




Ashbridges Bay Erosion and Sediment Control Class EA:  
CLC Meeting #2  
September 5, 2013






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### Agenda

- 6.30pm Welcome and Agenda Review
- 6.35pm Review of Minutes from CLC #1
- 6.45pm Follow-up Items from CLC #1:
  - Dredging Activities
  - Cost Benefit Analysis Exercise
- 7:00pm Feedback from PIC#1
- 7:15pm Refreshment Break
- 7:25pm Description of Refined Alternatives
- 7:50pm Evaluation of Alternatives: Update on Method and Progress
- 8:20pm Next Steps
- 8.30pm End

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### 2013 Class EA Objective


Refined to reflect CLC comments:

*To identify a preferred solution that will mitigate erosion and sediment deposition at the harbour entrance of Coatsworth Cut in order to ensure safe navigation - while considering the various approved facilities, planning initiatives and current uses in the study area.*



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### Roles of the CLC

- **Identify public/stakeholder issues and positions** related to the impact and design of the project;
- **Offer potential advice or solutions** to resolve these issues;
- **Assist the TRCA and the City in reaching out and maintaining communication** with community residents, local groups, associations, and organizations that share an interest in Ashbridges Bay and the project, including helping to share information with their represented organization; and
- **Attend and assist at the Public Information Centre public meetings** organized by TRCA and the City of Toronto to assist in providing information to the public along with receiving their feedback.

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## Objectives of Tonight's CLC

1. Follow up on outstanding items from the last CLC meeting
2. Review feedback received from the PIC and present the final evaluation criteria
3. Understand the refined alternatives
4. Provide an update on the Evaluation Process and highlight key factors
5. Update on project progress and key next steps

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## Dredging Activities



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## Dredging

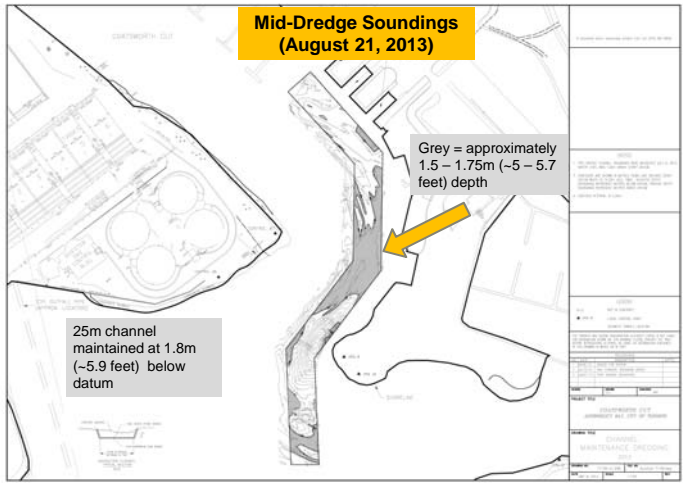
- 2013 dredging in the Coatsworth Cut navigation channel is underway and nearly complete (approximately 1,000 m3 remains to be removed)
- Total volume to be removed = 4,100 m3




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## Mid-Dredge Soundings (August 21, 2013)




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## Request to Consider Expanding Dredging

- The areas users indicated were problematic lie primarily either within the northern waterlot for the ABTP or the navigation channel into Coatsworth Cut.
- The navigation channel will continue to be maintained and addressed as part of this project and expanding the area that has traditionally been dredged will be considered once the remedial solution has been implemented (pending available funds).
- Toronto Water has indicated that they will not be looking at dredging areas of the Ashbridges Bay Treatment Plant waterlot for recreational uses.



- Additional dredging would have to be initiated and financed by the clubs in the area and would be pending necessary landowner and agency (Provincial and Federal) approvals.
- In other areas of Lake Ontario TRCA has offered boat clubs advice and assistance working through the approvals and permitting processes required.


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## Cost Benefit Analysis



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## Characterizing Social and Economic Value

Although we do not have the resources to undertake a full cost benefit analysis, the clubs in the study area were surveyed and information was collected to help characterize the cultural and economic benefits they bring to the community. The survey results will be presented cumulatively as part of the socioeconomic section of the Baseline Environmental Inventory.


Example of data collected:

- Social value
  - programs for members aged 5 and above
  - approx. 600 volunteers
  - subsidies and special programming
- Local economy contribution
  - 7 full-time and 45 seasonal staff
  - approx. 2,000 members; 75-99% of revenue spent within the City of Toronto
  - approx. 4,300 visitors in 2012-2013


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## Overview of Feedback from PIC#1




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## Overview of Public Information Center #1

- The first of two planned Public Information Centres (PIC) was held on June 17, 2013.
- The PIC targeted input from the public on the:
  - Alternative concepts being considered to help solve the sediment problem
  - Draft evaluation criteria which will be used to assess the alternative concepts
- An open house format was held at the Toronto Fire Academy from 6:30 to 8:30 p.m. for members of the public to preview some key display panels and to talk informally with the Project Team (TRCA, City of Toronto - Toronto Water and Shoreplan Engineering).
- Attendees were given a workbook (later placed on website) to inform and encourage input. Input was received for two weeks following the meeting.
- The meeting was attended by six (6) members of the public, one (1) member of City Council, two (2) Steering Committee members and four (4) CLC members.**

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## PIC #1 -

Comments on the alternative concepts included:

- 1A and 2A will negatively impact dingy and small sailing craft training west of ABYC harbor as these alternatives will restrict or eliminate space used for training by ABYC
- Alternative 2A and watercraft traffic:
  - Want sufficient space where two breakwaters are close together. Otherwise, may create boat traffic bottleneck there, particularly in the summer season.
- Alternative 2A vs. 1A:
  - 2A provides for more length, but less space for various club members to navigate around each other.
  - 1A provides for space and is thus safer for users.
- Hopes were expressed that the alternative could enable improved water circulation in the cut, a benefit for both sailors and canoeists.

- Comments were considered in the refinement of the alternatives that were carried forward.
- Federal navigation standards will be upheld in the design of all Alternatives. Impacts to current users, including changes in wave conditions, will be analysed and considered in the evaluation of the Alternatives.

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## PIC #1 -


Consideration could be given to reconfiguring points of park headlands to allow for more space

- At this time removal or alteration of current land is not being considered because of the impacts it would have to existing uses of the current landowners/leases.

There was interest in how the EA Process might improve the situation for canoeists in Coatsworth Cut, for example dredging a larger area for the canoe club and potentially using Toronto Water's treatment wetland as a place to shelter canoes.

- Dredging beyond the navigational channel is outside of the scope of this project.
- Toronto Waters facility will be a treatment wetland only and public access in this area will not be available. A buffer will also be created between this facility and any public access considered on the proposed landform to ensure public safety.

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## PIC #1 -

There was concern expressed that in most Environmental Assessments the method of evaluating/scoring does not allow for comparison between each alternative. There need to be a range of scoring that is significant enough to account for the range in impacts. Simple words like 'major' and 'minor' impacts should not be used to describe the evaluation criteria and results. The evaluation needs to be quantifiable.

- Scoring for the evaluation has not yet been developed and comments will be considered when this is undertaken. Preliminary thoughts are that scoring from negative 3 to positive 3 would be used to capture the range of impacts each alternative may have. The impacts each alternatives has in relation to the other will be compared. A simple code or visual tool may be used in addition to the numerical score to help with public interpretation.

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## Refreshment Break




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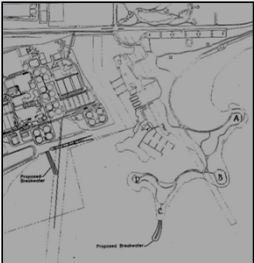
## Sediment Control Alternatives



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## Alternative 1 & 1A (2002) – CARRIED FORWARD



**Alternative 1**


- 120m breakwater west of ABTP Overflow Gates
- 100m extension of Headland "C" Ashbridges Bay



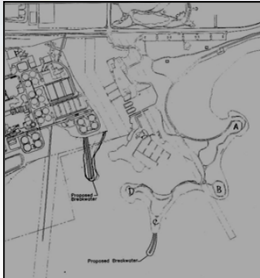
**Alternative 1a**

- 600m breakwater west of ABTP Overflow Gates (overlying existing outfall)
- 100m extension of Headland "C" Ashbridges Bay

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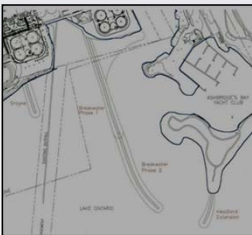


## Alternative 2 and 2A (2002) – CARRIED FORWARD



**Alternative 2**


- 175 to 200m breakwater east of ABTP Overflow Gates
- 100m extension of Headland "C" Ashbridges Bay



**Alternative 2a**

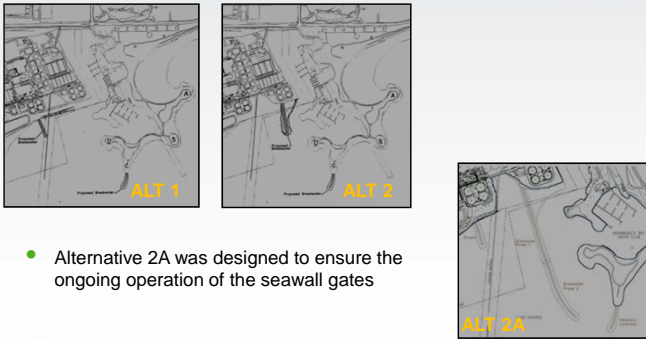
- 600m breakwater east of ABTP Overflow Gates
- 200m groyne west of ABTP Overflow Gates
- 100m extension of Headland "C" Ashbridges Bay

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## Refined Alternatives

- Alternative 1 and Alternative 2 were not refined based on their inability to be integrated with the other approved facilities in the local study area.



- Alternative 2A was designed to ensure the ongoing operation of the seawall gates

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## Refined Alternatives


Alternatives were refined to take into account:

- On-going operation of the seawall gates
- Toronto Waters' approved treatment wetland facility (10 ha)
- Toronto Waters' approved high rate treatment facility (with a 50m buffer)

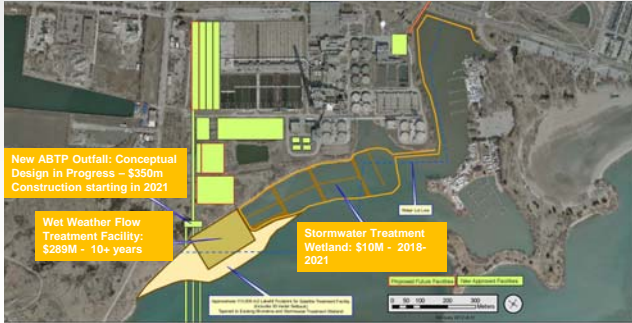
For the approved facilities, area required for the concepts in their respective EAs was used to configure project along the shoreline (as per direction from Toronto Water).

Three newly refined alternatives were finalized and renumbered for the 2013 EA.

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## Design Concepts for Facilities Associated with Approved EA Studies

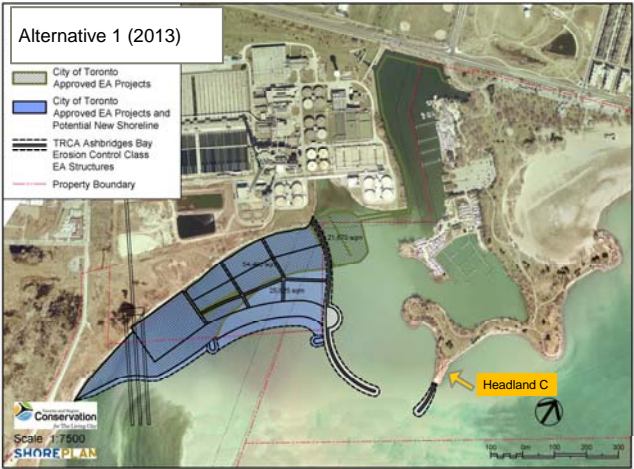


- New ABTP Outfall: Conceptual Design in Progress – \$350m Construction starting in 2021
- Wet Weather Flow Treatment Facility: \$289M - 10+ years
- Stormwater Treatment Wetland: \$10M - 2018-2021

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## Alternative 1 (2013)



Legend:

- City of Toronto Approved EA Projects
- City of Toronto Approved EA Projects and Potential New Shoreline
- TRCA Ayrbridges Bay Erosion Control Class EA Structures
- Property Boundary

Scale 1:7500  
SHOREPLAN

Headland C

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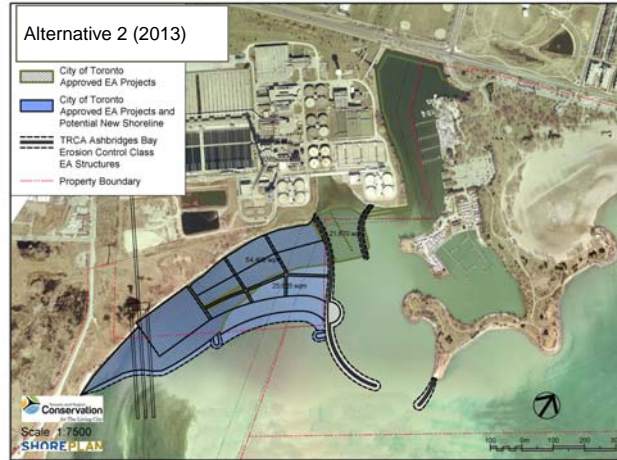
### Alternative 1: Description

- Alternative 1 consists of two breakwater extensions referred to as east and west breakwaters.
- The east breakwater is approximately 100 m long and extends from Headland C of the Ashbridge's Bay Park.
- The west breakwater is approximately 625 m long and extends from the west side of the ABTP
- The entrance created between these two breakwaters is approximately 120 meters wide. It is located at the -4 m contour.
- The breakwaters create a semi-sheltered area of approximately 160,000 sq. m.
- The location of the treatment wetland needs to be modified by relocating approximately one fifth (22,000 sq. m.) of the proposed treatment wetland
- The shoreline of the landform is approximately 850 meters long with one half (400 m) being cobble beach and the remainder is proposed to be an armour stone revetment.
- Public access is accommodated along the revetment and the crest of the beach.
- A lookout is located on the east side of the west breakwater just behind the crest of the beach.

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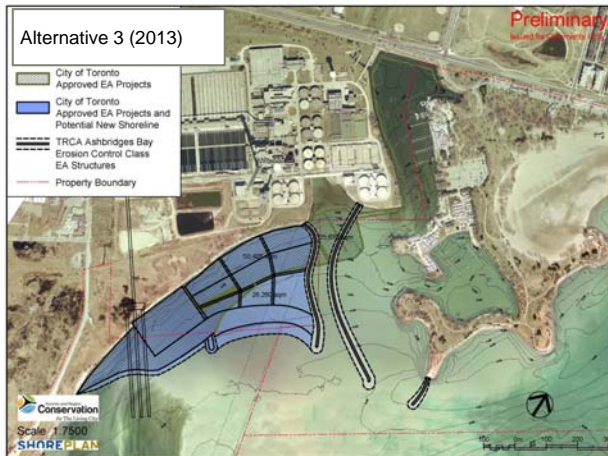
### Alternative 2: Description

- Alternative 2 is a variation of Alternative 1.
- The east and the west breakwaters and the land form west of the west breakwater are identical to those described above for Alternative 1.
- Short central breakwater is added from the east side of the overflow gates of the MTP.
- The purpose of this breakwater is to deflect occasional flow from the overflow gates further out away from the mouth of the Coatsworth Cut and further away from ABYC entrance.
- The central breakwater is approximately 200 meters long with low crest elevation of and narrow width.

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### Alternative 3: Description

- Alternative 3 shares the same east breakwater with Alternative 1 and 2
- West breakwater is relocated to enclose a smaller area of approximately 116,00 sq. m.
- Discharge of the overflow gates is directed out through an open channel on the west side of the west breakwater.
- A secondary west breakwater is positioned approximately 40 m from the primary west breakwater. The spacing of the breakwater was selected to match the approximate width of the overflow gates to allow free open channel flow.
- The primary west breakwater is approximately 650 m long and the secondary west breakwater is approximately 450 m long.
- The location of the treatment wetland is modified by relocating approximately 25% or 26,000 sq. m.
- The proposed shore treatment along the modified land form west of the secondary west breakwater is very similar to that described for Alternative 1.
- No public access across the open channel is provided.

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### Cross Section of Structures (All Alternatives)

- The proposed breakwaters are to be constructed using quarry run core and rip rap and armour stone exterior.
- The quarry run and some of the rip rap could be substituted with suitable concrete rubble if supply is available at the time of construction.
- The east breakwater and the outer portions of the west breakwater is expected to be constructed with a low cross-section that is armoured on the top.
- The low cross-section will allow occasional overtopping during severe storms and high water levels. Such a crest treatment does not accommodate public access but minimizes in-water footprint and visual obstructions.


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### Evaluation of Alternatives



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### Evaluation Process

Step 1: Determine whether the undertakings for this project has an impact on the criteria (either negative or positive)


Step 2: Carry forward any criteria that the project has an impact on

Step 3: Evaluate the impact each alternative has on each criteria comparatively

- Scoring currently proposed would be a -3 to +3 range with 0 being neutral
- The range of the scoring has not been finalized as the preliminary results from the water quality modelling need to be considered to ensure that the proper range of scoring is used for a comparative evaluation amongst the Alternatives

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## Water Quality Modelling

- The City of Toronto's Lake Ontario MIKE-3 hydrodynamic and water quality model is being used to assess the impact the Alternatives will have on water quality.
- This model will be run for both:
  - existing conditions; and
  - implementation of local Wet Weather Flow projects (the treatment wetland, new outfall/decommission of the sea wall gates).
- Total Phosphorus (TP), Total Suspended Solids (TSS), Copper (Cu) and E.coli levels will be modelled in the following locations:
  - Coatsworth Cut Boat Basin (2 points)
  - ABYC Boat Basin
  - Inside the Breakwaters for each Alternative
  - Woodbine Beach/Beaches Park (2 points)
  - Harris Water Intake
  - Tommy Thompson Park (3 points)
  - Center Island
  - Cherry Beach

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## Evaluation Criteria


Cultural Heritage Criteria	Typical Questions
First Nations/Métis Interests	Does alternative impact any identified First Nations or Métis interests in the area?
Cultural Heritage Impacts	Does alternative potentially impact unknown cultural heritage resources in the area?
Accessibility and Scenic Views Impact	Does alternative impact public access and/or existing scenic views?

Feasibility and Cost Criteria	Typical Questions
Capital and Maintenance Costs	Compare alternatives, relative to one another, for cost to construct and maintain.
Construction Phasing Impacts (Land and Water)	Does construction phasing of alternative result in significant impacts to existing users (staging, access, disruption of use, etc.)?
Land/Water Lot Requirements	Does alternative require lands or water lots under ownership or lease by other agencies/stakeholders?
Impacts on Other Projects	Does alternative produce impacts to projects not currently identified under Technical Considerations Criteria?

\* Impacts can be positive or negative

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## Evaluation Criteria

Natural Environment Criteria	Typical Questions
Aquatic Habitat Impacts	Does alternative result in impacts to aquatic habitat? Does alternative result in a Net Loss/Gain of habitat?
Terrestrial Habitat Impacts	Does alternative result in impacts to sensitive terrestrial habitat or migration of terrestrial communities?
Migratory and Breeding Bird Impacts	Does alternative result in impacts to habitat for migratory or breeding bird communities?
Species of Interest Impacts	Does alternative impact species of interest/concern?
Fisheries Impacts	Does alternative impact fish community assemblages?
Unique Habitat/Landform Impacts	Does alternative impact any unique habitats or landforms in the area?
Soils and groundwater Impacts	Does alternative impact soil/groundwater quality, or is it potentially impacted by contaminated soils/groundwater?
Water Quality	Does the alternative impact water quality in the local or regional study area?

\* Impacts can be positive or negative

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## Evaluation Criteria

Socio-Economic Environment	Typical Question
Parks – Public Use and Infrastructure Impacts	Does alternative impact public use and infrastructure in the area?
Parks Planning – Ashbridge's Bay Park, Tommy Thompson Park and the Lake Ontario Park Master Plan	Does alternative impact the goals and objectives of existing planning initiatives in the area?
Boat Club Facility and Operations Impacts	Does alternative impact boat club facilities, programs and operations?

\* Impacts can be positive or negative

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## Evaluation Criteria

Technical Considerations	Typical Questions
Public Safety	Does alternative impact public safety during construction and/or day-to-day use following construction?
Water Circulation	Does alternative impact water circulation?
Safe Boat Passage	Does alternative impact the movement and interaction between anticipated types of watercraft, the Coast Guard Auxiliary Station, or Federal navigation safety guidelines?
Shoreline Stability	Does alternative impact wave energy within the area and subsequently shoreline erosion?
Dredging Impacts	Does alternative reduce annual long term dredging requirements?
Climate Change Impacts	Is the alternative able to adjust / function / adapt in the event of changing lake levels due to Climate Change?
Recreational Water Use Impacts	Does alternative provide for sheltered / flatwater conditions required by canoes/kayaks?


\* Impacts can be positive or negative

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## Preliminary Results of Coastal Modelling

### SHOREPLAN



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## Design Wave Conditions

**LEGEND**

Wave Height (m)

- 4.0
- 3.5
- 3.0
- 2.5
- 2.0
- 1.5
- 1.0
- 0.5

Deep Water  
1:100 year  
10% Ex.  
Gumbell

Water level  
+1.0m


EXISTING CONDITIONS

ALTERNATIVE 1

ALTERNATIVE 2

ALTERNATIVE 3

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## Surveyed Lakebed Elevation Changes

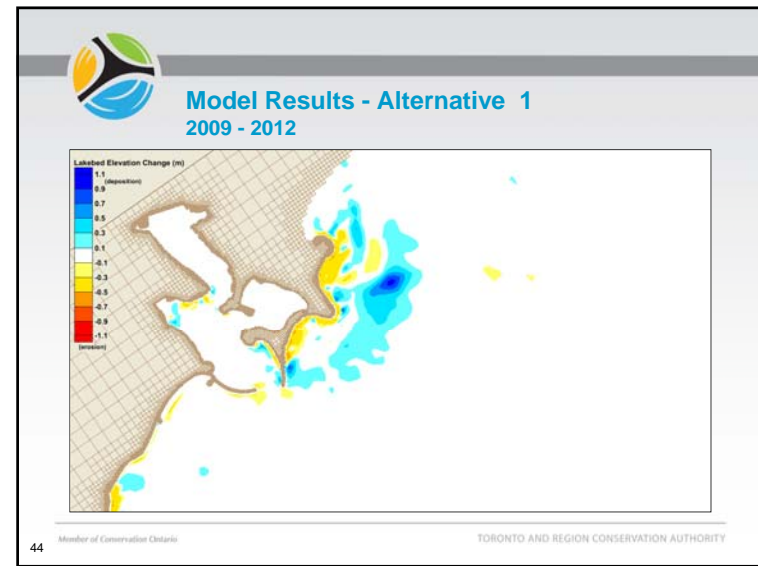
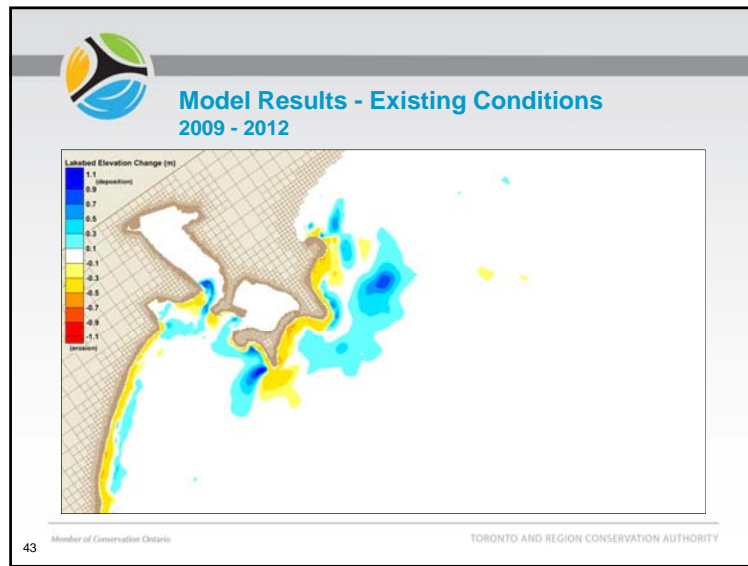
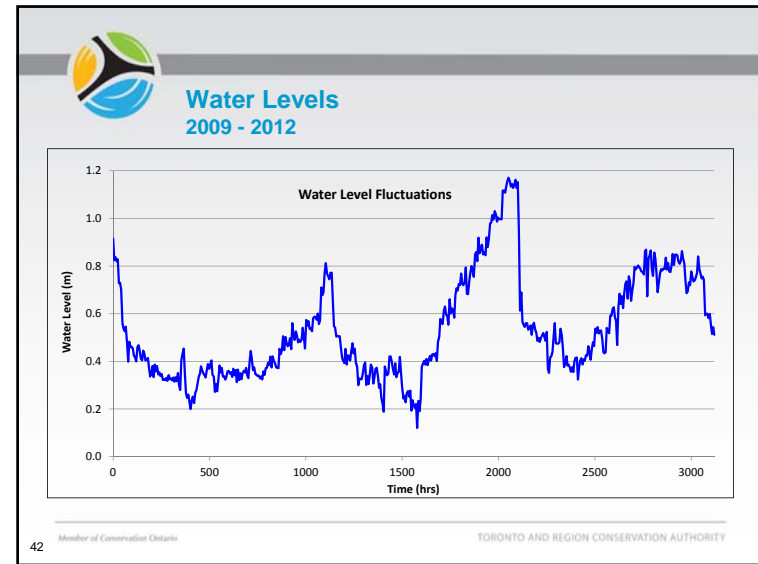
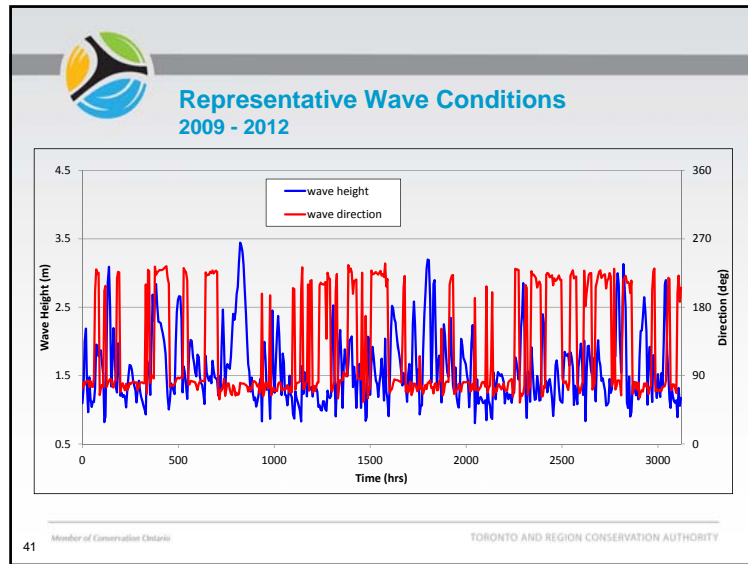
### 2009 - 2012

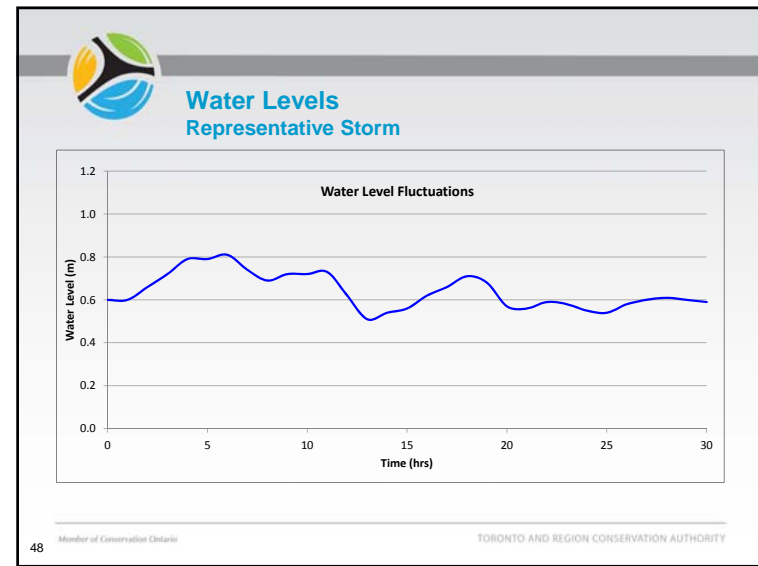
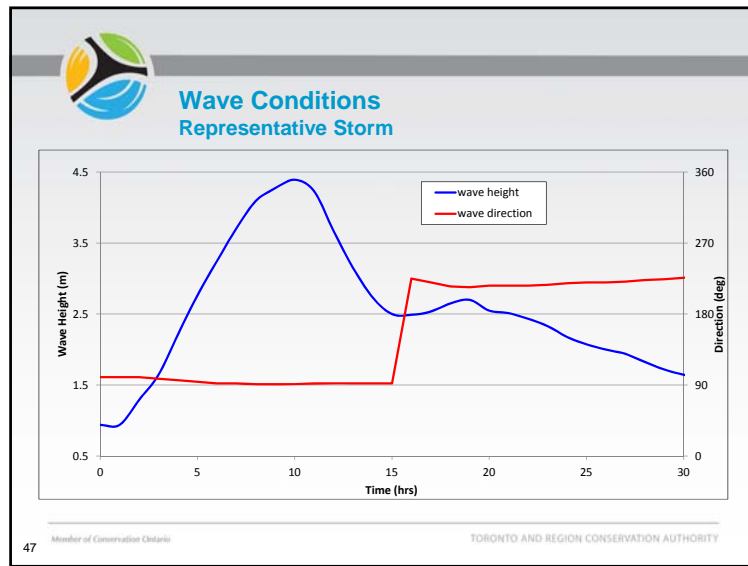
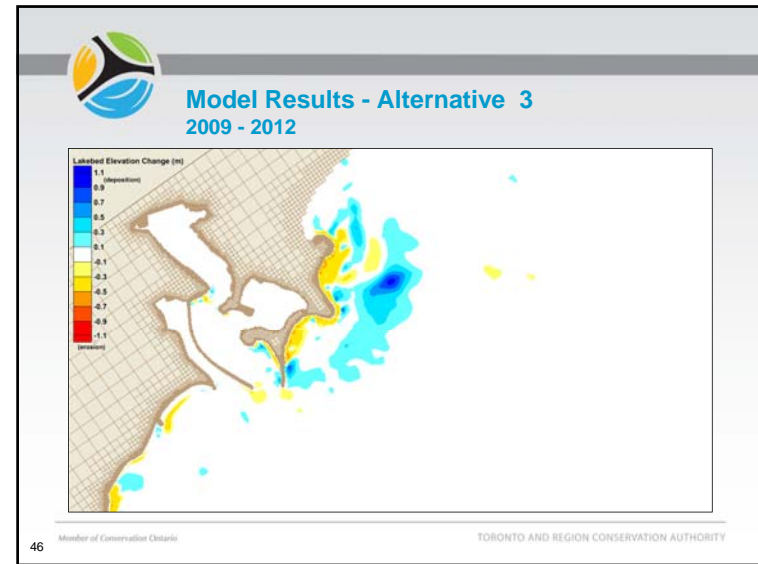
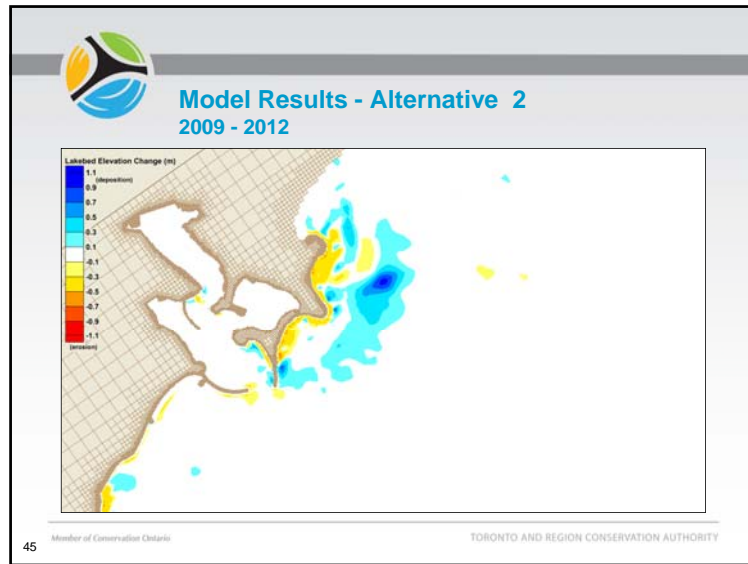
Lakebed Elevation Change (m)

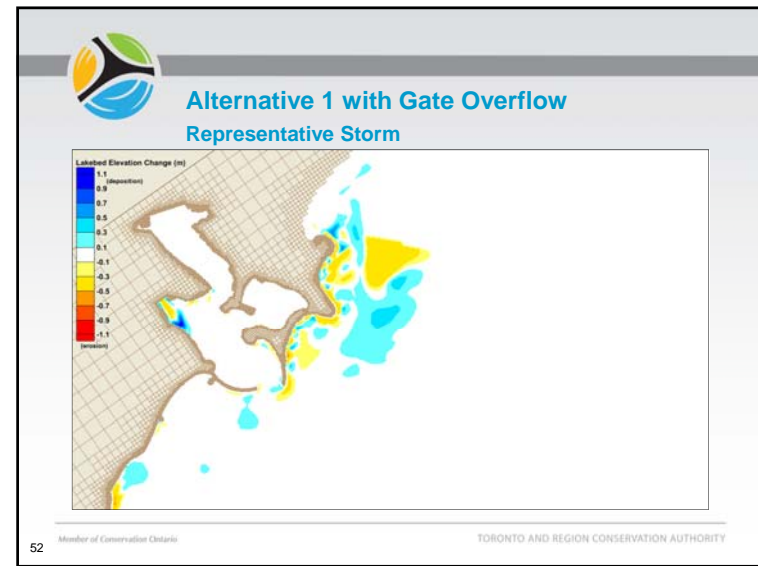
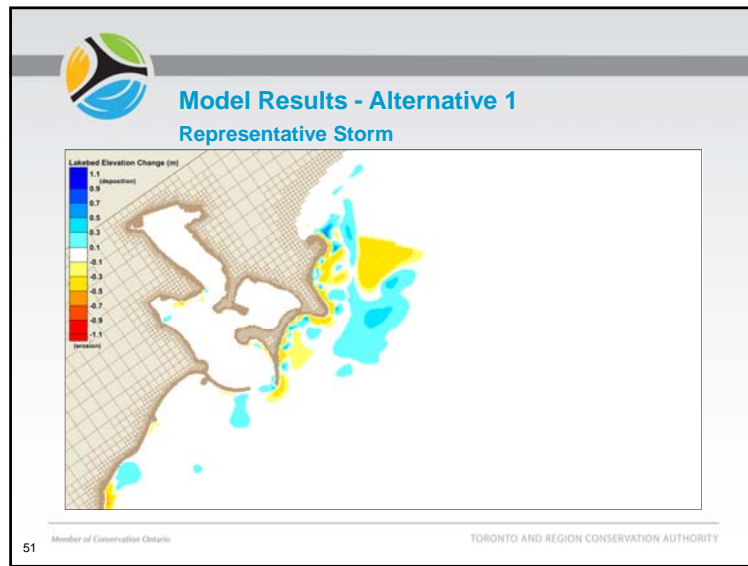
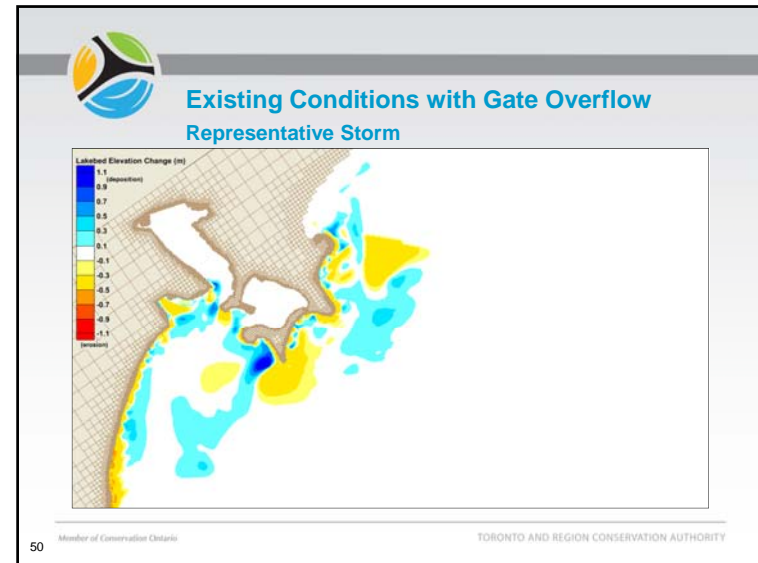
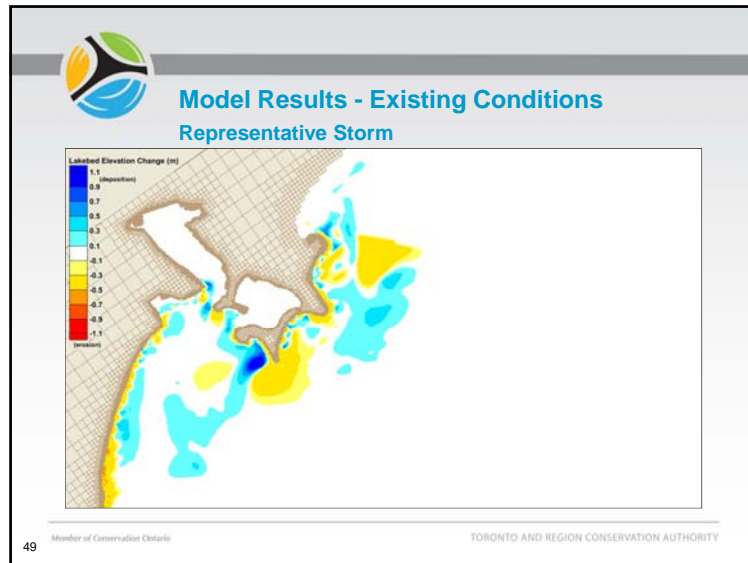
- 1.1
- 0.9
- 0.7
- 0.5
- 0.3
- 0.1
- 0.1
- 0.3
- 0.5
- 0.7
- 0.9
- 1.1

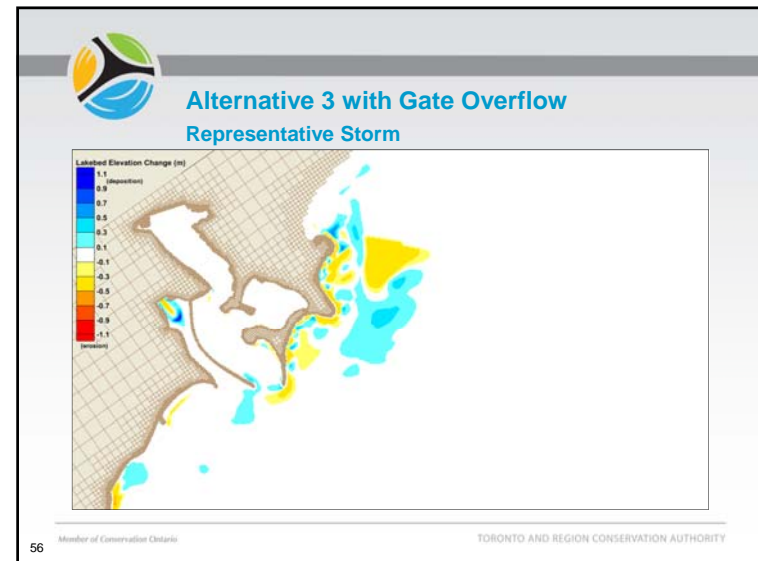
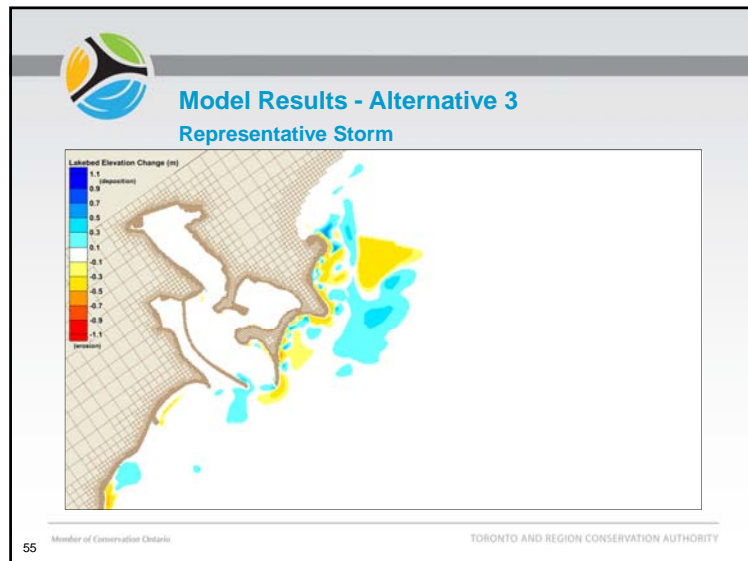
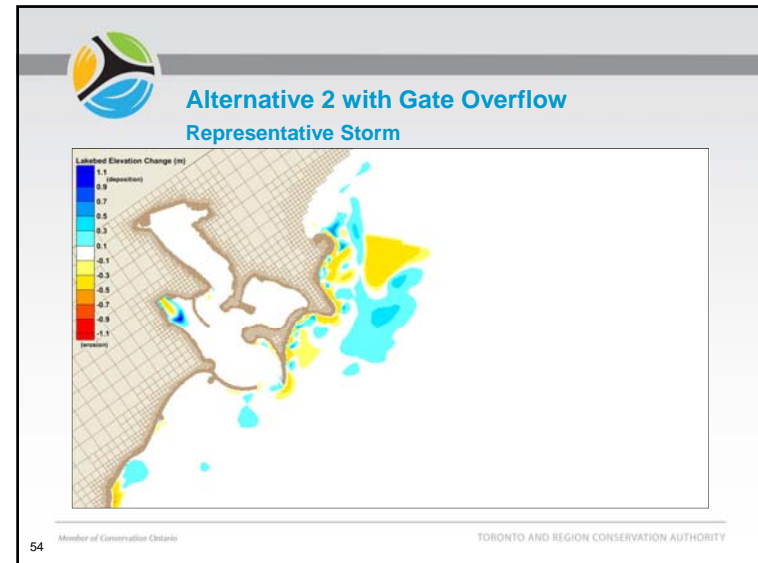
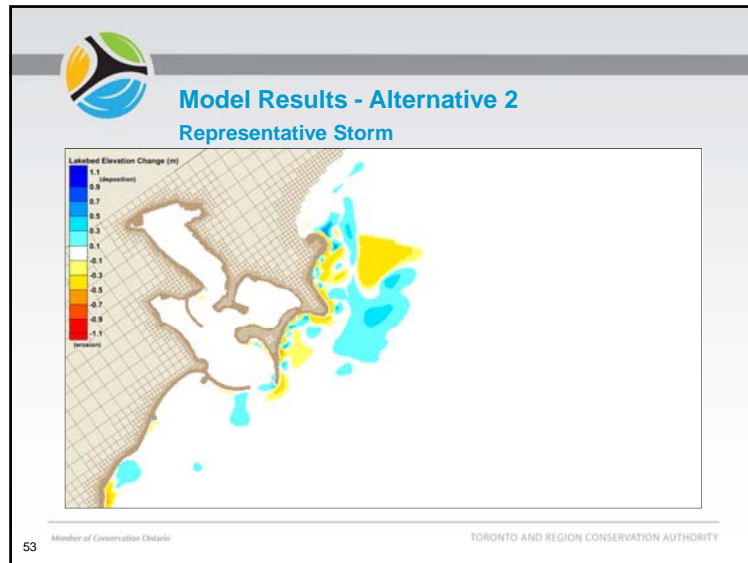
Limit of area common to both surveys


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## Next Steps



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## Ashbridges Bay Erosion and Sediment Control Project Process - 2013

**Step 1: CO Class EA Study (April 2013 – December 2013):**

- Complete Class EA study to deal with the erosion and sediment control landform structure – November 2013
- Report back to City of Toronto Council in December 2013 (prior to filing Notice of Completion); seek approval to proceed with detailed design of landform pending completion of EA process
- File Environmental Study Report for mandatory 30-day public review period – January 2014


**Step 2: Detailed Design (2014) - Pending City of Toronto Council approval**

- Undertake detailed design of a landform south of the Ashbridge's Bay Treatment Plant that would utilize materials available from local infrastructure projects to:
  - Create the footprint for the treatment facility and treatment wetland (based on approved concepts in their respective EAs)
  - Provide for erosion and sediment control

**Step 3: Construction Strategy (Spring 2014)**

- Secure permits and prepare construction strategy for landform


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## Project Specific Next Steps

- Complete water quality modelling
- Finalize evaluation scoring method and complete evaluation of Refined Alternatives
- Select Preliminary Preferred Alternative based on evaluations
- Conduct detailed analysis of environmental impacts
- Determine if environmental impacts can be mitigated
- Present Preliminary Preferred Alternative to CLC
- Refine Preferred Alternative
- Present Preferred Alternative to PIC
- Finalize Preferred Alternative
- Complete Environmental Study Report
- File Environmental Study Report for public review

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## Draft Milestone Schedule: 2013 - 2014

<b>April 2013</b>	Formally re-initiate Class EA
<b>May 2013</b>	Community Liaison Committee (CLC) Meeting #1
<b>June 19, 2013</b>	Public Information Center (PIC) #1
<b>Sept 5, 2013</b>	CLC Meeting #2 – <i>Present refined alternatives</i> ← <b>We are here</b>
<b>Early Oct 2013</b>	CLC Meeting #3 - <i>Present results of evaluation, preliminary preferred alternative and detailed environmental analysis of impacts</i>
<b>Late Oct 2013</b>	PIC #2 - <i>Present preferred alternative and detailed environmental analysis of impacts</i>
<b>November 2013</b>	Draft ESR to CLC for review (CLC #4 if needed)
<b>Jan 2014</b>	Environmental Study Report (ESR) filed with the MOE and available for public comment
<b>Feb 2014</b>	Deadline for comments on ESR
<b>April 2014</b>	CLC and PIC for detailed design of the landform

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## Public Information Center #2

- Late October – Location TBD
- Format: Information Panels Outlining Evaluation of the Refined Alternatives and the Preferred Alternative
- Encourage participation of CLC members
- Will receive public comments for two (2) weeks following the meeting
- Report summarizing comments will be prepared