


Don Mouth Naturalization And Port Lands Flood Protection Project

*DON NARROWS –
Historical and
Existing Conditions*

March 29, 2008



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Presentation Overview

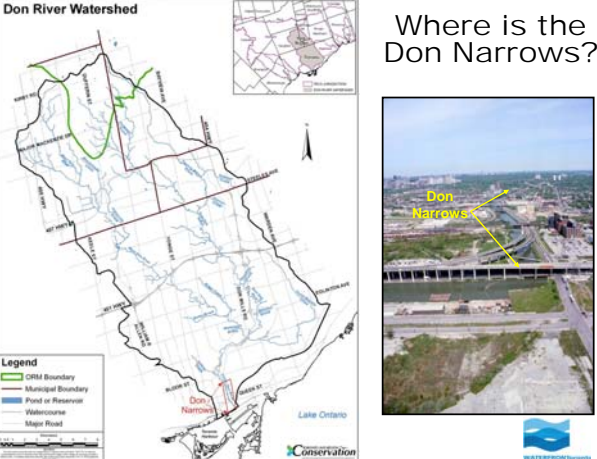
1. Project Location and Background
2. Historical Context – How did the Don Narrows Come to Be?
3. The Don Narrows Today
4. Next Steps

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Don River Watershed

Where is the Don Narrows?



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What is the Don Narrows?

- The “Don Narrows” extends ~2150 metres from Riverdale Park to Lake Shore Blvd; where the Don River enters the Keating Channel.
- Engineering works in the late-1880s straightened and widened the river channel; cedar posts were inserted into the ground vertically side-by-side to create new river banks.
- Steel sheet-piles were installed behind these cedar posts in the late-1940s to mid-1950s to facilitate construction of the Don Valley Parkway (DVP) and Bayview extensions. Remnants of the original cedar posts can still be seen in the “Narrows”

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What is the Don Narrows? *(continued)*

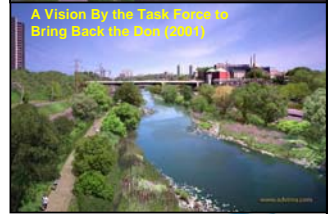
- The location of the DVP, Bayview Avenue and railways along the top of the river bank through the "Narrows" are frequently flooded (~2 year return period).
- A pedestrian trail along the west side of the river provides the only public access to the Don River through the "Narrows".
- Vegetation along the "Narrows" is either absent or limited to a narrow band of opportunistic trees, grasses and shrubs – usually of the invasive variety.
- Heavy sediment loads (mainly sands and silts), and straight, hard channel banks that are overly-wide inhibit the formation of good aquatic habitat within the "Narrows".

Project Background

- For years, strong community support has been expressed to improve the natural habitat conditions along and within the Don Narrows.
- In response, TRCA and Waterfront Toronto included consideration of "In-Channel" naturalization opportunities for the Don Narrows as part of the DMNP EA



A Vision By The Test: *Force to Bring Back the Don (2007)*



Project Objective


- As part of the Step 5 Activities for the Don Mouth Naturalization and Port Lands Flood Protection Project EA, TRCA and the Gartner Lee Limited consultant team will examine opportunities for improving the instream habitat conditions within the Don Narrows (e.g., within the channel banks and immediately adjacent to the top of banks between the DVP on the east and railway tracks on the west).
 - The EA team will examine:
 - Options for providing instream structures designed to improve aquatic habitat quality; and
 - Where vegetation can be planted or transplanted (in the case of phasing out invasive species).
- HOWEVER, THERE ARE SOME CONSTRAINTS!**
- Naturalization cannot increase the frequency of flooding on the Don Valley Parkway (DVP), Bayview Avenue, nor the railway tracks on the west side of the river (which are currently flooded almost every year in sections);
 - Naturalization features cannot increase water levels during the Regulatory Flood Event;
 - Naturalization features cannot increase the risk of failure for transportation and utility infrastructure running parallel to the Don Narrows.

Historical Context

How did the Don Narrows end up this way?

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Don Narrows Early 1800s



Early to mid 1800s, the Don River originally exited into the Ashbridge's Bay Marsh near what would become Eastern Avenue.

Vidal, 1815

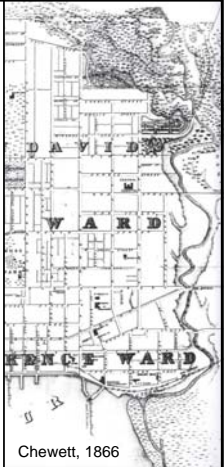
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Don Narrows Mid 1800s

- By 1857, the Grand Trunk Railroad had established a rail crossing over the Don between Palace Street and Front Street (adjacent to existing location).
- By late 1850's, crossings at Gerrard Street (then known as Bell's Bridge) and Queen Street were built.
- Between late 1850's and 1890, numerous other road bridges were built and either destroyed or removed south of Queen Street
- Late 1850's small ships and scows travelled up and down the river as far as Gerrard.



Chewett, 1866


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Don Narrows Late 1800s

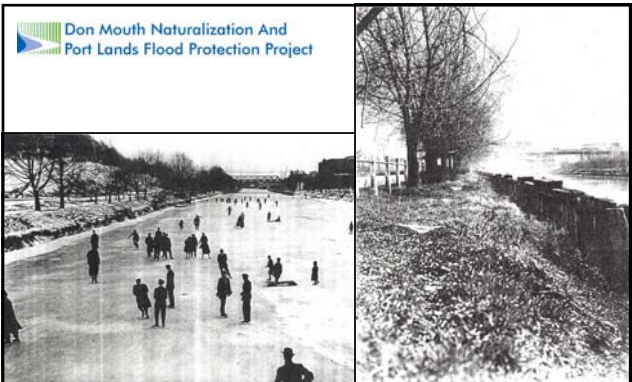
- Don River "Improvements" occurred between 1887 and 1890
- Objectives were to straighten and deepen the channel from Gerrard Street to the Grand Trunk Railway crossing.
- Goals were to provide flood protection, prevent ice jams and attract industry.
- The "Improvement" project was one of Toronto's greatest political boondoggles in the late 19th century as it accomplished none of the goals, and took far longer to construct and at a much higher cost.



Goad's Atlas 1890

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Skating on the Narrows


Cedar Pile Bank Protection along the Narrows

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Don Narrows
Late 1800s & Early 1900s



- By 1890, the Canadian Pacific Railway built railway lines up the Don Valley along the west side of the Don River, occupying lands that were made available by the Don River "Improvement" project.

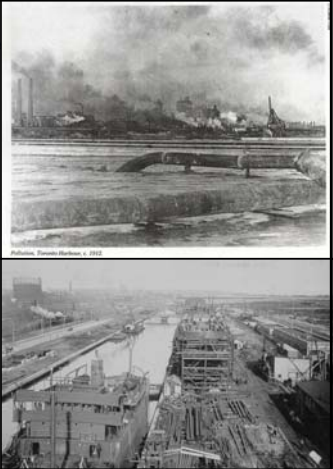
- By 1912, the Keating Channel was completed, which effectively diverted the Don River entirely to the west, into the Inner Harbour.

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Don Narrows
Early 1900s



- Pollution in the Don River increased during the 19th and early 20th century due to agriculture, logging, milling, industrial and animal wastes, and human sewage. Pollution accumulated in the lower Don and Ashbridge's Bay Marsh contributing to disease outbreaks.
- The Toronto Harbour Commissioners devised the 1912 Waterfront Plan, calling for the transformation of Ashbridge's Bay Marsh into a port that provided industrial, commercial and park land uses.
- The Port Industrial District was completed between 1912 and 1952.


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Don Narrows
Early 1900s

- Major ice jam floods occurred in the Don, in February of 1918 and 1925.
- In 1928, the Grand Trunk Railway over the Don River was raised 6 metres onto an earthen viaduct




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Don Narrows
Mid 1900s

- The DVP & Bayview Extension were built along the east and west banks of the "Narrows", respectively in the mid-1950s.
- The Gardiner Expressway was completed by the early 1960s, providing an elevated expressway from the DVP to Toronto's downtown core.





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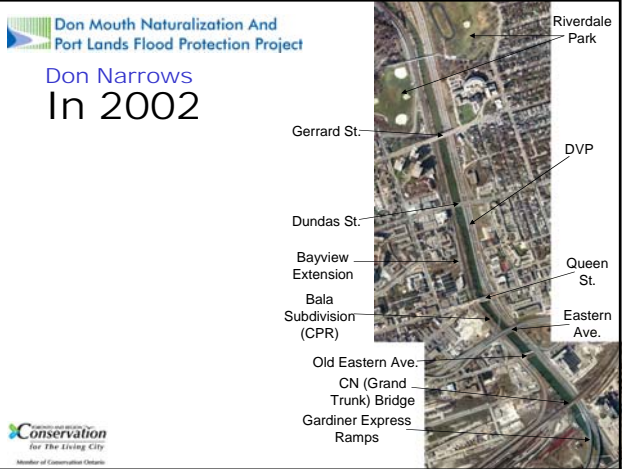



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What are the Physical Conditions Today?

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Don Narrows In 2002

2 Year Flood Plain

Don Narrows Flood Levels in the Narrows



(2 Year Flood)

2 + 100 Year Flood Plain

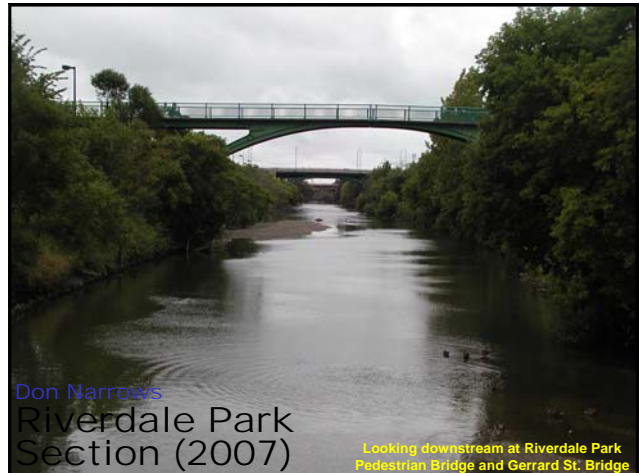
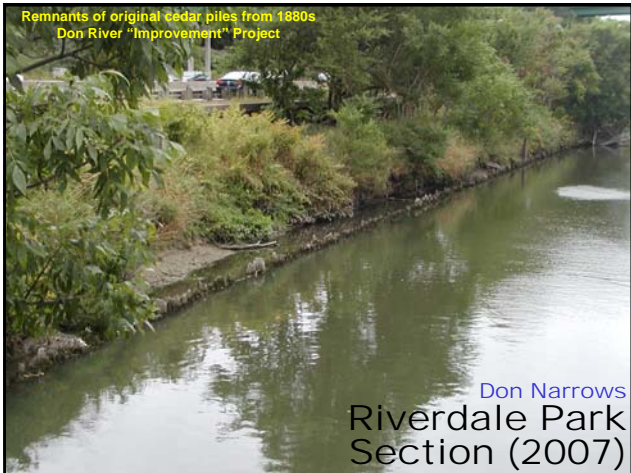
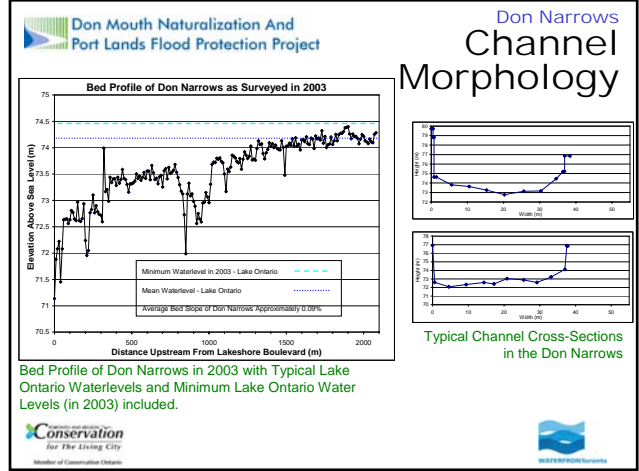
Don Narrows Flood Levels in the Narrows

(2 and 100 Year Flood)



Don Narrows
Flood Levels in the Narrows
(2, 100 Year, and Regulatory Flood)





Looking downstream from Riverdale Park Pedestrian Bridge at Gerrard St. Bridge

Don Narrows
Riverdale
Park Section
(2007)



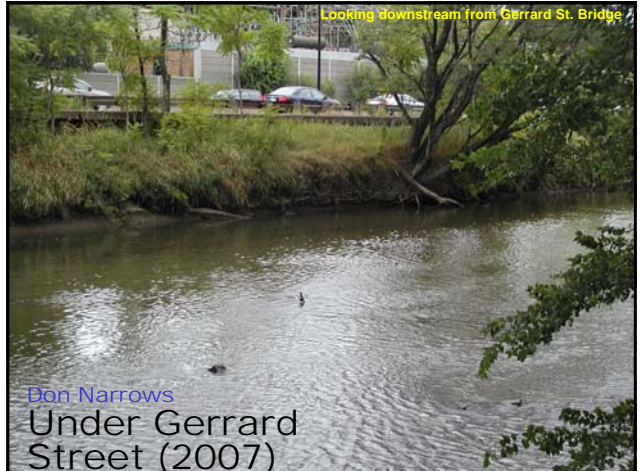
Looking upstream from Gerrard St. Bridge

Don Narrows
Under Gerrard
Street (2007)



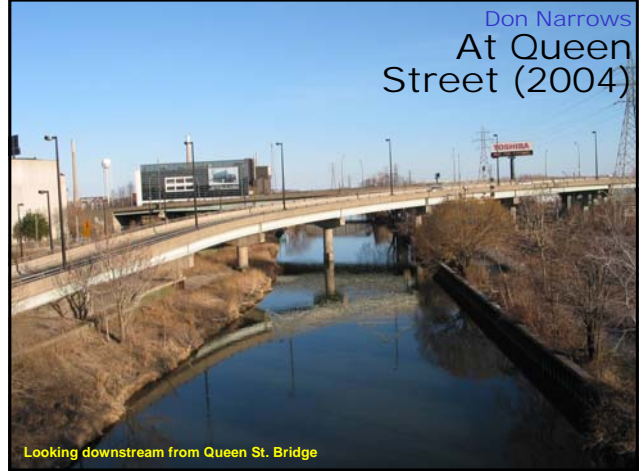
Looking upstream from Gerrard St. Bridge

Don Narrows
Under Gerrard
Street (2007)

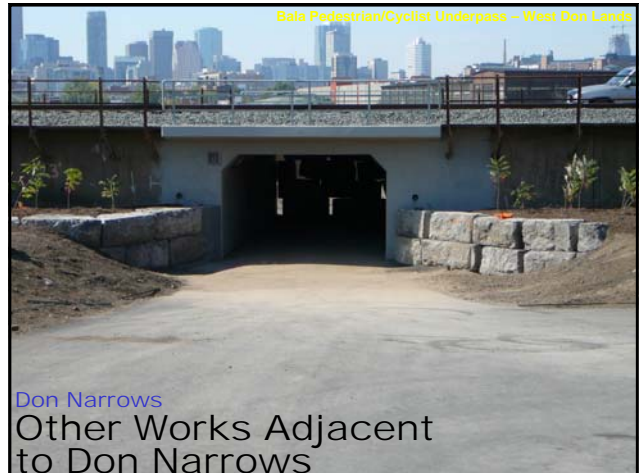
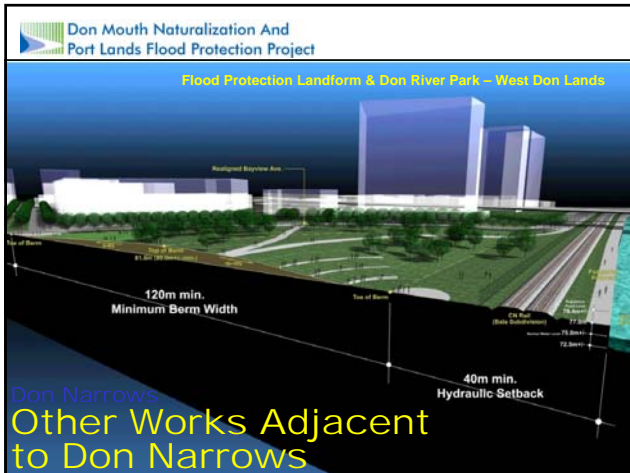
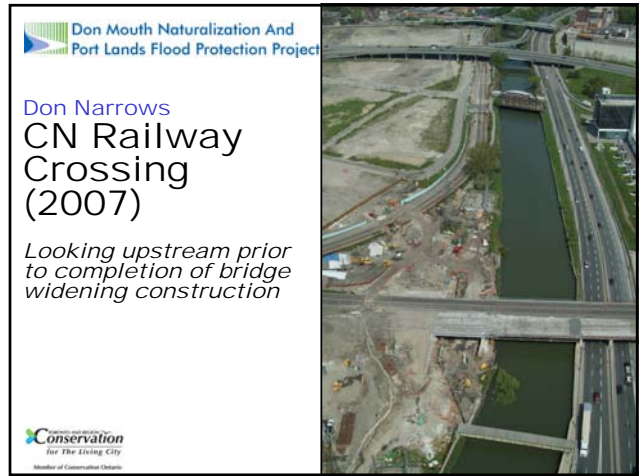


Looking downstream from Gerrard St. Bridge

Don Narrows
Under Gerrard
Street (2007)









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Don Narrows
Other Works
Adjacent to
Don Narrows

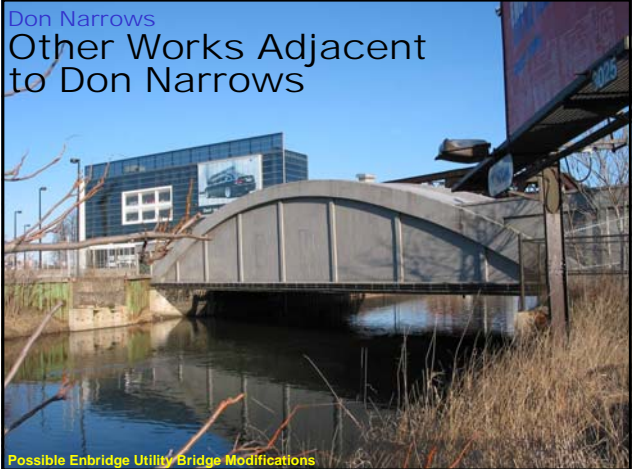


Don Landing - West Don Lands

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Don Narrows
Other Works Adjacent
to Don Narrows



Possible Enbridge Utility Bridge Modifications

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Next Steps

A Site Walk and Working Session to
Discuss Ideas for the Naturalization of the
Don Narrows will be held on

Saturday May 24, 2008

IF INTERESTED IN PARTICIPATING, PLEASE
PROVIDE YOUR NAME AND EMAIL ADDRESS AT
THE BOOTH SO THAT DETAILS OF THE EVENT CAN
BE SENT TO YOU WHEN THEY ARE AVAILABLE

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