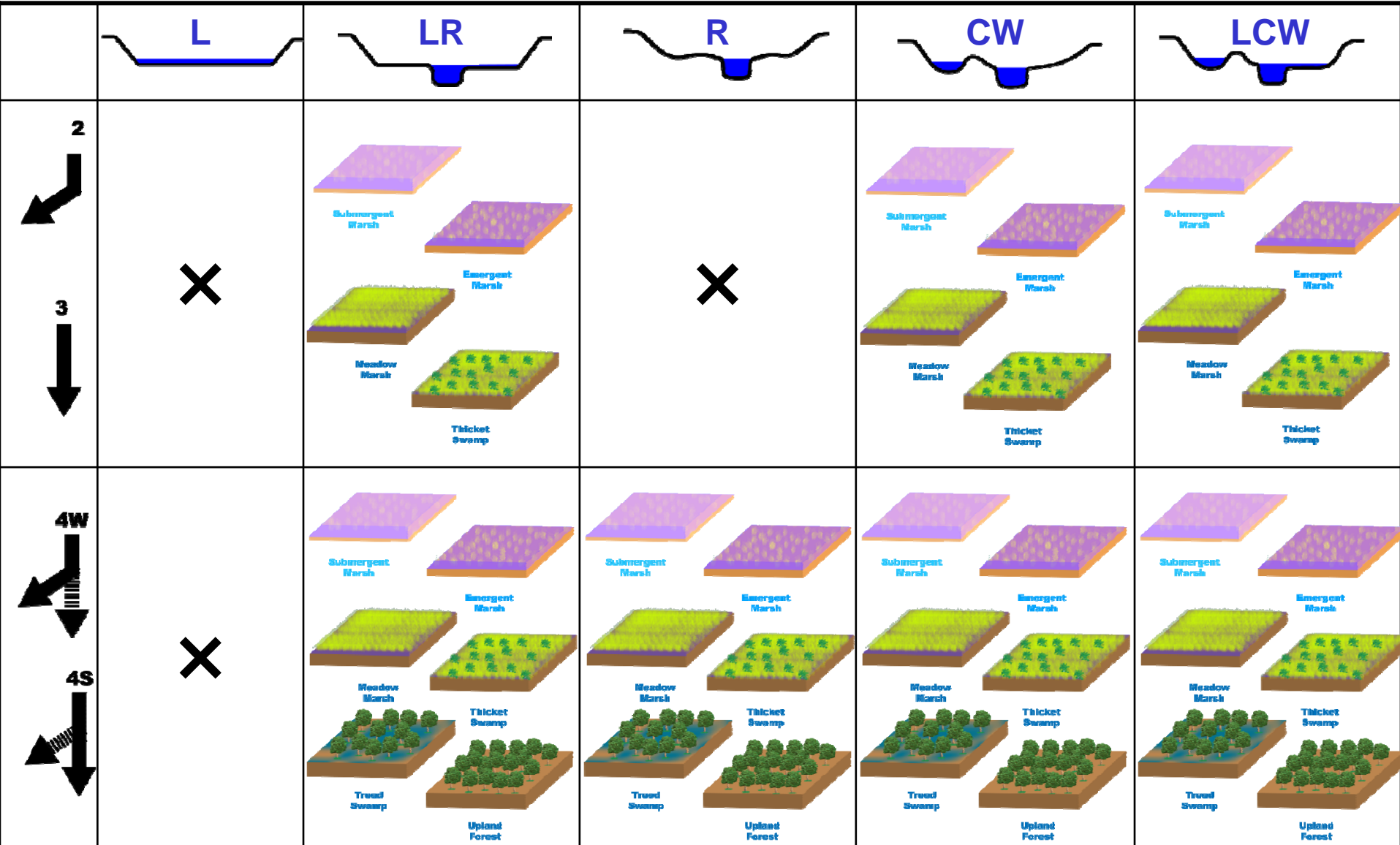
Background – Step 2

Description of Step 2

- Ensure that alternatives work based on constraints / thresholds that limit:
 - The ability of channel to convey water
 - The ability for vegetation communities to thrive

Background - Step 2

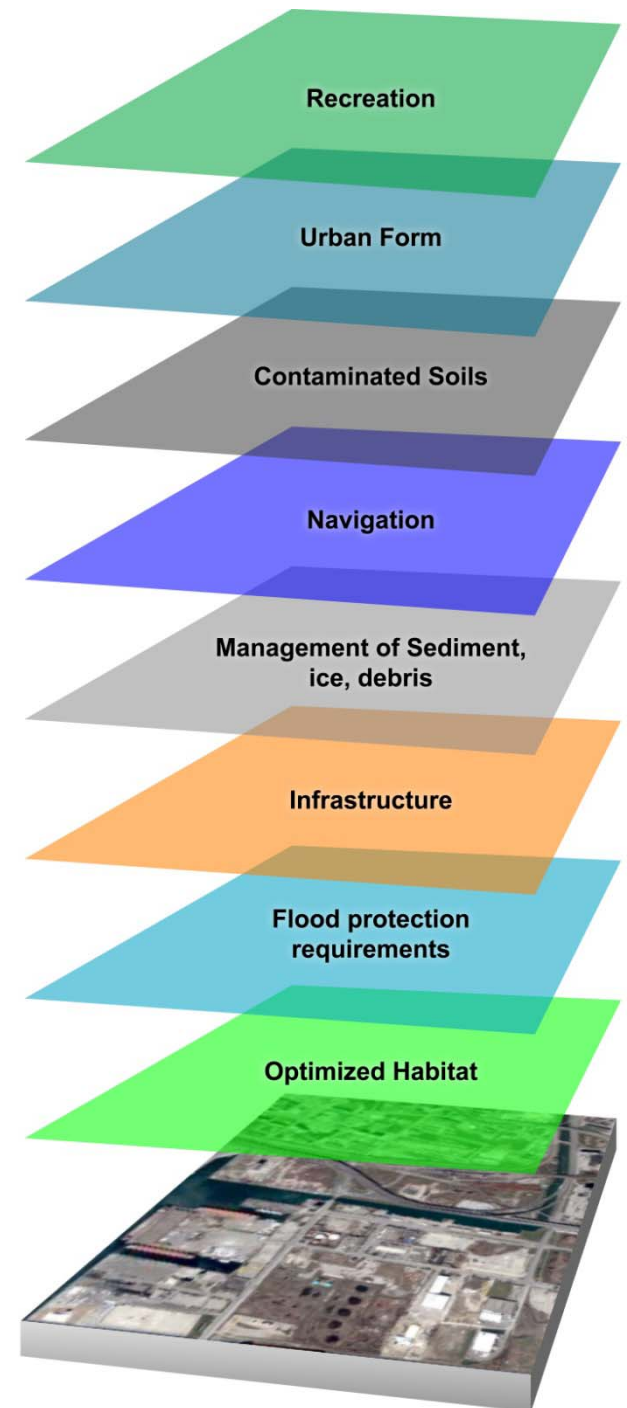
Summary - Primary Channel



Step 3

Describe the Alternatives

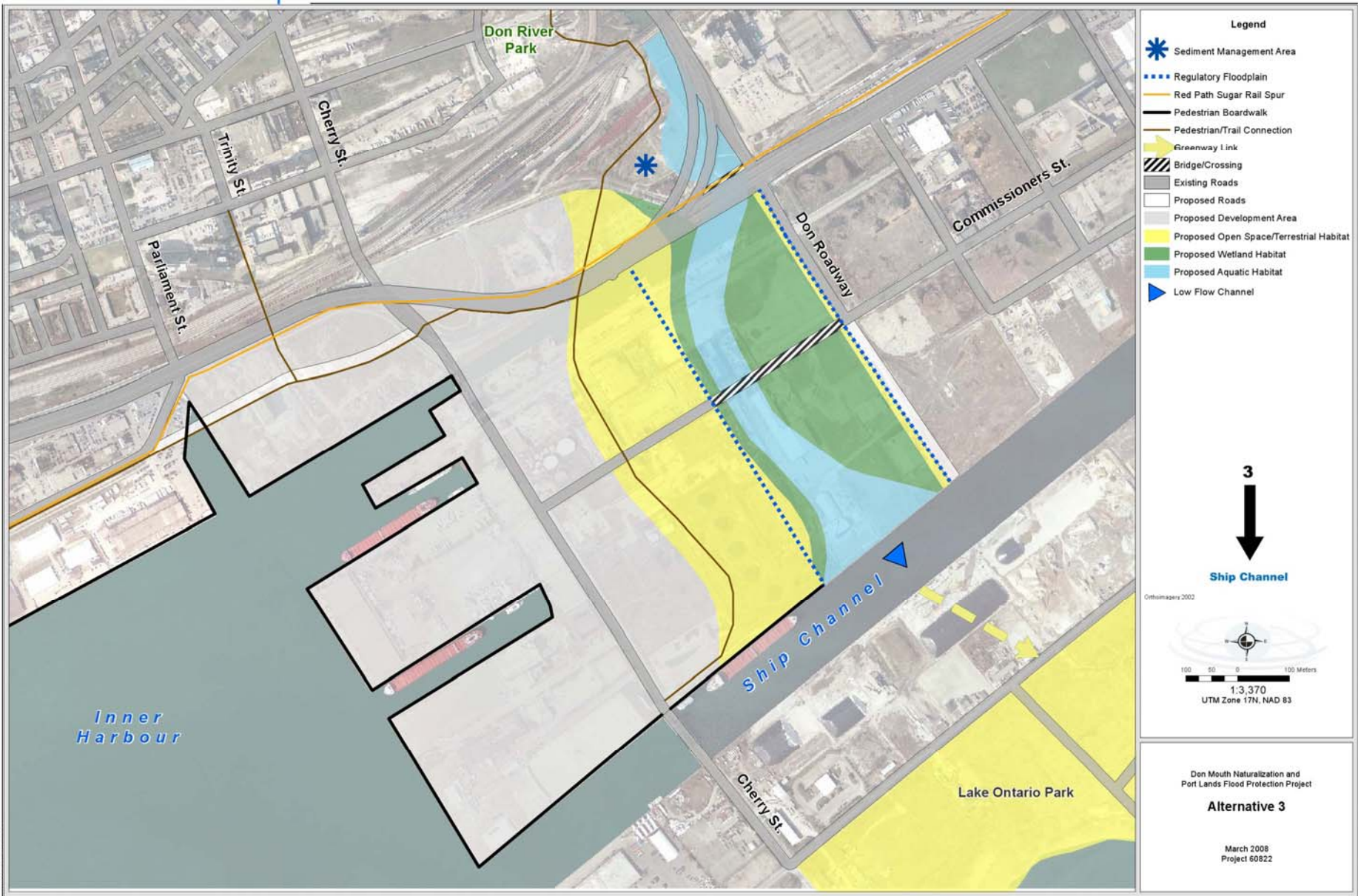
- Layer information on each combination of discharge point and cross-section

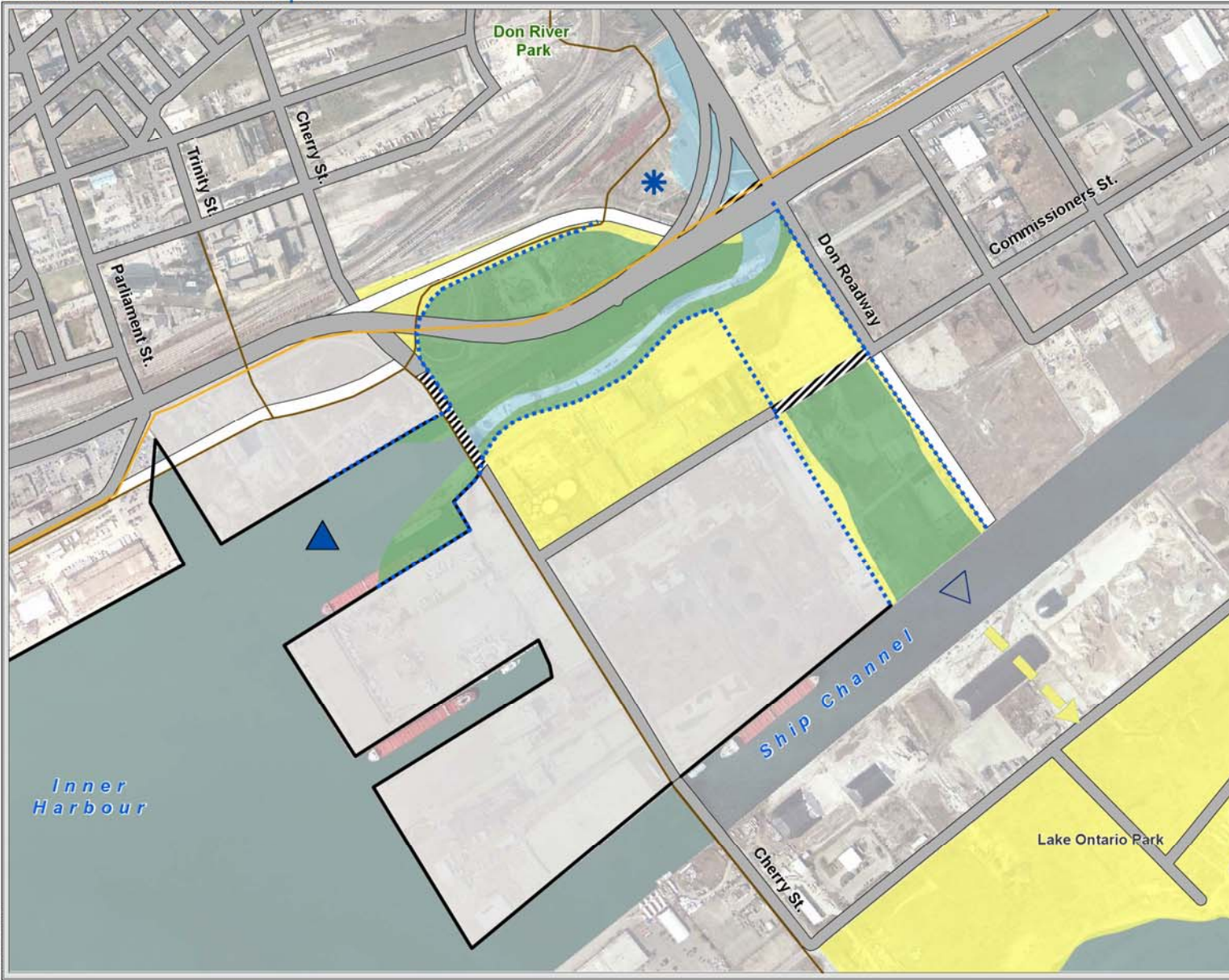


m2

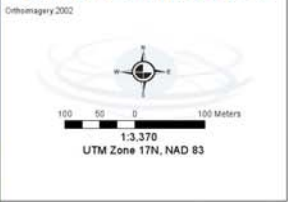
Steve B to add in 2 layers
mposkin, 1/21/2008







- Legend**
- Sediment Management Area
 - Regulatory Floodplain
 - Red Path Sugar Rail Spur
 - Pedestrian Boardwalk
 - Pedestrian/Trail Connection
 - Greenway Link
 - Bridge/Crossing
 - Existing Roads
 - Proposed Roads
 - Proposed Development Area
 - Proposed Open Space/Terrestrial Habitat
 - Proposed Wetland Habitat
 - Proposed Aquatic Habitat
 - Low Flow Channel
 - Spillway

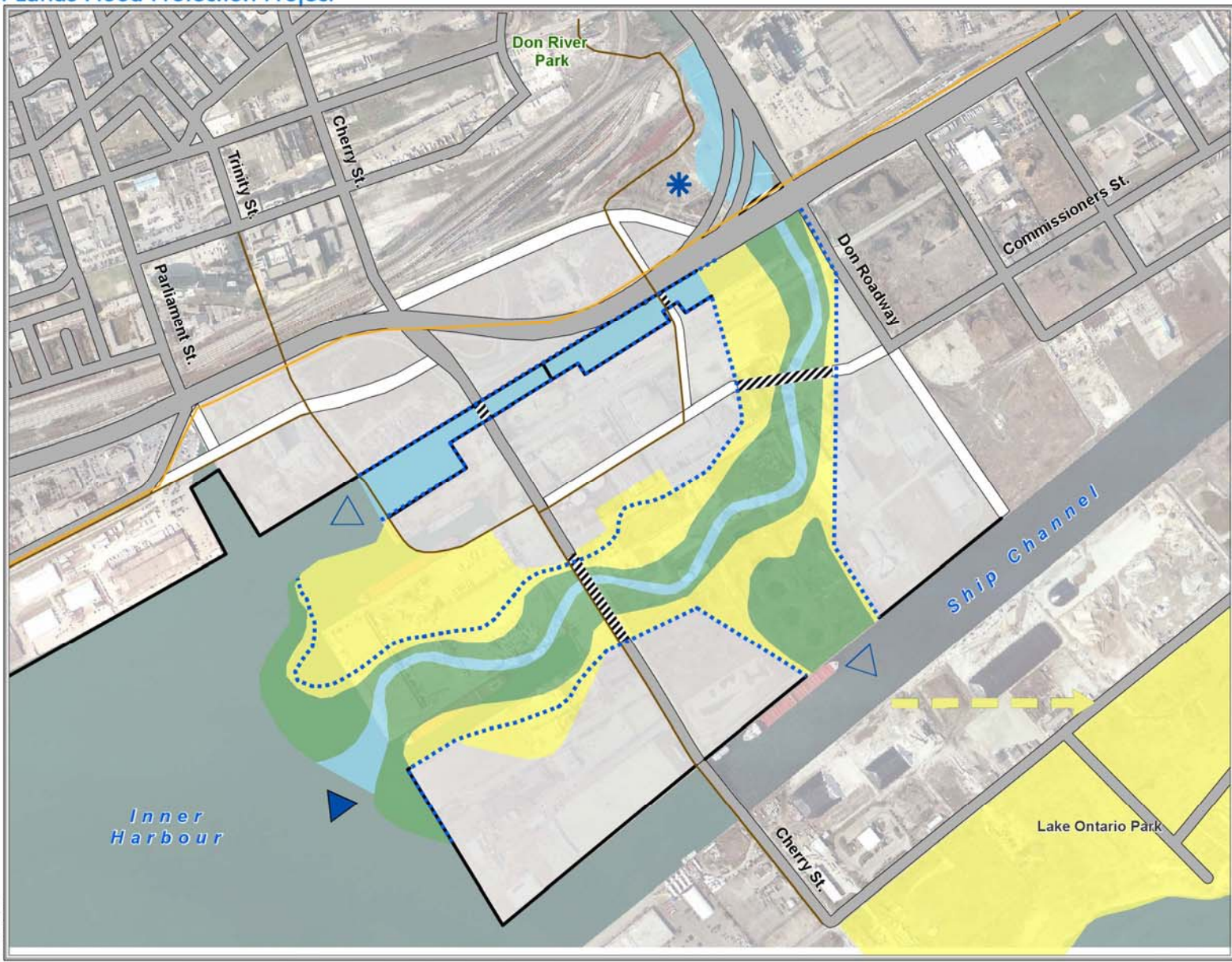


Don Mouth Naturalization and Port Lands Flood Protection Project

Alternative 4W

March 2008
Project 60822





Legend

- Sediment Management Area
- Regulatory Floodplain
- Red Path Sugar Rail Spur
- Pedestrian Boardwalk
- Pedestrian/Trail Connection
- Greenway Link
- Bridge/Crossing
- Existing Roads
- Proposed Roads
- Proposed Development Area
- Proposed Open Space/Terrestrial Habitat
- Proposed Wetland Habitat
- Proposed Aquatic Habitat
- Low Flow Channel
- Spillway

4WS

Primary Flow To Inner Harbour

Orthomageary 2002

100 50 0 100 Meters

1:3,446
UTM Zone 17N, NAD 83

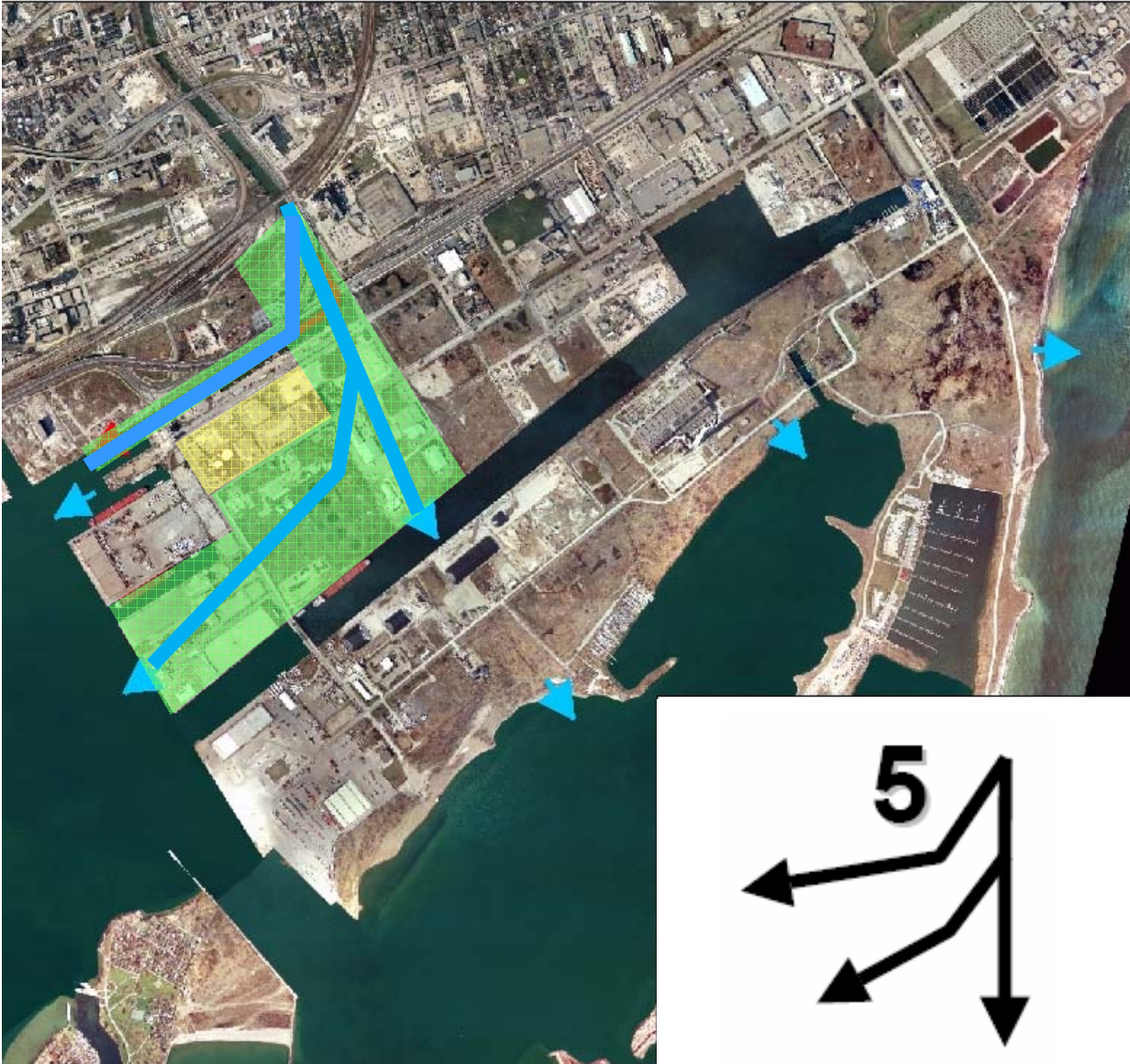
Don Mouth Naturalization and
Port Lands Flood Protection Project

Alternative 4WS

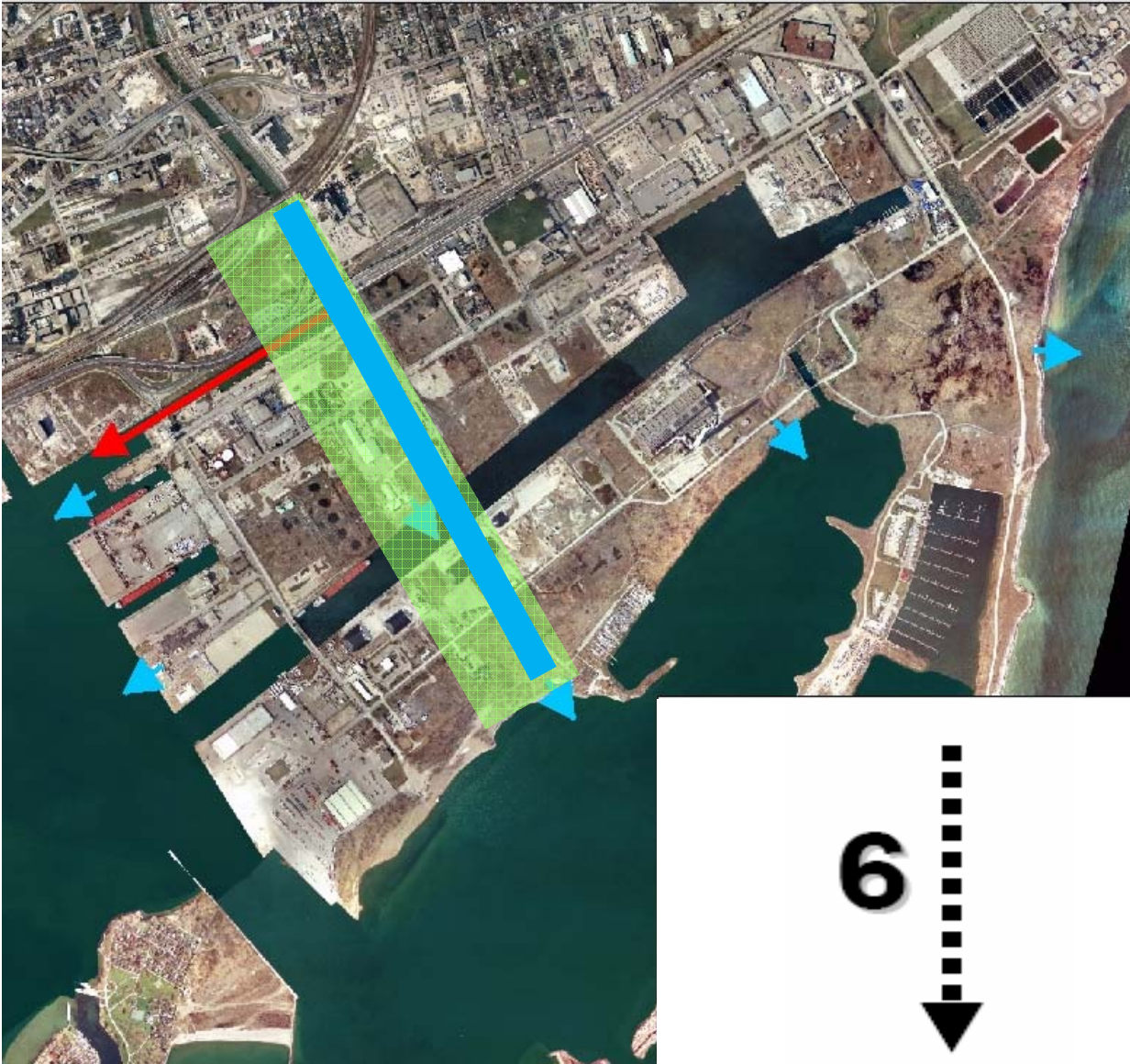
March 2008
Project 60822



Don Mouth Naturalization And Port Lands Flood Protection Project



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Don Mouth Naturalization And Port Lands Flood Protection Project



Outcome of Steps 1 to 3

- 5 alternatives carried forward for comparative evaluation (Step 4)








- Will evaluate “Do Nothing” during Step 5

Step 4

Evaluation of the Alternatives

- ✓ Determine how well alternatives achieve objectives based on evaluation criteria
- ✓ Describe issues and trade-offs with alternatives
- ✓ Identify preferred alternative(s)

Step 4

Objectives	Criteria	Indicator(s)	2 	3 	4W 	4S 	4WS 
Naturalization							
Flood Protection							
Operational Management and Constructability							
Integration with Infrastructure							
Recreational and Cultural Opportunities							
Coordination with Other Planning Efforts							
Consistency with Waterfront Toronto Sustainability Framework							

Step 4

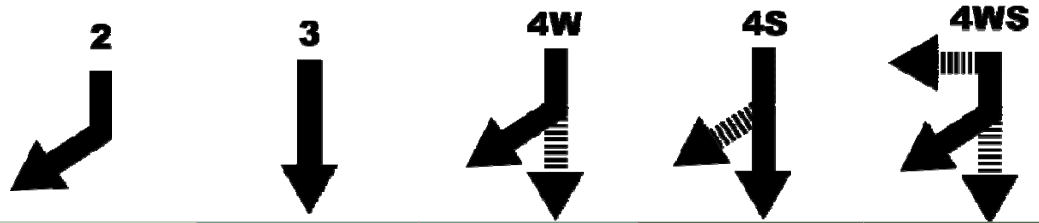
Comparative Evaluation Framework

Objective	Criteria	Indicator	Alt #2	Alt #3	Alt #4W	Alt #4S	Alt #4WS
Naturalization	Area of wetland habitat types created	Total area of wetland habitat	8.1 ha	11.5 ha	20.5 ha	20.0 ha	19.1 ha
			Least Preferred	Moderately Preferred	Most preferred	Most Preferred	Most Preferred



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Step 4

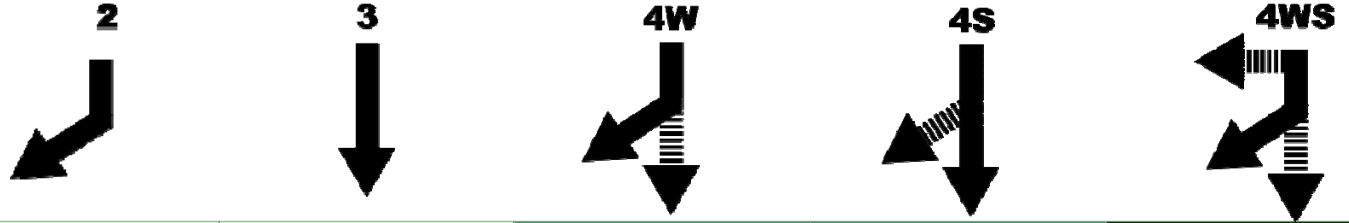


Objectives		2	3	4W	4S	4WS
1. Naturalization	Total naturalized area	Least preferred	Moderately preferred	Moderately preferred	Most preferred	Most preferred
	Area of wetland habitat	Least preferred	Moderately preferred	Moderately preferred	Most preferred	Moderately preferred
	Area of open space / terrestrial habitat	Least preferred	Moderately preferred	Least preferred	Most preferred	Most preferred
	Potential to minimizing disturbance for wildlife	Least preferred	Most preferred	Most preferred	Most preferred	Most preferred
	Potential for effects on aquatic habitat	Moderately preferred	Moderately preferred	Least preferred	Least preferred	Most preferred
	Potential for hydraulics to affect vegetation	Least preferred	Least preferred	Moderately preferred	Moderately preferred	Most preferred
	Potential to maintain and improve connection for aquatic species	Most preferred	Least preferred	Most preferred	Least preferred	Most preferred
	Quality of habitat created	Least preferred	Moderately preferred	Moderately preferred	Moderately preferred	Most preferred
	Potential to provide habitat connections for wildlife	Least preferred	Moderately preferred	Least preferred	Moderately preferred	Most preferred
OVERALL	Least preferred	Least preferred	Moderately preferred	Moderately preferred	Most preferred	



Don Mouth Naturalization And Port Lands Flood Protection Project

Step 4



Objectives	2	3	4W	4S	4WS
Naturalization	Least preferred	Least preferred	Moderately preferred	Moderately preferred	Most preferred
Flood Protection	Least preferred	Least preferred	Most preferred	Most preferred	Most preferred
Operational Management and Constructability	Most preferred	Most preferred	Moderately preferred	Least preferred	Least preferred
Integration with Infrastructure	Most preferred	Most preferred	Least preferred	Least preferred	Moderately preferred
Recreational and Cultural Opportunities	Most preferred	Moderately preferred	Moderately preferred	Least preferred	Most preferred
Coordination with Other Planning Efforts	Moderately preferred	Least preferred	Moderately preferred	Least preferred	Most preferred
Consistency with Waterfront Toronto Sustainability Framework (regarding soils)	Moderately preferred	Most preferred	Least preferred	Most preferred	Most preferred
OVERALL	MODERATELY PREFERRED	MODERATELY PREFERRED	MODERATELY PREFERRED	LEAST PREFERRED	MOST PREFERRED

Next Steps

Confirmatory Studies

- Hydrology/ Sediment Management
- Management of Contaminated Soils and Groundwater
- Risk Analysis of Shipping Lane








Next Steps

Other Activities

- Consultation on Step 4
- Confirm *preliminary* preferred alternative
- Undertake design development and impact assessment
- Prepare and submit Provincial and Federal EAs
- Soil Management Plan
- Other planning and approval requirements

Next Steps

Timeline

Remaining Tasks	2008	2009	2010	2035
Confirmatory Studies				
Design Development				
Detailed Impact Assessment				
Consult on Step 5				
Prepare and Submit EAs				
Initial Implementation of Phase 1				
Completion of the Undertaking				

Any Questions?