

**Stormwater Funding Options**  
**Council Meeting Presentation**  
**February 12, 2013**

**Robert Muir, Senior Stormwater Engineer,  
Asset Management Department**

## Background

- **Series of Council Workshops held in 2011/2012 regarding Stormwater Mgmt Strategies**
- **Special General Meeting - Stormwater Funding - November 8<sup>th</sup> 2012**
- **Recommendations to Council Meeting of December 17<sup>th</sup> and deferred to January in order for staff to meet with the West Thornhill Stormwater Flood Remediation Liaison Committee members.**

## Direction at December Council

- **Report and recommendations on a flood control strategy deferred to January meeting in order to consult further with West Thornhill Stormwater Flood Remediation Liaison Committee members. Staff held those discussions.**
- **Meetings and ongoing correspondence have helped clarify technical aspects of the project, and the rationale for funding options in the flood control funding strategy.**
- **Feedback: strong comments on the funding options - West Thornhill members prefer to have local option removed. Staff believe there is a need for further consultation City-wide.**

## Objectives – Feb 12, 2013

- **To advance decisions related to managing storm water in order to continue the implementation without delays in Thornhill and City-wide.**
- **The following directions to staff are needed at this meeting:**
  - Service Level
  - Implementation timeframe
  - Funding Options (# and type) for inclusion at public consultation
- **Earlier presentation material is summarized to assist in decision making process.**

## Background of Storm Water Management

- **Sustainable funding for stormwater management strategies has been pursued by many municipalities as the costs to meet regulatory requirements for environmental compliance and public expectations for expanded services continue to expand.**
- **In Markham, previous Municipal Class Environmental Assessment (MCEA) studies in West Thornhill and Don Mills Channel have highlighted funding needs for expanded flood control related to stormwater services.**
- **City improvement projects have been ongoing while awaiting MCEA approval for major stormwater works.**

## Projects Undertaken by City

- **Completed projects include: Over and above EA's**
  - ✓ Wastewater systems upgrades and modifications on Clarke Ave., Inverlochy Blvd;
  - ✓ wastewater flow reduction in West Thornhill: downspout disconnection, manhole lid sealing; (recommendations for Citywide implementation);
  - ✓ sewer relining in West Thornhill; private lateral relining ongoing;
  - ✓ Stormwater risk reduction measures have included culvert grate modification (to prevent clogging), Babcombe Ave./CN culvert inlet upgrades;
  - ✓ Planning and development considerations and changes to standards under development;
  - ✓ Other projects in planning stages – e.g. Markham Village area.

## Projects Undertaken by City

- **West Thornhill stormwater implementation:**
  - ✓ MCEA hydraulic model updated and refined to support preliminary and detailed design (extensive field investigations, integration with Glynnwood MCEA model, evaluation of structural condition/defects).
  - ✓ Value Engineering completed in 2012 to confirm technical direction of MCLA preferred alternative and to identify cost-savings.
  - ✓ Evaluation of sewer alignments to avoid disturbance through private lots, and minimize cost will meeting 100 year level of service.
  - ✓ Advancing downspout disconnection working with TRCA through Sustainable Neighbourhood Action Plan (SNAP), and in coordination with wastewater inflow/infiltration reduction activities.
  - ✓ Preliminary design for first stage of Phase 1 underway (2013 tendering subject to permit(s) approvals)

# Costs for Target Level of Service

Type of Work	Estimated Cost		Funding Identified
<b>1- Flood Control Allowances</b>	5-year Protection	100-year Protection	
a) Don Mills Channel	\$42M	\$112M	\$0
b) West Thornhill	\$17M	\$40M	\$4M – Gas Tax
c) Town-wide	\$33M	\$77M	\$0
<b>Total Flood Control</b>	<b>\$92M</b>	<b>\$229M</b>	<b>Total \$4M</b>

\$ 159 M Flood Control Cost

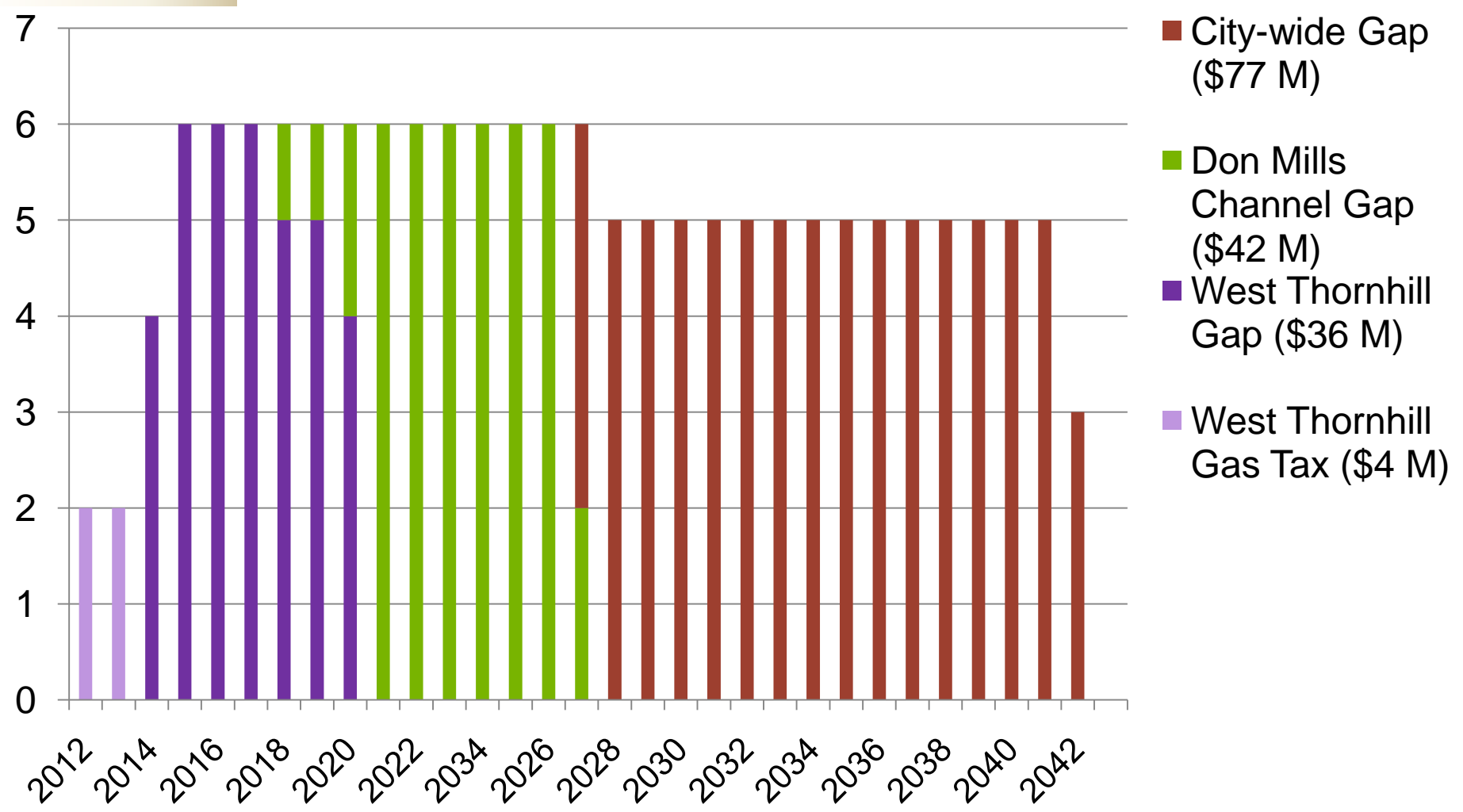
\$ 155 M Funding Gap

 Cost for Target Level of Service

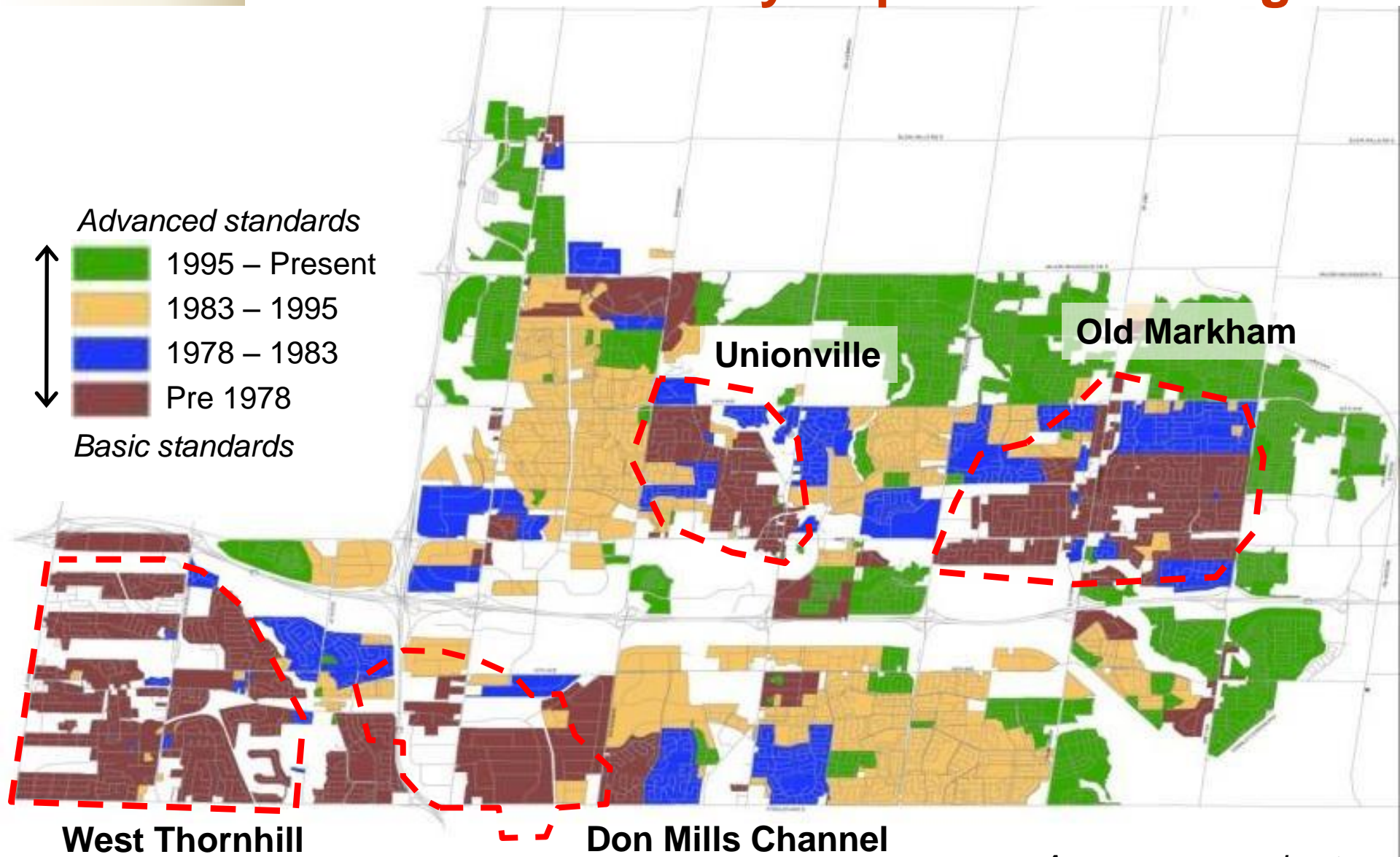
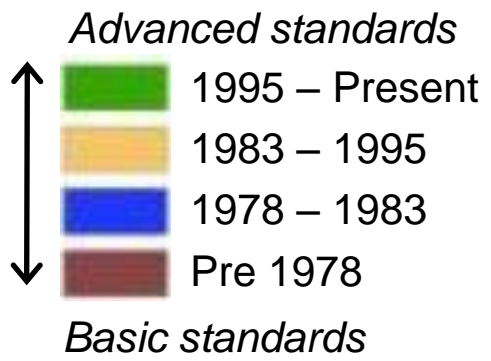


# Example Implementation Strategy: \$155M flood control over 30 years (2012 \$'s)

Cost (\$M)



# Pre-1978 areas may require local charges



*Areas are approximate*

## City-wide Funding Options

- **Option #1 – Flat Fee**
  - Residential : in the range of \$3-4/month
  - Non-residential : in the range of \$45-60/month *per water account*  
Or average \$ 25 / month *per property (can vary by size)*
- **Option #2 – Water Rate Surcharge**
  - Residential : in the range of approximately \$3-4/month per water account
  - Non-residential : ranges from \$25/month to \$1,000/month per water account
- **Option #3 – Property Tax Rate Increase**
  - One time 4.41% increase, or phased in
  - Residential : average \$3-4/month *per property (can vary by assessment)*
  - Non-residential : varies according to current value assessment
- **Option #5 – Stormwater Utility**
  - Residential : average \$3-4 / month *per property (can vary by size)*
  - Non-residential : varies with hard surfaces, averages 6 to 7 times residential, on average \$ 25 / month *per property*  
: example large properties, e.g., shopping centre  
\$1000/month, school \$500/month, church \$120/month
- **Option #6 – Canada Gas Tax Fund**
  - Portion of annual fund (\$2M) could be dedicated toward flood control

## Local Charge Funding Option

- Applies to properties in specific areas only (West Thornhill, Don Mills Channel and other areas), no charges outside these specific areas
- Based on a 30 year implementation strategy, 30 year financing (5% interest rate), and estimated number of properties in benefiting area

### Estimated financial implications:

- West Thornhill: 1 time payment of approximately \$5,400/property or \$27/month/property for 30 years
- Don Mills Channel: 1 time payment of approximately \$114,000/property, or \$619/month/property for 30 years
- Other Specific Areas: 1 time payment of approximately \$6,000/property, or \$32/month/property for 30 years

## Funding Options For Consultation Residential Example

Option	Distribution of Fees		Estimated Fees per Year (average)			
			City-wide Properties		Local West Thornhill Properties	
	City-wide	Local	No Gas Tax Funding	With Gas Tax Offset	No Gas Tax Funding	With Gas Tax Offset
City-wide Fee (a)	100 %	0 %	\$48	\$36	\$48	\$36
Blended fee (c)	25 %	75 %	\$12	\$9	\$260	\$200
Local Charge (b)	0 %	100 %	\$0	\$0	\$330	\$250

## Funding Options For Consultation Commercial Example

Option	Distribution of Fees		Estimated Fees per Year (average)			
			City-wide Properties		Local Don Mills Channel Properties	
	City-wide	Local	No Gas Tax Funding	With Gas Tax Offset	No Gas Tax Funding	With Gas Tax Offset
City-wide Fee (a)	100 %	0 %	\$560	\$420	\$560 <i>(maximum \$560/yr)</i>	\$420 <i>(maximum \$420/yr)</i>
Blended fee (c)	25 %	75 %	\$140	\$105	\$5710 <i>(maximum \$89,300/yr)</i>	\$4230 <i>(maximum \$67,600/yr)</i>
Local Charge (b)	0 %	100 %	\$0	\$0	\$7430 <i>(maximum \$119,000/yr)</i>	\$5500 <i>(maximum \$87,900/yr)</i>

- 30 year financing of local fees. 30 year strategy for city-wide fees. Maximum local approximately 16 times average in Don Mills Channel Area. \$2M/yr Gas Tax/yr.



## Summary

- **Consultation on funding options with City wide residents required due to the size, scope and impact of the plan -- \$155 million. Need feedback from residents city wide.**
- **In order to accelerate our implementation in Thornhill need the following decisions made by June 2013:**
  - Funding Source for City wide program (by June 2013)
  - Service level – (approval requested Feb 12)
  - Implementation timeframe – (approval requested Feb 12)

## Key Decisions – Flood Strategy Level of Service

- **Resolutions from November 8, 2012 Special General Cttee. :**
  - 1) That the presentation by Robert Muir, Senior Stormwater Management Engineer regarding the Water System Management - Stormwater Funding Options be received; and,
  - 2) That the City's flood control strategy consider a 100-year level of service target for City-wide storm drainage systems, subject to technical feasibility and approvals as part of future Class Environmental Assessments (EA) which shall consider different levels of protection; and,
  - 3) That the City's flood control strategy consider a 5 year level of service target for Don Mills Channel drainage system based on its original design and consider other options, subject to technical feasibility and approval as part of a future Class EA; and,



## Key Decisions – Flood Strategy Implementation Time

- 4) That the City adopt a 30 year implementation timeframe for its flood control strategy; and,
- 5) That the flood control strategy implement City-wide flood risk reduction projects, prioritized on the basis of identified risk and cost-effectiveness of solutions; and,
- 6) That the flood control strategy be updated on a 5 year cycle considering projects identified in completed technical studies and updated budget requirements; and,

## Key Decisions– Funding Source

- 7) That staff consult the public on the following City wide flood control funding sources:
  - a) 100% City-wide fees,
  - b) 100% Local Charges, and
  - c) 75% Local Charges and 25% City-wide fee
- 8) That Canada Gas Tax Funding be considered to offset the cost of the above options; and

# Key Decisions– Consultation

## Recommendations:

- 9) That staff meet with the Thornhill Liaison Committee prior to the City Wide public consultations; and further,
- 10) That staff report back following public consultation and recommend a funding option for the flood control strategy.

## Next Steps

- **Public consultation on the City's proposed Flood Control Strategy and Funding Source options (City-wide and local aspects) – Mar. 26 to Apr. 11, 2013**
- **Staff report on the City's Flood Control Strategy and preferred Funding Source including feedback from public consultation (May 2013).**
- **Council decision on funding source**
- **Implementation of the strategy**
  - Implement funding program – timelines depend on recommended option (i.e., local charges require most detailed framework, tiered flat rates require more detailed framework than property tax)
  - Construction of next phases of approved flood control projects
  - Initiate next priority flood control studies (Class EAs)