

Town of Markham

RESERVE STUDY PRESENTATION

**Finance and Administrative Committee Meeting
November 8, 2004**

Background & Purpose of the Reserve Study

- In response to Councillor & Resident (via public Budget Breakfast meeting) requests for more information on reserve adequacy levels at the Town, an Expression of Interest was issued in 2003
- The purpose of the study is to:
 - determine the adequacy of the Town's Reserves to meet known future expenditures (Infrastructure/Capital Asset rehab./replacements)
 - assess & benchmark the Town of Markham's Reserves with those of other Municipalities & "Best Practices" (GFOA) to determine an adequate level for rate stabilization/contingency reserves
 - review, consolidate, & refine policies, with Council direction, surrounding the various reserves and reserve funds (discretionary) accumulated throughout the years

Reserves Included in the Study

Fund Group	Balance
Working Funds/Stabilization Reserves	
Working Capital	\$ 2,149,303
Corporate Rate Stabilization	27,389,088
Winter Maintenance	343,000
Contingencies	19,587
Special Corp Rate Stabilization	705,176
Debt Charge Payment	3,153
Subtotal	<u>30,609,307</u>
General Capital	
General Capital (10% Non-Growth DC Reserve)	5,248,710
Planning Studies	539
Subtotal	<u>5,249,249</u>

Fund Group	Balance
Specific Capital	
Facility Ramp-up	4,807,878
Heritage Preservation	93,687
Markham Heritage Loans	348,452
Tree Replacement	7,030
Environmental Land Acquisition RF	3,036,728
Environmental Sustainability RF	163,218
City Centre Infrastructure	3,253
Raymerville Park Construction	23,563
Valleylands Revitalization	5,180
Peace Garden	8,415
Parks Vaughan/Gallanou	6,445
Fred Varley Art Centre	-
Elson Park	1,772
Tennis Court Repairs	(142)
Walden Pond Maintenance	3,574
Subtotal	<u>8,509,053</u>
Lifecycle Replacement	
Firefighter Bunker Gear	274,000
Major Capital Repairs/Replacement	17,052,751
Rec & Culture Capital Replacement	774,953
Subtotal	<u>18,101,704</u>
Total Reserves included in the Study	62,469,313

Reserves Not Included in Study

Reserve/Reserve Fund	Balance
DCA	97,866,790
Pre-DCA	17,965,001
Hydro Equity	12,366,814
Parks 5% Cash-in-Lieu	6,774,825
Roads Resurfacing	4,501,539
Waterworks	4,446,600
WSIB/LTD	3,397,095
Fire Fighter Sick Leave	3,196,966
Waste Management	1,259,609
Library Building Program	1,047,101
Other	3,378,751
Total Reserves Not Included in the Study	156,201,091
Reserves Included in Study (Prev. Slide)	62,469,313
Total Reserve/Reserve Fund Balance	218,670,404

Reserve Study Overview

- The Consultant, CN Watson, reviewed 26 of the Town's Reserves and Reserve Funds and made recommendations on grouping, consolidating, adequacy and target levels.
- Consultant recommendations on consolidation of reserves & classification of reserves into 4 Categories:

A. Working Funds/Stabilization Reserves

B. General Capital Reserves (non-growth portion of Dev. projects)

C. Specific Capital Reserves (funds set aside for specific purposes)

D. Life Cycle Replacement Reserves (on-going capital replacement, preventative maintenance of capital assets over their useful life)

A - Working Funds/Stabilization Reserves

PURPOSE:

- To maintain the Town's cash flow
- Minimize need for short-term borrowing
- To fund urgent expenditure requirements
- To minimize changes in the tax or rate levy
- To smooth out fluctuations due to one-time expenditures

CURRENT

- 6 Reserves that serve this purpose – total balance approx. \$30.6M

RECOMMENDATION

- GFOA Best Practices 5% to 15% of local annual tax revenue
- Recommend to consolidate into one reserve with a balance between 10% - 15% of annual tax revenues. At a target 15%, target balance = \$11.7M
- Annual top-up to be funded from Operating budget surplus, if any
- \$18.9M (\$30.6M – \$11.7M) to be redistributed to Life Cycle Replacement Reserve (Major Capital Repairs/Replacement)

Stabilization Reserves – Other Municipalities

- York Region – 5% of net revenues
- Brampton – 10% of gross budget + separate reserve for Winter Maint.
- Halton Region – 10% of gross operating expenditures
- Kitchener – no target – contributions from year-end surpluses
- Mississauga – various reserves – currently reviewing policy
- Oshawa – no target
- Town of Markham – 15% of local annual tax revenue per GFOA Best Practices

B - General Capital Reserve

PURPOSE

- To fund non-growth component of development (DC) related projects

CURRENT

- 2 Reserves – General Capital & Planning Studies (approx. balance \$5.2M) – used to fund (10%) Non-DC component of NEW Recreational facilities, and Libraries.

RECOMMENDATION

- Consolidate both Reserves into one General Capital Reserve
- Continue to use the reserve to fund new Recreational facilities & Libraries
- Continue to fund the reserve from the Sale of Land
- Start allocating interest to this reserve
- Monitor the reserve to ensure that the balance and projected balance is sufficient to fund the 10% Non-DC component of new Rec. & Library facilities outlined in the DC Background Study
- Note: Based on annual proceeds from the sale of Lands of \$200K, and interest of 3.5%, the reserve will have a sufficient balance to fund the 2004 – 2013 growth-related projects identified in the recently adopted DC Background Study.

C - Specific Capital Reserves

PURPOSE

- Capital reserves set aside for specific purposes – incl. Environmental Land Acquisition, Environmental Sustainability, Facility Ramp-up

CURRENT

- 15 Reserves with a total balance of approximately \$8.5M

RECOMMENDATION

- 1) Close all Specific Capital Reserves with the exception of: Facility Ramp-up, Heritage Preservation, Markham Heritage Loans, Environmental Land Acquisition, Environmental Sustainability.
 - Specific Capital Reserves to be closed to the Life Cycle (Major Capital Repairs/Replacement) Reserve.
- 2) Facility Ramp-up Reserve – primary purpose of the ramp-up is to phase the on-going personnel costs into the Operating Budget. Recommendation is to use the funds in the Reserve to fund Facility-related capital expenditures.
 - Based on a balance of \$4.8M at the end of 2004, the reserve can be used to fund the two 2005 Capital projects pre-approved by Council in 2004 (Museum Reception Centre \$490K + Centennial CC Reno. \$3.1M)

C - Specific Capital Reserves (Cont'd)

RECOMMENDATIONS (Cont'd)

- 3) Use \$0.5M of the projected \$4M Hydro Interest Income to fund the Environmental Land Acquisition
 - The reserve will be replenished on an annual basis from operating surpluses (if any following the top-up of the rate stabilization reserve) for purchases made in the year.
 - Annual requests to top-up the reserve will be included in the following year's Capital Budget for discussion should the previous year's operating surplus not be sufficient.

- 4) Establish a new Land Acquisition Reserve
 - The Reserve will be used to fund the purchase of strategic land acquisitions.
 - This reserve is for non-growth and non-environmental land acquisitions.

Use \$0.5M of the projected \$4M Hydro Interest Income to Fund the Land Acquisition Reserve

D – Life Cycle Replacement Reserves

PURPOSE

- To address on-going capital replacement and preventative maintenance of capital assets over their useful life.

CURRENT

- 3 Reserves (Firefighter Bunker Gear, Recreation & Culture Capital Replacement, Major Capital Repairs & Replacement Reserve) with a combined balance of \$18.1M

RECOMMENDATION

- 1) Combine all reserves in this section to one “Major Capital Repairs & Replacement” Reserve (see final balance of Recommendations to consolidate Reserves on next slide).
- 2) Perform Life Cycle Replacement Analysis on existing capital assets/infrastructure to determine future capital replacement requirements.
- 3) Review/Recommend funding requirements/sources to meet the capital replacement schedule in the Life Cycle Replacement analysis.
- 4) Transfer in balances from the other Reserves (Stabilization & Specific Capital Reserves) – Balances after transfers summarized on next slide


Summary of all Reserve Consolidation Recommendations

(Projected Reserve Balances after consolidation/transfers)

	<u>\$ Millions</u>
RESERVES INCLUDED IN THE STUDY	
A) Working Funds/Stabilization Reserves	
– Corporate Rate Stabilization	\$11.7M
B) General Capital	
– 10% Non-Growth DC Reserve (General Capital Reserve)	\$5.2M
C) Specific Capital Reserves	
– Facility Ramp-up	\$4.8M
– Heritage Preservation	\$0.1M
– Markham Heritage Loans	\$0.3M
– Environmental Land Acquisition	\$3.0M
– Environmental Sustainability	\$0.2M
– Land Acquisition **NEW**	\$0.0M
D) Life Cycle Replacement	
– Major Capital Repairs/Replacement	<u>\$37.1M</u>
TOTAL RESERVES INCLUDED IN THE STUDY	<u>\$62.4M</u>
Reserves Not Included in the Study (Slide 4)	<u>\$156.2M</u>
Total Reserves	<u>\$218.6M</u>

D - Life Cycle Replacement Reserves

Capital Infrastructure replacements were calculated based on *existing* inventory and:

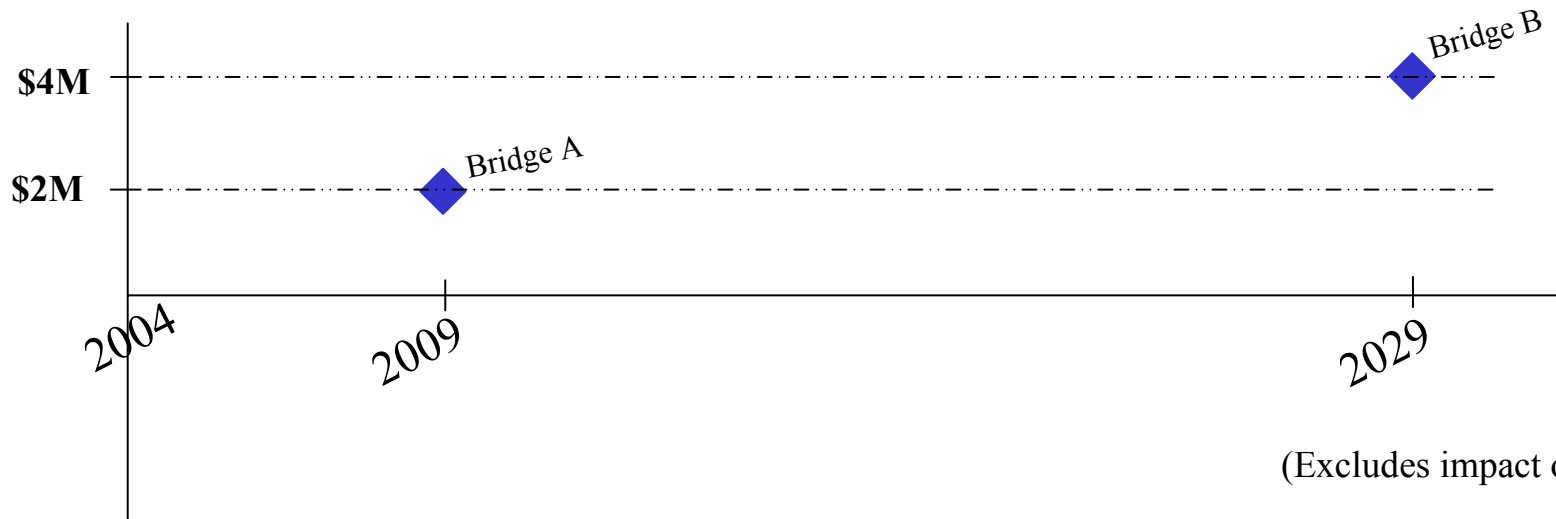
- **Facilities** – the construction “MEANS” data for timing and cost estimates for replacement of various facility components.
 - **Bridges** – useful life of 75 years.
 - **Vehicles** – various useful life models, depending on type of vehicle.
 - **Roads** – useful life of 15, 20, 30 years. To smooth out fluctuations in Roads, replacement requirements were grouped in 5 year periods and total costs for the 5 years were allocated evenly each year.
 - **Parks** – various useful life models based on type of asset within the park (i.e. bleachers, playground equip’t, floodlights)
 - **Traffic Signals**
 - **Storm Sewers**
 - **IT Infrastructure**
 - **Firefighter Bunker Gear**
- 
- Assumed annual contributions based on current inventory & estimated cost to replace

Life Cycle Replacement Modeling Methodology

- Inventory of Assets (age, replacement cost)
- Project future replacement costs related to inventory

Example:

- 2 bridges:
 - Bridge A is 70 years old (cost to replace of \$2M)
 - Bridge B is 50 years old (cost to replace is \$4M)
 - Bridges have an expected life of 75 years
 - Bridge A should be replaced in 2009 & Bridge B in 2029



(Excludes impact of inflation)

Life Cycle Projections & Peer Review

CN WATSON METHODOLOGY FOR FACILITIES

- The “MEANS Statistical Cost Data for Construction” (MEANS data) was used to determine when major components (i.e. roof, HVAC, electrical, plumbing, etc.) of the Town’s facilities would require replacement & approximate cost of replacement.
- The MEANS data includes an estimated useful life for major components of facilities (i.e. A roof for a Community Centre has a useful life of 20 years)
- The MEANS data also includes an estimated replacement cost of the major facility component based on a % of the total facility replacement cost (i.e. replacement of the roof/HVAC/Interiors for a Comm. Ctr is approx. 45% of the total replacement cost).
- The MEANS data methodology results in fluctuations in early years as various facility components have pre-determined replacement frequency regardless of condition.

EXAMPLE: **COMMUNITY CENTRE (\$20M replacement value)**

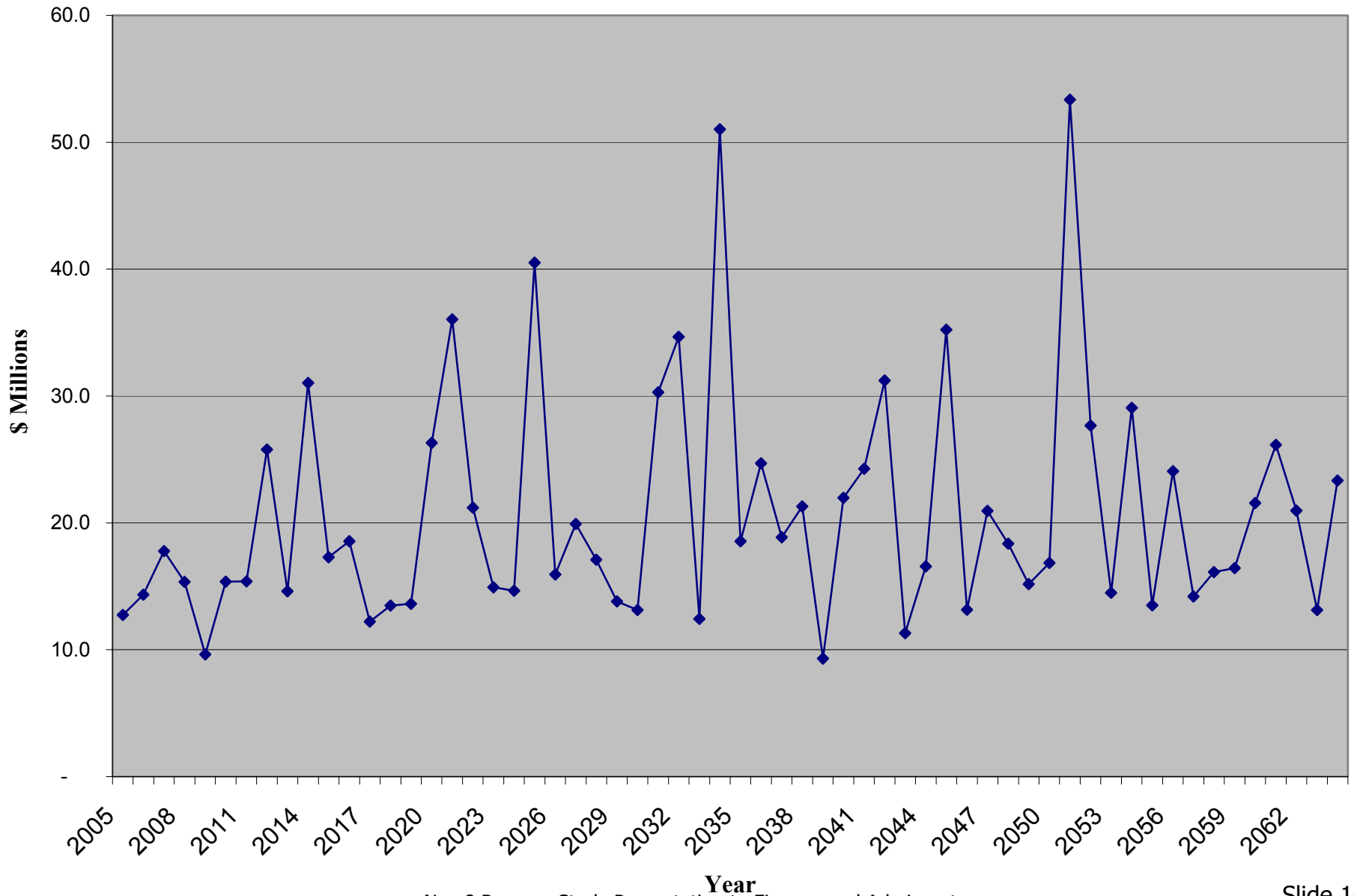
- Built in 1945 (59 years old), Useful Life 60 years
- The roof at the community centre (above) has a useful life of 20 years. Over the Community Centre’s useful life of 60 years, the roof/HVAC/interiors will have to be replaced 3 times at a cost of \$9M each replacement (45% of the \$20M value of the facility per MEANS data).

TOWN OF MARKHAM PEER REVIEW

- Review of the CN Watson’s methodology for facility and other asset life cycle projections concluded similar results.

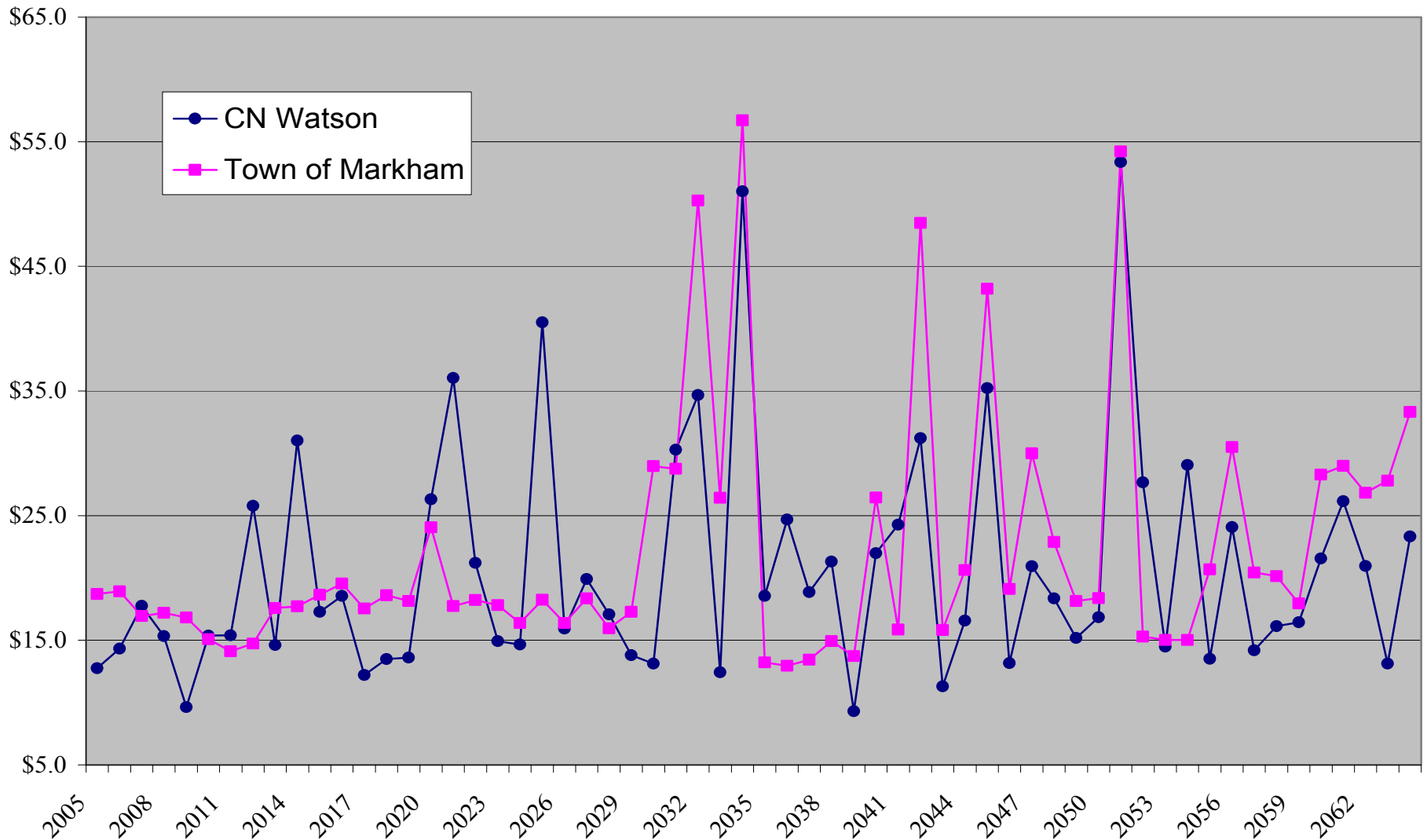
Projected Major Capital Repair & Replacement of Existing Infrastructure [CN Watson Reserve Study]

(Excludes Inflation & new infrastructure/assets)



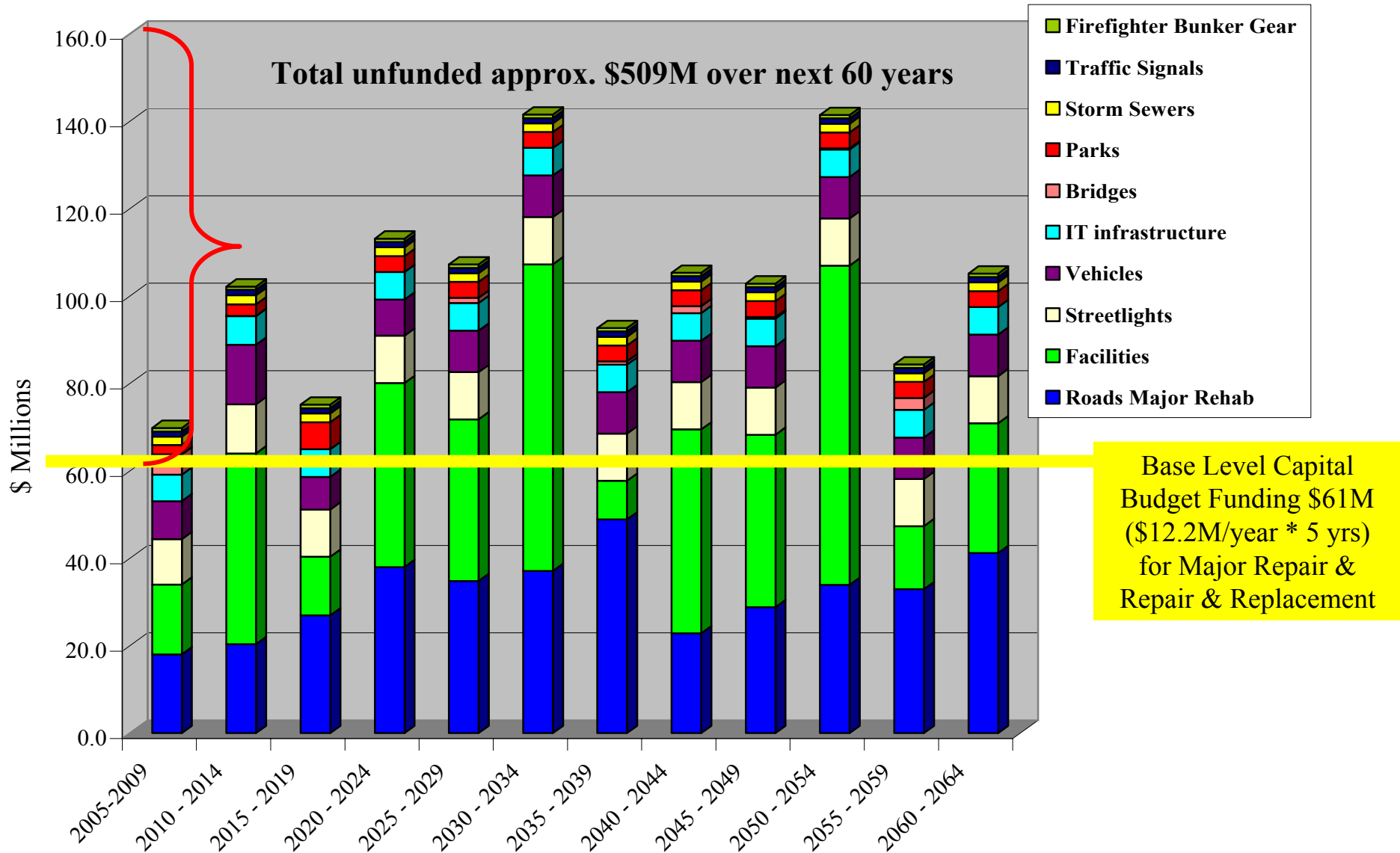
Projected Major Capital Repair & Replacement CN Watson Study vs. Town of Markham Peer Review

(Excludes Inflation & New Infrastructure/Assets)



Town of Markham's Projected Life Cycle Expenditures by Asset Category

(excludes inflation & new infrastructure/assets)



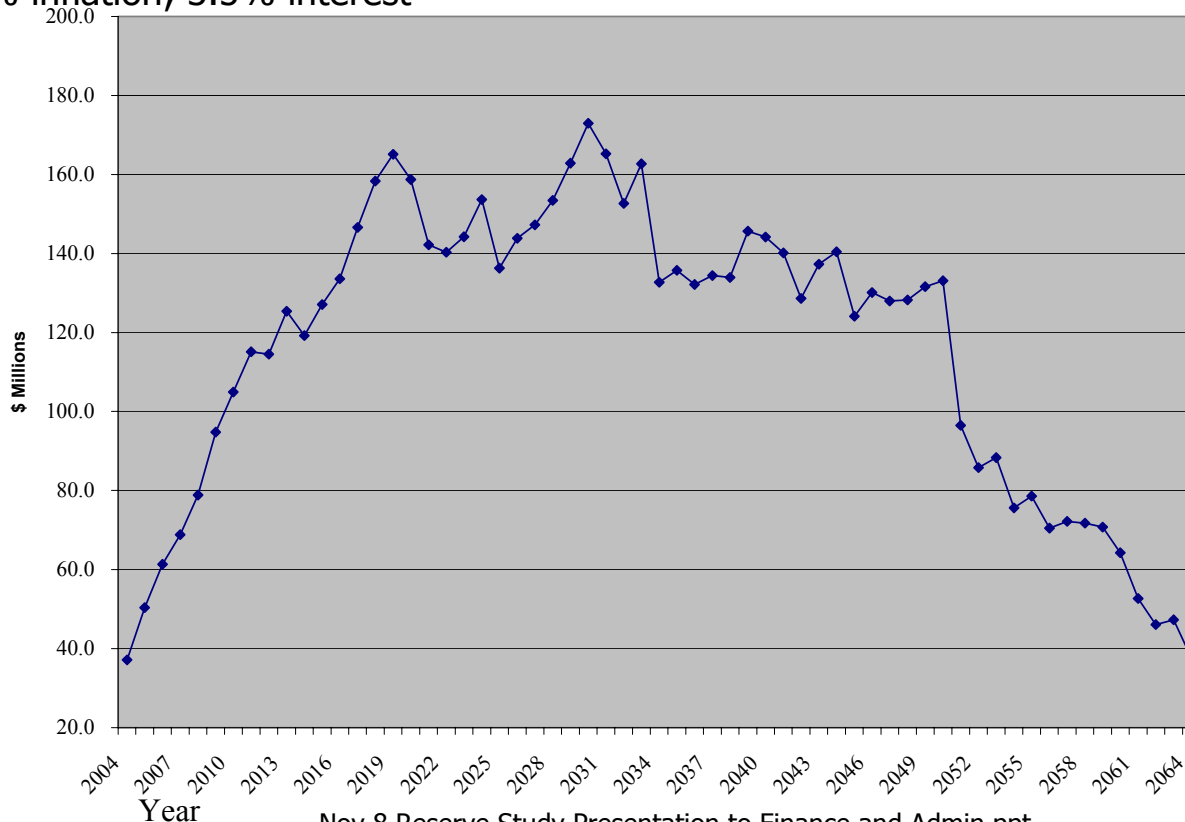
Projected Reserve Balances – BEST CASE

(Constant 2005 Dollars)

To meet the Life Cycle Capital expenditures shown on the previous slide, **an additional \$12.1M capital funding is required each year (2005 – 2064) over the existing \$16.7M capital budget.**

Assumptions:

- An opening Reserve balance of \$37M in 2004
- A base capital budget of \$16.7M tax-funded & the continuation of \$0.5M additional tax-funded capital each year
- 2.0% inflation; 3.5% interest



After 60 years
reserve balance
still \$37M
(2005 Dollars)

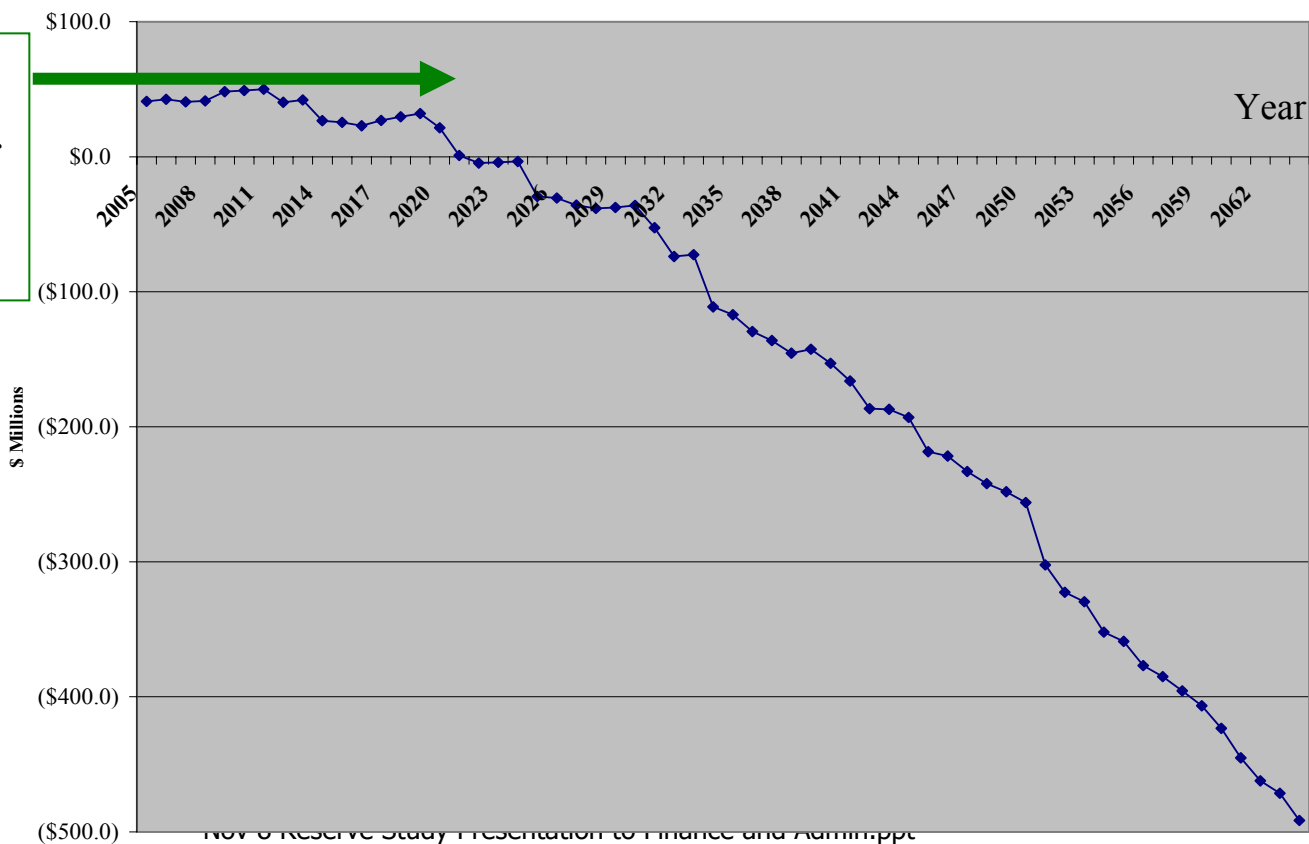
Projected Reserve Balances – Hydro Interest Income Funded (Constant 2005 Dollars)

Based on Life Cycle Capital Expenditures (shown previously) and **an additional \$3.0M funding from Hydro Interest Income (balance of the \$4M) each year (2005 – 2064)**, the reserve balances are shown below.

Assumptions:

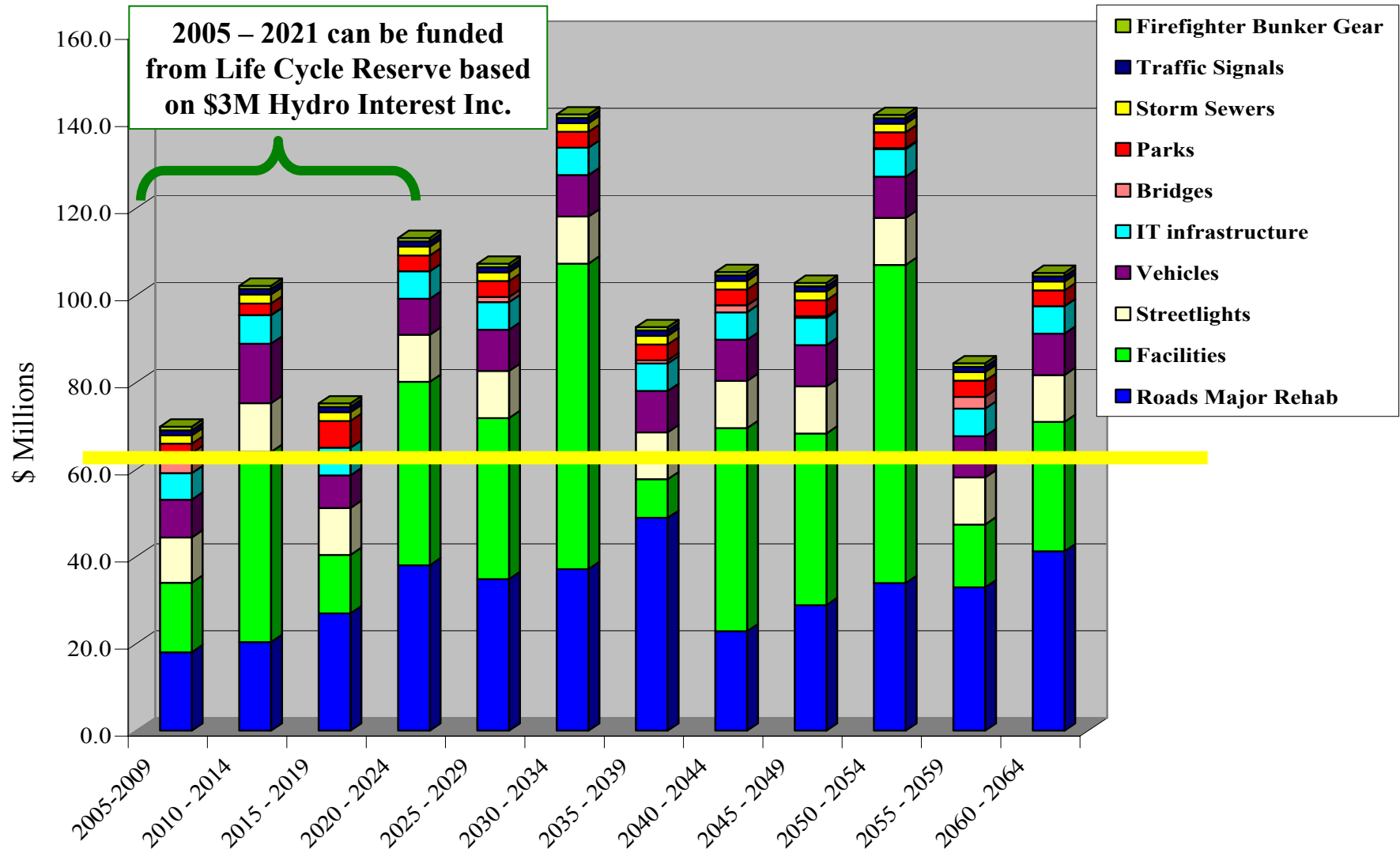
- An opening Reserve balance of \$37M in 2004
- A base capital budget of \$16.7M tax-funded & the continuation of \$0.5M additional tax-funded capital each year
- 2.0% inflation; 3.5% interest

Reserves used to
supplement major
repair/replacement of
existing assets
2005 - 2021



Town of Markham's Projected Life Cycle Expenditures by Asset Category

(excludes inflation & new infrastructure/assets)



Recommendations

A) Working Funds/Stabilization Reserves

- Consolidate into one reserve with a balance at 15% of local annual tax revenues = \$11.7M
- Annual top-up to be funded from Operating budget surplus, if any
- Redistribute the balance \$18.9M (\$30.6M – \$11.7M) to Major Capital Repairs/Replacement (Life Cycle Replacement) Reserve

B) General Capital Reserve

- Consolidate General Capital and Planning Studies Reserves into one General Capital Reserve
- Continue to fund the reserve from the Sale of Land and start allocating it interest
- Monitor the reserve to ensure that the balance and projected balance is sufficient to fund the 10% Non-DC component of new Recreational & Library facilities outlined in the DC Background Study

C) Specific Capital Reserves

- Close all Specific Capital Reserves, total \$52,060, to the Major Capital Repairs/Replacement Reserve with the exception of: Facility Ramp-up, Heritage Preservation, Markham Heritage Loans, Environmental Land Acquisition, Environmental Sustainability.
- Use the Facility Ramp-up Reserve to fund the 2005 Capital Projects, Museum Reception Centre (\$490,000) and Centennial Community Centre Renovations (\$3,100,000)

Recommendations (Cont'd)

C) Specific Capital Reserves (Cont'd)

- Use \$0.5M of the projected \$4.0M Hydro Interest Income to fund the Environmental Land Acquisition Fund on an annual basis, beginning in 2005.
- The reserve will be replenished on an annual basis from operating surpluses (if any following the top-up of the rate stabilization reserve) for purchases made in the year.
- Annual requests to top-up the reserve will be included in the following year's Capital Budget for discussion should the previous year's operating surplus not be sufficient.
- Establish an (interest earning) Land Acquisition Fund and use \$0.5M of the projected \$4.0M Hydro Interest Income to fund it on an annual basis, beginning in 2005.

D) Life Cycle Replacement Reserves

- Consolidate the Firefighter Bunker Gear and Recreation & Culture Replacement reserves into the Major Capital Repairs/Replacement Reserve
- Use \$3M of the remaining \$4M of projected Hydro Interest Revenue to fund the Major Capital Repairs/Replacement Reserve on an annual basis
- Use the Major Capital Repairs/Replacement Reserve to supplement capital costs related to the repair and replacement of existing infrastructure/assets
- A conditional assessment of major assets identified to be replaced should be performed prior to inclusion of the replacement in the Capital Budget.

Discussion & Comments

Next Steps

- Reserve Study report to be brought forward to Finance and Administrative Committee on November 22nd