

Effects Assessment Tables

The conceptual design of the preferred alternative included in the approved EA was developed to provide a degree of flexibility in project design and construction. It recognized that during detailed design and construction there was the potential for changes to the conceptual design, construction techniques, and baseline conditions.

Chapter 7 of the approved EA, Detailed Assessment of the Preferred Alternative, provided an evaluation of the Undertaking's ability to achieve the Project Objectives and the anticipated environmental effects resulting from its implementation – both during construction and establishment.

The DMNP EA was designed to enhance the overall environmental conditions in the Lower Don Lands as defined by the 7 Project Objectives. As such, the vast majority of negative or potentially negative impacts were caused during the construction phase and/or as a result of the proposed extended, phased construction period of the Project. The proposed modifications described previously reflect the results of an extensive value engineering and risk reduction process during Detailed Design, while continuing to achieve the original functions defined in the original EA. As such, the majority of effects associated with the proposed modifications are generally negligible or slightly positive as compared to the original effect assessment.

In this Section, tables are used to identify new and / or changed effects arising from the proposed modifications. The tables were developed with the following columns for ease of comparison to the approved EA (from left to right):

- Criteria: same as approved EA
- Indicators: same as approved EA
- Net Original EA Net Effects: same as approved EA
- New / Changed Net Effects: anticipated as a result of implementing the Proposed Modifications.

Objective 1: Naturalization

The naturalization of the Don Mouth will not only improve the aquatic and terrestrial habitat conditions at the mouth of the river, but will provide for the creation of a more natural form of river mouth.

Table 1, below, details expected changes to the originally anticipated Net Effects resulting from the proposed physical and phasing-related modifications incurred during Detailed Design.

Table 1 – Objective 1: Naturalization

Criteria	Indicator(s)	Original EA Net Effects	New / Changed Net Effects
Construction Effects			
Changes to Aquatic Habitat	Disruption, destruction and alteration of aquatic habitat	<p>Aquatic Environment <u>Negative</u></p> <ul style="list-style-type: none"> Permanent destruction of 4 ha of low quality aquatic habitat due to lake filling in Essroc Quay <p><u>Negligible</u></p> <ul style="list-style-type: none"> Temporary disturbance to 10 ha of low quality aquatic habitat in the Project Study Area due to construction will be offset by creation of new high quality habitat of a larger area and greater complexity during establishment 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects to Aquatic Species	Nuisance effects on aquatic species from construction (noise, dust, vibration, sediment release, etc.)	<p>Aquatic Environment <u>Negligible</u></p> <ul style="list-style-type: none"> Minimal effects on behaviour of aquatic species as a result of construction activities as existing habitat is low quality and experiences frequent disturbance during flood events Short-term, infrequent and highly localized nuisance effects on aquatic species will be minimized by Waterfront Toronto's EMP and BMPs 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Changes to Naturalization (Terrestrial / Wetland) Habitat	Removal or disturbance of naturalization habitat	<p>Terrestrial / Wetland Environment <u>Negative</u></p> <ul style="list-style-type: none"> Permanent loss of 4 ha of the North Shore Park ESA east of the Don Roadway during construction of the VWF will be compensated for by the creation of new higher quality naturalization habitat (terrestrial and wetland habitat) within the Don River Valley of the DMNP <p><u>None</u></p> <ul style="list-style-type: none"> Removal of 8 ha of low quality terrestrial habitat within the Project Study Area which will be compensated for by the creation of new higher quality naturalization habitat 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects to Terrestrial Species	Nuisance effects on terrestrial species from construction (noise, dust, vibration, sediment release, etc.)	<p>Terrestrial / Wetland Environment <u>Negligible</u></p> <ul style="list-style-type: none"> Mitigation will minimize impacts to urban tolerant wildlife and provide new high quality habitat opportunities Short-term, infrequent and highly localized nuisance effects on terrestrial species will be minimized by Waterfront Toronto's EMP and BMPs 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Establishment / Post- Establishment Effects			
Area and Function of Wetland Habitat Types Created	Area and type of wetland habitat created	<p>Wetland Environment <u>Positive</u></p> <ul style="list-style-type: none"> Creation of approximately 13 ha of higher functioning wetland 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Largest single circular wetland patch size	<p>Wetland Environment <u>Positive</u></p> <ul style="list-style-type: none"> Creation of a wetland 2 ha in size (with a patch size of 1 ha wetland) that has the potential to attract less common marsh species to the Project Study Area 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Potential to Create Ecosystem Function for Wildlife Species and Communities	Performance of wetland habitat	<p>Wetland Environment <u>Positive</u></p> <ul style="list-style-type: none"> Wetland habitat will be higher functioning than existing conditions 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Area of terrestrial habitat created	<p>Terrestrial Environment <u>Positive</u></p> <ul style="list-style-type: none"> Creation of 4 ha of terrestrial habitat within the Project Study Area 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Species that will use habitat for breeding purposes	<p>Terrestrial Environment <u>Positive</u></p> <ul style="list-style-type: none"> Native biodiversity and resiliency will increase through greater diversity of bird species, including woodland breeding birds, thicket breeding birds and migrant birds 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects on Native Fish Habitat or Aquatic Communities	Total area of aquatic habitat (including each type of aquatic habitat created)	<p>Aquatic Environment <u>Positive</u></p> <ul style="list-style-type: none"> Creation of 13 ha of higher functioning aquatic habitat which represents an overall net increase of 1 ha over existing low quality habitat within the Project Study Area 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects of Hydraulics and Hydrology / Sedimentation on Sustainability of Vegetation Communities and Associated Fauna	Management of full range of flows without adverse impact on vegetation communities (e.g., high erosional stress, sediment deposits)	<p>Wetland Environment / Aquatic Environment <u>Negligible</u></p> <ul style="list-style-type: none"> Vegetation in the lake-connected wetlands within the Project Study Area is expected to survive sedimentation effects; in addition, sedimentation will provide wetland species with the necessary nutrients to ensure their health and survival over the long-term Vegetation within the river valley system is expected to survive infrequent flood events, up to the 100-year event <p><u>Positive</u></p>	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

		<ul style="list-style-type: none"> Based on the optimized frequency and duration of inundation of lake-connected wetlands, vegetation within the wetland systems will thrive during regular flow events 	
Effects on Wildlife Species or Communities (i.e., minimizing disturbance and connecting habitat)	Enhancement of migratory bird habitat (internal linkages as well as links external to the DMNP to both existing and planned habitat)	Terrestrial Environment <u>Positive</u> <ul style="list-style-type: none"> Improved connectivity and improved structure to the vegetation communities created 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Disturbance to communities as a result of fragmentation and nuisance behaviour from human activity	Wetland Environment <u>Negligible</u> <ul style="list-style-type: none"> Minimal disturbance to naturalized areas is anticipated as a result of mitigation 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects of Water Quality on Wetland and Aquatic Habitat	Response of vegetation communities to changes in water quality, including from sediment management activities	Wetland Environment / Aquatic Environment <u>Negligible</u> <ul style="list-style-type: none"> Keating Channel: Water quality within the Keating Channel may limit the types of vegetation communities that will survive <u>Positive</u> <ul style="list-style-type: none"> <i>Low Flow Channel:</i> Water quality and turbidity within the lower reaches of the low flow channel will promote the survival of vegetation communities <i>Lake-connected Wetlands:</i> Improved water quality within the lake-connected wetlands will promote the survival of vegetation communities 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

Discussion for Objective 1: Naturalization

New Effects

The Proposed Modifications will have no New Effects with regard to Objective 1: Naturalization.

New Mitigation Measures

The Proposed Modifications will require no New Mitigation Measures.

New Net Effects

The Proposed Modifications will yield no New Net Effects.

Summary of Proposed Modifications Effects Related to Naturalization

Criterion	Original EA Overall Effects	Modified EA Overall Effects
Construction		
Changes to Aquatic Habitat	Negative	Negative
Effects to Aquatic Species	Negligible	Negligible
Changes to Naturalization (Terrestrial / Wetland) Habitat	Negative	Negative
Effects to Terrestrial Habitat	Negligible	Negligible
Establishment / Post-Establishment		
Area and Function of Naturalization Habitat Types Created	Positive	Positive
Potential to Create Ecosystem Function for Wildlife Species and Communities	Positive	Positive
Effects on Native Fish Habitat or Aquatic Communities	Positive	Positive
Effects of Hydraulics and Hydrology / Sedimentation on Sustainability of Vegetation Communities and Associated Fauna	Positive	Positive
Effects on Wildlife Species or Communities (<i>i.e., minimizing disturbance and connecting habitat</i>)	Positive	Positive
Effects of Water Quality on Wetland and Aquatic Habitat	Positive	Positive

Objective 2: Flood Protection

The DMNP must address flooding issues in the Port Lands and not exacerbate flooding in other areas, while meeting the first objective.

Table 2, below, details expected changes to the originally anticipated Net Effects related to Objective 2: Flood Protection.

Table 2 – Objective 2: Flood Protection

Criteria	Indicator(s)	Original EA Net Effects	New / Changed Net Effects
Construction Effects			
Management of Stormwater During Rainfall Storm Events	Effects of erosion during rainfall and flood events within the construction area	<p>Aquatic Environment</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> Potential disturbance to aquatic habitat due to runoff from flooding is limited to large flood events Potential impacts during less intense and more frequent floods will be mitigated through the use of BMPs 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects to Aquatic Species Potential to Impact Flooding Conditions On-site During Construction	Extent of flooding within the construction area	<p>Flooding</p> <p><u>None</u></p> <ul style="list-style-type: none"> Construction activities will not exacerbate existing flood risk within the construction area 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Potential to Impact Flooding Conditions Elsewhere	Extent of flooding that will continue to occur in developed areas or beyond the Project Study Area in Spill Zones 1 and 2	<p>Flooding</p> <p><u>None</u></p> <ul style="list-style-type: none"> Construction activities will not exacerbate flood risk off-site 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Establishment / Post- Establishment Effects			
Potential to Impact Flooding Conditions Elsewhere	Extent of flooding that will continue to occur in developed areas or beyond the Project Study Area in Spill Zones 1 and 2	<p>Flooding / Existing Land Use / Infrastructure and Utilities</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Regulatory Flood and increases in flood frequency associated with climate change will be contained within the floodplain Flood protection will result in the permanent removal of approximately 240 ha of land area within Spill Zones 1 and 2 from flood risk 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Change in assessment values as a result of removal of flood risk	<p>Existing Land Use / Planned Land Use</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Long-term assessment values within the Project Study Area will increase substantially due to removal from flood risk Long-term assessment values outside of the Project Study Area will increase due to removal from flood risk and proximity to parkland amenities 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Resilience of Stabilization Works for Valley, Low Flow Channel and Levees Potential to Impact Flooding Conditions Elsewhere	Ability of stabilization works to maintain structural integrity of river valley, low flow channel and levees	<p>Flooding</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> New river valley system form is preserved during Regulatory Flood to eliminate risk to life and property <p><u>Negligible</u></p> <ul style="list-style-type: none"> Low flow channel and wetlands are preserved under more frequent flood events and may require increasing levels of maintenance as size of flood events increase 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Extent of flooding that will continue to occur in developed areas or beyond the Project Study Area in Spill Zones 1 and 2	<p>Flooding / Existing Land Use / Infrastructure and Utilities</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Regulatory Flood and increases in flood frequency associated with climate change will be contained within the floodplain Flood protection will result in the permanent removal of approximately 240 ha of land area within Spill Zones 1 and 2 from flood risk 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Change in assessment values as a result of removal of flood risk	<p>Existing Land Use / Planned Land Use</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Long-term assessment values within the Project Study Area will increase substantially due to removal from flood risk Long-term assessment values outside of the Project Study Area will increase due to removal from flood risk and proximity to parkland amenities 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Resilience of Stabilization Works for Valley, Low Flow Channel and Levees	Ability of stabilization works to maintain structural integrity of river valley, low flow channel and levees	<p>Flooding</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> New river valley system form is preserved during Regulatory Flood to eliminate risk to life and property <p><u>Negligible</u></p> <ul style="list-style-type: none"> Low flow channel and wetlands are preserved under more frequent flood events and may require increasing levels of maintenance as size of flood events increase 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

Discussion for Objective 2: Flood Protection

New Effects

The Proposed Modifications will have no New Effects with regard to Objective 2: Flood Protection.

New Mitigation Measures

The Proposed Modifications will require no New Mitigation Measures.

New Net Effects

The Proposed Modifications will yield no New Net Effects.

Summary of Proposed Modifications Effects Related to Flood Protection

Criterion	Original EA Overall Effects	Modified EA Overall Effects
Construction		
Management of Stormwater During Rainfall Storm Event	Negligible	Negligible
Potential to Impact Flooding Conditions On-site During Construction	None	None
Potential to Impact Flooding Conditions Elsewhere	None	None
Establishment / Post-Establishment		
Potential to Impact Flooding Conditions Elsewhere	Positive	Positive
Resilience of Stabilization Works for Valley, Low Flow Channel and Levees	Positive	Positive

Objective 3: Operational Management and Constructability

The DMNP design must adequately manage sediment, debris and ice to ensure that the DMNP supports required navigation, natural function and existing or future flood protection works within the Lower Don River.

Table 3, below, details expected changes to the originally anticipated Net Effects related to Objective 3: Operational Management and Constructability.

Table 3 – Objective 3: Operational Management and Constructability

Criteria	Indicator(s)	Original EA Net Effects	New / Changed Net Effects
Construction Effects			
Management of Stormwater Related to Precipitation Events	Extent of areas inundated by stormwater runoff related to precipitation events	Lake / River Water Quality <u>Negligible</u> <ul style="list-style-type: none"> No net effects of precipitation events within the construction area on stormwater are predicted based on application of mitigation measures 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Changes to Sediment and Debris Management During Construction	Effects to aquatic habitat as a result of changes to management activities during construction	Lake / River Water Quality <u>Positive</u> <ul style="list-style-type: none"> Aquatic habitat within the Keating Channel will be improved when management activities are moved to the Sediment and Debris Management Area in Reach 1 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects from Construction on Lake and River Water Quality	Effects of in-water and near shore works on water quality	Lake / River Water Quality <u>Negligible</u> <ul style="list-style-type: none"> Isolation of excavated area in Reach 1 will minimize sediment release during construction activities Implementation of BMPs and a spill response plan will mitigate any effects on water quality Methodical placement of fill on top of sediments within containment berm will minimize sediment plume release during in-water works 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects to Terrestrial Species	Ability to manage sediment and debris during construction activities	Lake / River Water Quality <u>None</u> <ul style="list-style-type: none"> Dredging will continue in the Keating Channel until the completion of the Sediment and Debris Management Area, which will maintain existing water quality within the river / lake 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Implications of Phasing on Port Operations	Loss of potential mooring revenue	Economic Base <u>Negative</u> Permanent loss of mooring revenue associated with 2,140 m of dockwall removal / modification to create the new river valley system; investigate feasibility of increasing mooring in other areas to address dockwall removal / modification	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Total Cost of Construction	Total cost associated with constructing the DMNP	Economic Base <u>None</u> Total estimated cost of constructing the DMNP will be provided in the final submission	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Establishment / Post- Establishment Effects			
Potential Changes to Stormwater Quality and Quantity Effects of Operational Management on Water Quality	Change in amount of impervious cover	Stormwater Quality and Quantity <u>Positive</u> <ul style="list-style-type: none"> Stormwater quantity is reduced as a result of new floodplain and stormwater quality is not affected 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Changes in water quality related to sediment management activities	Lake / River Water Quality <u>Positive</u> <ul style="list-style-type: none"> Future water quality within the lake-connected wetlands will be improved compared to existing water quality in the Lower Don River Water quality within the low flow channel is anticipated to be comparable to or marginally better than existing water quality within the Lower Don River, especially within the lower reaches <u>Negligible</u> <ul style="list-style-type: none"> Water quality within the Keating Channel is anticipated to be comparable to existing water quality within the Keating Channel 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects to Port Operations	Changes to Toronto Port Authority works yard operations	Existing Land Use <u>Negligible</u> <ul style="list-style-type: none"> A suitable location for the works yard will be found in consultation with the TPA Relocation of the works yard will change the nature of its operations, as sediment and debris management will occur in Reach 1, although it is not yet determined which agency will be responsible for these activities <u>Positive</u>	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

		<ul style="list-style-type: none"> • Use of hydraulic dredge and dewatering technologies potentially provides opportunity to increase life expectancy of CDF Cell #3 by separating cleaner sands from dredgeate for better reuse • 	
	Changes to Port operations	<p>Existing Land Use <u>Negative</u></p> <ul style="list-style-type: none"> • Decreased moorage in Essroc Quay and in the Ship Channel <p><u>Negligible</u></p> <ul style="list-style-type: none"> • Mooring in the Inner Harbour along the western dockwall of Cousins Quay, within the Polson Slip at 54 Polson Street, (until the completion of Phase 4), the western dockwall of Polson Quay and the majority of the Ship Channel will be accommodated • Shallow draft vessels will be able to use dockwalls in the Keating Channel • Relocation of Sediment and Debris Management Area will not change the risk of sedimentation in the Inner Harbour 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Changes to shipping activities	<p>Existing Land Use <u>Negligible</u></p> <ul style="list-style-type: none"> • Ships will be unable to manoeuvre or load / unload in the Inner Harbour or Polson Slip during large storm events, which is similar to existing conditions • Mitigation measures will minimize potential conflict between recreational boaters and larger vessels • 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Annual Operations and Maintenance Costs	Annual cost of sediment and debris management activities	<p>Economic Base <u>Negative</u></p> <ul style="list-style-type: none"> • As future costs are anticipated to be similar to current costs, there is limited effect on operating budgets • However, there are additional costs associated with maintenance of slurry pipe (i.e., regular, long-term inspection and maintenance to minimize clogging) and one-time capital costs of purchasing hydraulic dredge and hydrocyclone • It should be noted that existing clamshell dredge is over 100 years old and would likely need replacing in the near future 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Annual cost of maintaining flood protection works, including weirs	<p>Economic Base <u>Negligible</u></p> <ul style="list-style-type: none"> • Anticipated maintenance costs for flood protection works are expected to be low 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications.

Discussion for Objective 3: Operational Management and Constructability

New Effects

The Proposed Modifications will have no New Effects with regard to Objective 3: Operational Management and Constructability.

New Mitigation Measures

The Proposed Modifications will require no New Mitigation Measures.

New Net Effects

The Proposed Modifications will yield no New Net Effects.

Summary of Proposed Modifications Effects Related to Operational Management and Constructability

Criterion	EA Overall Effects	With Proposed Modifications
Construction		
Management of Stormwater Related to Precipitation Events	Negligible	Negligible
Changes to Sediment and Debris Management during Construction	Positive	Positive
Effects from Construction on Lake and River Water Quality	Negligible	Negligible
Implications of Phasing on Port Operations	Negative	Negative
Total Cost of Construction	None	None
Establishment / Post-Establishment		
Potential Changes to Stormwater Quality and Quantity	Positive	Positive
Effects of Operational Management on Water Quality	Positive	Positive
Effects to Port Operations	Negative	Negative
Annual Operations and Maintenance Costs	Negative	Negative

Objective 4: Integration with Infrastructure

The DMNP must integrate with all existing and planned infrastructure that could not be reasonably moved or removed.

Table 4, below, details expected changes to the originally anticipated Net Effects related to Objective 4: Integration with Infrastructure.

Table 4 – Objective 4: Integration with Infrastructure

Criteria	Indicator(s)	Original EA Net Effects	New / Changed Net Effects
Construction Effects			
Changes to Existing and Planned Roads and Bridges Solely Due to DMNP	Nuisance effects as a result of modifications to Lake Shore Boulevard at the Don Roadway, the Don Roadway, Cherry Street, Villiers Street, Keating Channel bridge, Commissioners Street and Basin Street	Atmospheric Environment / Existing Land Use / Infrastructure and Utilities <u>Negligible</u> <ul style="list-style-type: none"> Short-term, infrequent and highly localized nuisance effects associated with dust, combustion emissions, noise and traffic disruption will be minimized by Waterfront Toronto's EMP and BMPs The effects associated with the road closures are attributable to the improvements being undertaken as part of the Lower Don Lands Environmental Assessment Master Plan (LDL EAMP) 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Changes to Existing Rail Lines or Yards or Access Roads Leading to Rail Yards	Nuisance effects as a result of modifications to rail lines, yard or access roads (e.g., Harbour Lead spur and yard, Keating Yard, GO Transit / Don Yard)	Atmospheric Environment / Existing Land Use <u>Negligible</u> <ul style="list-style-type: none"> Short-term, infrequent and highly localized nuisance effects associated with dust, combustion emissions, noise and traffic disruption will be minimized by Waterfront Toronto's EMP and BMPs 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Changes to Existing, Planned and Proposed Underground Utilities Due to Location of Floodplain and Low Flow Channel	Disturbance and / or displacement of underground utilities due to location of the floodplain and low flow channel, including: <ul style="list-style-type: none"> Enbridge gas pipeline Water and wastewater utilities Hydro One Networks Inc. (HONI) underground lines Other underground utilities 	Atmospheric Environment / Existing Land Use / Infrastructure and Utilities <u>Negative</u> <ul style="list-style-type: none"> Construction of the river valley system and flood protection features will result in the removal and replacement of existing underground utilities within the Lower Don Lands A suitable servicing and replacement / compensation strategy, which includes opportunities for cost sharing and partnerships for replacement old infrastructure nearing the end of its life, will be found through ongoing consultation with utility providers <u>Negligible</u> <ul style="list-style-type: none"> Construction of the river valley system and flood protection landform will require the installation of backflow prevention devices or reroute SSOs to convey stormwater away from the Don River An agreement has been established with Toronto Hydro that they will relocate their infrastructure over the Lake Shore Boulevard during the implementation of the DMNP Displacement and disturbance effects on HONI infrastructure will be mitigated through ongoing consultation with HONI to explore cost sharing opportunities for aging infrastructure and, where required, adequate compensation for relocation of infrastructure will be provided 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Nuisance effects as a result of modifications to underground utilities due to location of the floodplain and low flow channel	Atmospheric Environment / Existing Land Use / Infrastructure and Utilities <u>Negligible</u> <ul style="list-style-type: none"> Short-term, infrequent and highly localized nuisance effects associated with dust, combustion emissions and noise will be minimized by Waterfront Toronto's EMP and BMPs <u>None</u> <ul style="list-style-type: none"> Water and wastewater servicing to businesses will be maintained during construction SSOs north of Lake Shore Boulevard will be maintained during and following Construction Stormwater servicing will be maintained during Construction	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Changes to Existing Above Ground Utilities	Disturbance and / or displacement of above ground utilities due to location of the floodplain and low flow channel, including: <ul style="list-style-type: none"> The Hydro Bridge HONI overhead lines and towers Other utilities (assuming bridge lengthened or buried underneath the river)	Atmospheric Environment / Existing Land Use / Infrastructure and Utilities <u>Negative</u> <ul style="list-style-type: none"> Construction of the river valley system and flood protection features will result in the removal and replacement of existing above ground utilities within the Lower Don Lands <u>Negligible</u> <ul style="list-style-type: none"> Displacement and disturbance effects on HONI infrastructure will be mitigated through ongoing consultation with HONI to explore cost sharing opportunities for aging infrastructure and, where required, adequate compensation for relocation of infrastructure will be provided 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Nuisance effects as a result of modifications to the hydro bridge, HONI overhead lines and towers and other utilities (assuming bridge lengthened or buried underneath the river)	Atmospheric Environment / Existing Land Use / Infrastructure and Utilities <u>Negligible</u> <ul style="list-style-type: none"> Short-term, infrequent and highly localized nuisance effects associated with dust, combustion emissions and noise will be minimized by Waterfront Toronto's EMP and BMPs <u>None</u> Above ground services will be maintained until new servicing is available	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

Changes to Dockwalls	Nuisance effects as a result of modifications to dockwalls	Atmospheric Environment <u>Negligible</u> Short-term, infrequent and highly localized nuisance effects associated with dust, combustion emissions and noise will be minimized by Waterfront Toronto's EMP and BMPs	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Costs of Infrastructure Modification / Relocation Associated with DMNP	Total cost of infrastructure modification / relocation	Economic Base <u>None</u> Estimated cost of approximately \$130 million (in 2010 dollars) for modifying / relocating existing infrastructure and installing new infrastructure associated with DMNP (HR&A, 2010, Appendix O)	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Establishment / Post- Establishment Effects			
Roadway / Bridge Maintenance	Long-term maintenance implications for Lake Shore Boulevard, Cherry Street, Don Roadway, Commissioners Street, Basin Street and Gardiner Expressway substructures	Infrastructure and Utilities <u>None</u> <ul style="list-style-type: none"> All structures within the floodplain will require long-term maintenance The Gardiner Expressway substructure and part of the Lake Shore Boulevard structure are currently prone to erosion / scour 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Provision for Water-Based Emergency Services	Ability of water-based emergency services to navigate the river valley system	Infrastructure and Utilities <u>None</u> No limitations to access by water-based emergency services	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects on Maintaining Servicing	Effects of maintaining servicing on the new river valley system and low flow channel	Wetland Environment <u>None</u> The low flow channel and floodplain will not be disrupted by servicing through underground utility conduits or similar mechanisms	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

Discussion for Objective 4: Integration with Infrastructure

New Effects

The Proposed Modifications will have no New Effects with regard to Objective 4: Integration with Infrastructure.

New Mitigation Measures

The Proposed Modifications will require no New Mitigation Measures.

New Net Effects

The Proposed Modifications will yield no New Net Effects.

Summary of Proposed Modifications Effects Related to Integration with Infrastructure

Criterion	Original EA Overall Effects	Modified EA Overall Effects
Construction		
Changes to Existing and Planned Roads and Bridges Solely Due to DMNP	Negligible	Negligible
Changes to Existing Rail Lines or Yards or Access Roads Leading to Rail Yards	Negligible	Negligible
Changes to Existing, Planned and Proposed Underground Utilities Due to Location of Floodplain and Low Flow Channel	Negative	Negative
Changes to Existing Above Ground Utilities	Negative	Negative
Changes to Dockwalls	Negligible	Negligible
Costs of Infrastructure Modification / Relocation Associated with DMNP	None	None
Establishment / Post-Establishment		
Roadway / Bridge Maintenance	None	None
Provision for Water-based Emergency Services	None	None
Effects on Maintaining Servicing	None	None

Objective 5: Recreational and Cultural Opportunities

The DMNP should encourage and contribute to the development of compatible recreation, cultural and heritage opportunities as well as improve accessibility for the public and persons with disabilities to the Don Mouth.

Table 5, below, details expected changes to the originally anticipated Net Effects related to Objective 5: Recreational and Cultural Opportunities.

Table 5 – Objective 5: Recreational and Cultural Opportunities

Criteria	Indicator(s)	Original EA Net Effects	New / Changed Net Effects
Construction Effects			
Effects on Recreational Users from Construction	Nuisance effects (noise, dust and combustion emissions) from construction activities in the vicinity of recreational uses	<p>Atmospheric Environment / Land-based and Marine Recreation</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> Short-term, infrequent and highly-localized nuisance effects associated with noise, dust and combustion emissions will be minimized by Waterfront Toronto's EMP and BMPs Limited potential for recreational users to experience nuisance effects associated with dust, as majority of earthworks will require movement of wet or damp soils, which will minimize the amount of airborne dust <p><u>Negative</u></p> <ul style="list-style-type: none"> Frequent and off-site effects to recreational users from transportation of soils off-site will not be eliminated through mitigation measures 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effect from Construction on Archaeological Resources	Significance of archaeological resources within floodplain and low flow channel	<p>Archaeological Resources</p> <p><u>Negative</u></p> <ul style="list-style-type: none"> Limited potential for the survival of significant pre-contact or early contact period Aboriginal archaeological resources Inventoried archaeological resources have already been partially disturbed, however intact deposits may remain in other areas Should significant resources be encountered during construction monitoring, construction must be halted and the consulting archaeologist will require adequate time to document the resources and provide further recommendations for conservation as required 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effect from Construction on Traditional Uses of Lands by Aboriginal Peoples	Extent of traditional uses of lands within floodplain and low flow channel	<p>Aboriginal Interests</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> While there are no traditional uses within the new river valley system, continuing engagement with the Mississaugas of the New Credit First Nation, the Métis Nation of Ontario and other First Nations and Aboriginal groups in the DMNP will ensure that their interests are represented and addressed 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Changes to Use of River Mouth for Boating	Effects of construction on recreational boating	<p>Land-based and Marine Recreation</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> Construction will restrict navigation in some areas (Reach 1, Reach 2a, Reach 4); however, effects to recreational marine users will be short-term, infrequent and localized 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Changes to Existing Pedestrian / Cycling Trails	Effects of construction on existing pedestrian / cycling trail access	<p>Land-based and Marine Recreation</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> Disruption to trail access will be short-term (only during construction activities), localized and alternative access will be provided Phasing will ensure that not all trails will have restricted access at once 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Displacement of Built Heritage Resources as a Result of the DMNP	Effects to cultural heritage value (changes to structures) of built heritage resources and cultural heritage landscapes within low flow channel or floodplain	<p>Built Heritage and Cultural Landscape Resources</p> <p><u>Negative</u></p> <ul style="list-style-type: none"> Decrease in heritage value of Marine Terminal 35, Atlas Crane site and the one store brick warehouse at 242-292 Cherry Street, Port Lands Industrial District, Commissioners, Villiers and Cherry Streets (including Keating Channel bridge), Keating Channel and Polson dockwall due to displacement will be minimized by relocating the resources (where possible), incorporating the resource into the design of the new river mouth (Keating Channel) and through the preparation of commemorative interpretive material <p><u>Negligible</u></p> <ul style="list-style-type: none"> Decrease in heritage value of concrete silos on property at 54 Polson Street, Toronto Harbour Commissioners Storage Buildings, Former Dominion Bank building, Toronto Hydro Substation, Essroc Toronto Terminal silos and Commissioners Street and Don Roadway streetscapes will be avoided through mitigation during construction; however, the former Dominion Bank building, Fire Hall No. 30 and the one-storey brick building beside the Fire Hall as well as the Toronto Hydro Substation will be displaced during build-out of the River Precinct within the Lower Don Lands 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Landscape Due to Sediment and Debris Management / Construction Equipment (cranes, debris booms, hydraulic dredge, etc.)	Changes to visual landscape due to construction and maintenance equipment	<p>Visual Effect</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> The existing landscape is highly industrialized and a net change in views is not predicted Temporary changes in views due to the construction of the Sediment and Debris Management Area will be short-term and localized 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

Establishment / Post- Establishment Effects			
Changes to Use of River Mouth for Recreational Boating	Compatibility of recreational boating activities with naturalization	<i>Land-based and Marine Recreation</i> <u>Positive</u> <ul style="list-style-type: none"> • Increase in the length of the Don River available for boating • Increase in the naturalized land area available for users' enjoyment • Negligible effects of motorized boating within the low flow channels and non-motorized boating within the wetlands 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Recreational Users' Enjoyment of Parkland and Trails	Effects of increased parkland and trails on users' enjoyment	<i>Land-based Recreation</i> <u>Positive</u> <ul style="list-style-type: none"> • Increased users' enjoyment and amenity values of the DMNP and Project Study Area due to a naturalized river valley system, trail system and additional parkland created outside the floodplain 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects on Recreational Users from Operations Nuisances	Nuisance effects (noise, dust, combustion emissions) from sediment and debris management equipment in the vicinity of recreation uses	<i>Atmospheric Environment / Land-based and Marine Recreation</i> <u>Negligible</u> <ul style="list-style-type: none"> • Infrequent, highly localized noise levels and combustion emissions will be minimized by Waterfront Toronto's EMP and BMPs 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects to Visual Landscape Due to Sediment and Debris Management Equipment (<i>cranes, debris booms, hydraulic dredge, etc.</i>)	Changes to visual landscape due to equipment	<i>Visual Effect</i> <u>Negligible</u> <ul style="list-style-type: none"> • Disruption to views will be minimized by mitigation and views are not incongruous with existing views of existing operations within the area 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

Discussion for Objective 5: Recreational and Cultural Opportunities

New Effects

The Proposed Modifications will have no New Effects with regard to Objective 5: Recreational and Cultural Opportunities.

New Mitigation Measures

The Proposed Modifications will require no New Mitigation Measures.

New Net Effects

The Proposed Modifications will yield no New Net Effects.

Summary of Proposed Modifications Effects Related to Recreational and Cultural Opportunities

Criterion	EA Overall Effects	Modified EA Overall Effects
Construction		
Effects on Recreational Users from Construction	Negative	Negative
Effect from Construction on Archaeological Resources	Negative	Negative
Effect from Construction on Traditional Uses of Lands by Aboriginal Peoples	Positive	Positive
Changes to Use of River Mouth for Boating	Negligible	Negligible
Changes to Existing Pedestrian / Cycling Trails	Negligible	Negligible
Displacement of Built Heritage Resources as a Result of the DMNP	Negative	Negative
Effects to Visual Landscape Due to Sediment and Debris Management / Construction Equipment	Negligible	Negligible
Establishment / Post-Establishment		
Changes to Use of River Mouth for Recreational Boating	Positive	Positive
Recreational Users' Enjoyment of Parkland and Trails	Positive	Positive
Effects on Recreational Users from Operations Nuisances	Negligible	Negligible
Effects to Visual Landscape Due to Sediment and Debris Management Equipment	Negligible	Negligible

Objective 6: Co-ordination with Other Planning Initiatives

The DMNP must co-ordinate with other planning and development efforts, as well as between the three levels of government as recommended in the Our Toronto Waterfront: Gateway to the New Canada report (Fung Report) (Toronto Waterfront Revitalization Task Force, 2000), for the revitalization and sustainability of the waterfront and associated foreseeable infrastructure in order to ensure that the best outcome is achieved for all projects.

Table 6, below, details expected changes to the originally anticipated Net Effects related to Objective 6: Co-ordination with Other Planning Initiatives.

Table 6 – Objective 6: Co-ordination with Other Planning Initiatives

Criteria	Indicator(s)	Original EA Net Effects	New / Changed Net Effects
Construction Effects			
Removal of or Changes to, Existing Land Use	Number and type of displaced and disrupted land uses	<p>Existing Land Use</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> Short-term and highly localized nuisance effects associated with grade modifications will be minimized through ongoing consultation with landowners and, where possible, through landscaped buffering, stabilization and maintenance of vehicular access Leases will be terminated or not renewed prior to construction activities for those uses leasing from TPLC <p><u>Negative</u></p> <ul style="list-style-type: none"> Permanent removal of property from public and private owners Overall changes to land uses are anticipated as a result of long-standing planning for revitalization of the Lower Don Lands 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Employment Created from Construction Activities	Changes in employment levels (direct and indirect)	<p>Economic Base</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Infrastructure investment is expected to result in 3,900 full-time job years in direct employment and 4,900 full-time job years in indirect and induced employment 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Effects from Construction Activities on Future Residential and Business Uses	Nuisance effects from construction activities on future residential and business uses within the Project Study Area	<p>Atmospheric Environment</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> Short-term, infrequent and highly localized nuisance effects associated with dust, combustion emissions, noise and traffic disruption will be minimized by Waterfront Toronto's EMP and BMPs 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Establishment / Post- Establishment Effects			
Consistency with the Intent of the Central Waterfront Secondary Plan	Consistency of DMNP with objectives of Central Waterfront Secondary Plan (cross referenced to other indicators as appropriate)	<p>Planned Land Use</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> All DMNP planning was co-ordinated with the Secondary Plan and the revisions proposed to it and is therefore consistent 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Consistency with Planning Policies and Planning Studies (Currently Underway and Completed)	Consistency of DMNP with planning studies and projects underway in the vicinity of the Project Study Area	<p>Planned Land Use</p> <p><u>None</u></p> <ul style="list-style-type: none"> The DMNP has been co-ordinated with and with an understanding of all other EA / planning efforts 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Consistency with the Provincial Policy Statement (PPS), the <i>Places to Grow Act</i> and the Growth Plan for the Greater Golden Horseshoe (Growth Plan) (Ministry of Infrastructure, 2006).	<p>Planned Land Use</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Implementation of the DMNP enables redevelopment of the Lower Don Lands in a manner that is consistent with the policies outlined in the PPS, <i>Places to Grow Act</i> and Growth Plan 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Nuisance Effects on the Planned Surrounding Communities	Nuisance effects from sediment and debris management equipment in the vicinity of residential uses	<p>Atmospheric Environment / Planned Land Use</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> Infrequent, highly localized noise, dust and combustion emissions will be minimized by Waterfront Toronto's EMP and BMPs 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

Discussion for Objective 6: Co-ordination with Other Planning Initiatives

New Effects

The Proposed Modifications will have no New Effects with regard to Objective 6: Coordination with Other Planning Initiatives.

New Mitigation Measures

The Proposed Modifications will require no New Mitigation Measures.

New Net Effects

The Proposed Modifications will yield no New Net Effects.

Summary of Proposed Modifications Effects Related to Co-ordination with Other Planning Initiatives

Criterion	EA Overall Effects	Modified EA Overall Effects
Construction		
Removal of or Changes to, Existing Land Use	Negative	Negative
Employment Created from Construction Activities	Positive	Positive
Effects from Construction Activities on Future Residential and Business Uses	Negligible	Negligible
Establishment / Post-Establishment		
Consistency with the Intent of the Central Waterfront Secondary Plan	Positive	Positive
Consistency with Planning Policies and Planning Studies (Currently Underway and Completed)	Positive	Positive
Nuisance Effects on the Planned Surrounding Communities	Negligible	Negligible

Objective 7: Consistency with Waterfront Toronto Sustainability Framework Objective

The DMNP should be consistent with Waterfront Toronto's Sustainability Framework (TWRC, 2005c) which seeks to ensure that sustainability principles are integrated into all facets of waterfront revitalization management, operations and decision-making.

Table 7, below, details expected changes to the originally anticipated Net Effects related to Objective 7: Consistency with Waterfront Toronto Sustainability Framework.

Table 7 – Objective 7: Consistency with Waterfront Toronto Sustainability Framework Objective

Criteria	Indicator(s)	Original EA Net Effects	New / Changed Net Effects
Construction Effects			
Effects of Transporting Soils Off-site	Nuisance effects (traffic, noise, dust, combustion emissions) associated with transportation of soils off-site	<p>Atmospheric Environment / Existing Land Use / Infrastructure and Utilities</p> <p><u>Negative</u></p> <ul style="list-style-type: none"> Short-term, infrequent and highly localized nuisance effects associated with transporting soils off-site, if required, will be minimized by Waterfront Toronto's EMP and BMPs but will nonetheless have a negative impact Short-term, localized degradation of traffic conditions within the Project Study Area will remain within acceptable conditions Short-term degradation of already poor traffic conditions at the intersection of Lake Shore Boulevard / Parliament Street / Queens Quay Street will be minimized if trucks operate during off-peak hours 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Environmental Implications of Soil Management Activities During Construction	Nuisance effects (noise, dust, combustion emissions) associated with excavation, on-site movement and stockpiling of contaminated materials	<p>Atmospheric Environment</p> <p><u>Negative</u></p> <p>Short-term, localized, but frequent nuisance effects associated with excavation, on-site movement and stockpiling of contaminated materials will be minimized by Waterfront Toronto's EMP and BMPs</p>	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
	Effects on soils from excavation	<p>Geology and Soils</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Removal of contaminated soils during excavation will improve soil quality within the Project Study Area <p><u>Negligible</u></p> <ul style="list-style-type: none"> Potential leakage from permanent removal of abandoned pipelines will be mitigated by removal of oil and cutting and capping of pipelines Very infrequent and highly localized effects resulting from spills will be addressed through implementation of the spill response plan 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Environmental Implications of Groundwater Management Activities During Construction	Contaminated groundwater requiring treatment / management	<p>Groundwater Quality</p> <p><u>Negligible</u></p> <ul style="list-style-type: none"> Mitigation will minimize but not remove groundwater seepage <p><u>None</u></p> <ul style="list-style-type: none"> LNAPL will be removed and active product control / recovery pumping system will be decommissioned 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Total Cost of Soil Management	Total cost associated with managing soil associated with the DMNP	<p>Geology and Soils</p> <p><u>Negative</u></p> <ul style="list-style-type: none"> Treatment or disposal of contaminated soils will be a considerable cost associated with construction of the DMNP, which can potentially be reduced through a risk management approach 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Establishment / Post- Establishment Effects			
Soil Quality as a Result of the DMNP	Soils that meet O.Reg. 153/04	<p>Geology and Soils</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Soils within the floodplain will remain uncontaminated and therefore support terrestrial and aquatic wildlife 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications
Reuse of Clean Sediment for Beneficial Purposes	Ability to reuse clean sediment for beneficial purposes	<p>Geology and Soils</p> <p><u>Positive</u></p> <ul style="list-style-type: none"> Opportunities available to reuse soils and sediment that are uncontaminated or readily treatable 	No New or Changed Net Effects are anticipated as a result of the Proposed Modifications

Discussion for Objective 7: Consistency with Waterfront Toronto Sustainability Framework Objective

New Effects

The Proposed Modifications will have no New Effects with regard to Objective 7: Consistency with Waterfront Toronto Sustainability Framework Objective.

New Mitigation Measures

The Proposed Modifications will require no New Mitigation Measures.

New Net Effects

The Proposed Modifications will yield no New Net Effects.

Summary of Proposed Modifications Effects Related to Consistency with Waterfront Toronto Sustainability Framework Objective

Criterion	EA Overall Effects	Modified EA Overall Effects
Construction		
Effects of Transporting Soils Off-site	Negative	Negative
Environmental Implications of Soil Management Activities During Construction	Negligible	Negligible
Environmental Implications of Groundwater Management Activities During Construction	Negligible	Negligible
Total Cost of Soil Management	Negative	Negative
Establishment / Post-Establishment		
Soil Quality as a Result of the DMNP	Positive	Positive
Reuse of Clean Sediment for Beneficial Purposes	Positive	Positive