Malcolm Tweddle & Edith Rogers Dry Pond & Sewer Improvements

Millbourne Flood Mitigation Public Information Session

November 19, 2015

Drainage Services
Financial Services & Utilities

THE CITY OF Edmonton

Presentation Outline

- Millbourne Flooding
- Proposed Upgrades
- Properties Benefitting
- Dry Ponds Overview
- Dry Pond Options & Construction Issues
- Project Timing
- Stakeholder Communications / Input

Millbourne Flooding

LEGEND:

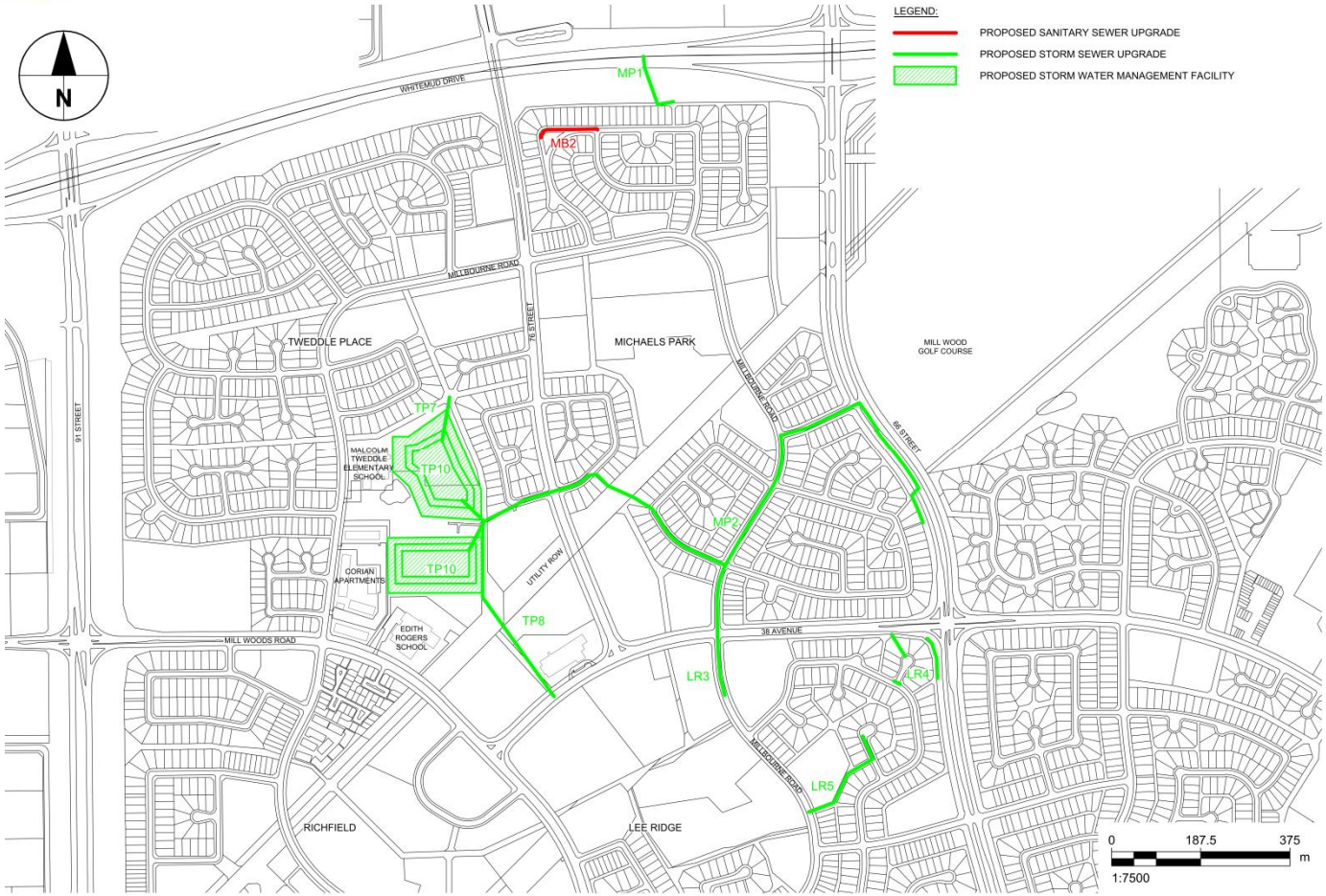
- NEIGHBOURHOOD BOUNDARY
- EXISTING STORM SEWER
- 311 CALL
- FLOODING QUESTIONNAIRE

DEPTH OF FLOODING:

- ABOVE 2.4
- 2.2 - 2.4
- 2.0 - 2.2
- 1.8 - 2.0
- 1.6 - 1.8
- 1.4 - 1.6
- 1.2 - 1.4
- 1.0 - 1.2
- 0.8 - 1.0
- 0.6 - 0.8
- 0.4 - 0.6
- 0.2 - 0.4
- 0.0 - 0.2

Proposed Upgrades - 2013

- TP10 – Dry Ponds
- TP7 – Inlet to N Cell
- TP8 – 38th Ave Inlet / Outlet to S Cell
- MP1 – Michaels Park (North) Storage
- MP2 – Michaels Park Storm Tunnel
- LR3 – Millbourne Rd. East
- LR4 – Lee Ridge Rd. (Northeast)
- LR5 – Lee Ridge Rd. (Central)
- MB2 – 44th Ave Sanitary Storage



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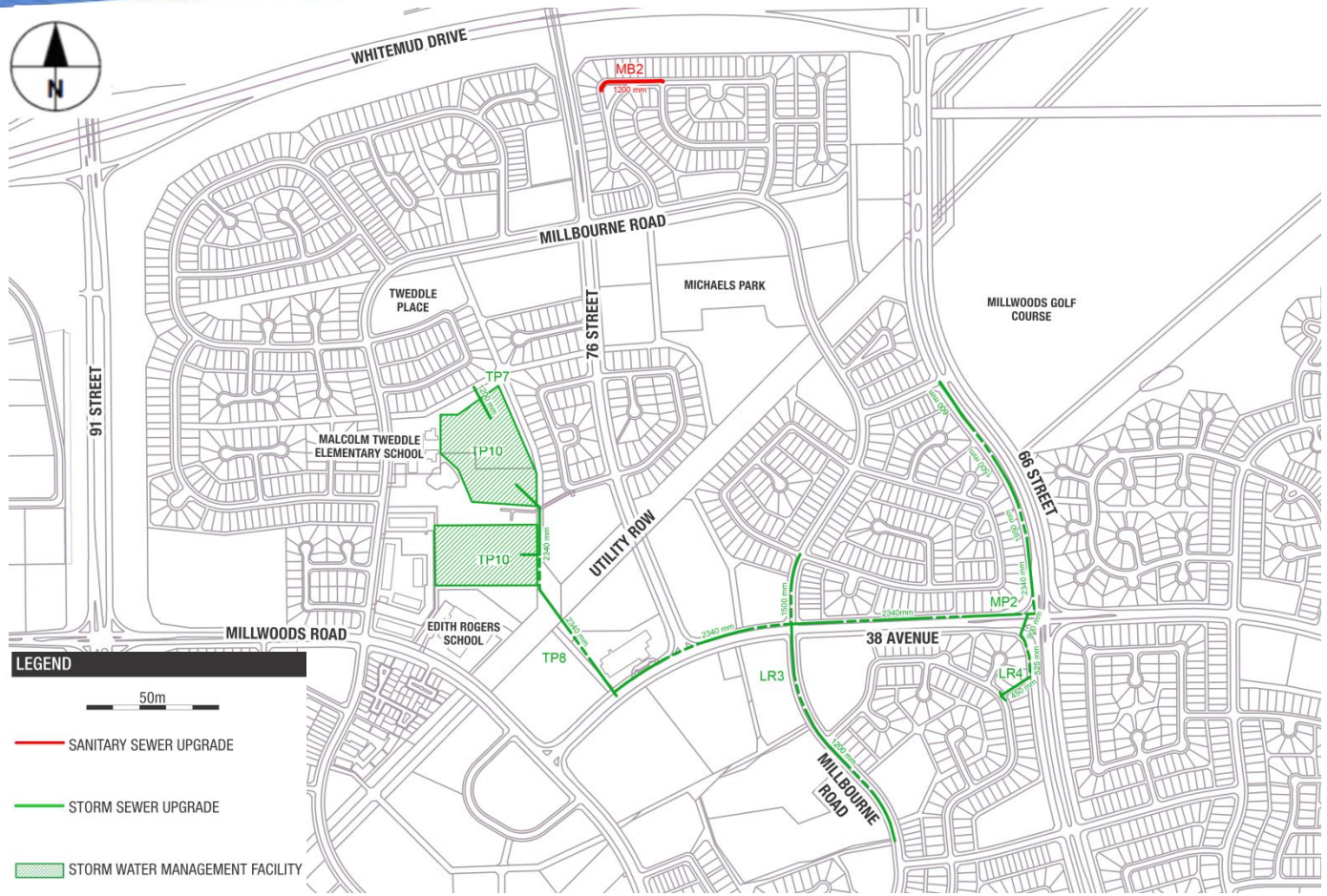
Proposed Upgrades - Revised

- TP10 – Dry Ponds
- TP7 – Inlet to N Cell
- TP8 – 38th Ave Inlet / Outlet to S Cell
- MP2 – 66th Street & 38th Ave Storm Tunnel
- LR3 – Millbourne Rd. East
- LR4 – Lee Ridge Rd. (Northeast)
- MB2 – 44th Ave Sanitary Storage



Ponding Before and After Upgrades

Existing vs Pond Only Upgrades (100-year)

Ponding Before and After Upgrades

Existing vs All Upgrades (100-year)

Properties Benefitted

(100-year event)

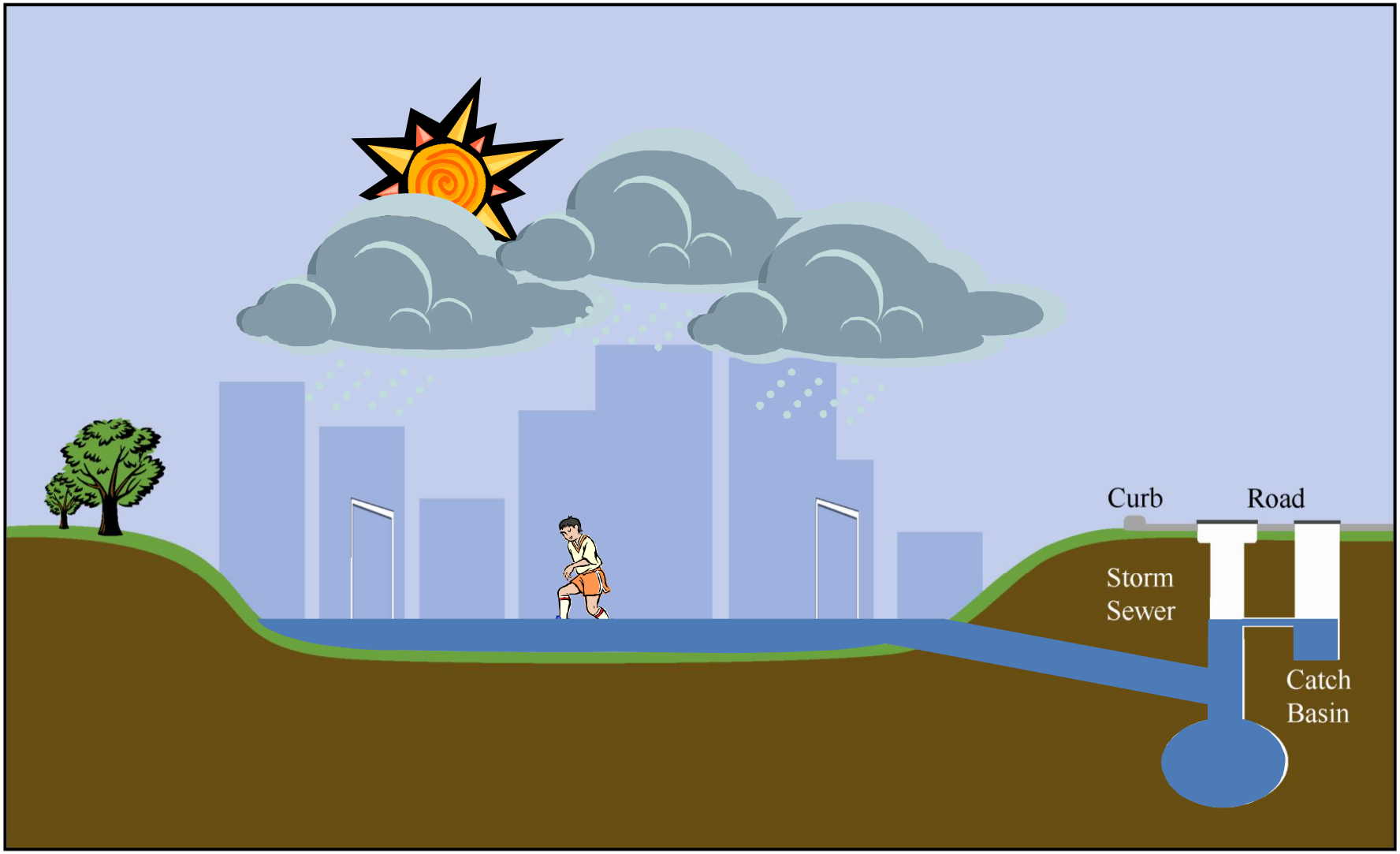
Neighbourhood	Number of Properties Benefitted (Pond Only)	Number of Properties Benefitted (All Upgrades)
Michaels Park	68	265
Lee Ridge	0	47
Richfield	0	1
Tweddle Place	76	77
Other Neighbourhoods	0	31
TOTAL	**144**	**421**

Benefitting property = no flooding or visibly reduced flooding based on 2D model

Dry Pond Description

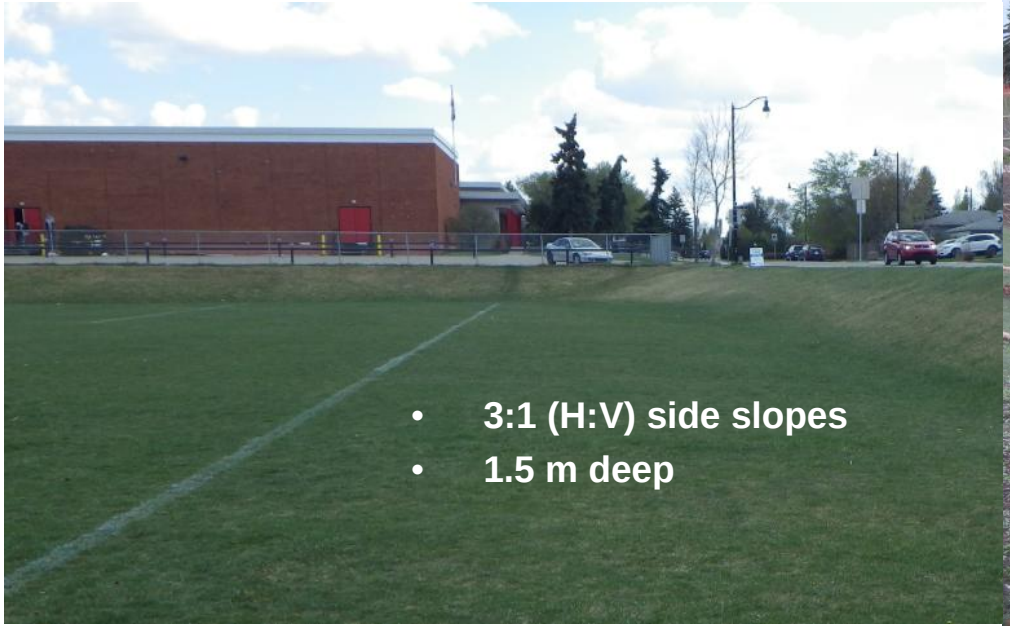
- Two cells next to Edith Rogers and Malcolm Tweddle Schools
- 64,000 m^3 storage capacity
- 5:1 (H:V) side slopes next to schools, 3:1 to 4:1 other sides
- Maximum excavation depth of approximately 6.5 m
- Designed for 100-year rainfall event
- Water depth 3 m maximum, 1.2 m average (100 year event)
- Dry for 2-year rainfall events and less
- Fills in 1.5 to 2 hours (100 year event)
- Drains within 8 hours (100 year event)
- Several options with different sports field configurations

How Dry Ponds Work

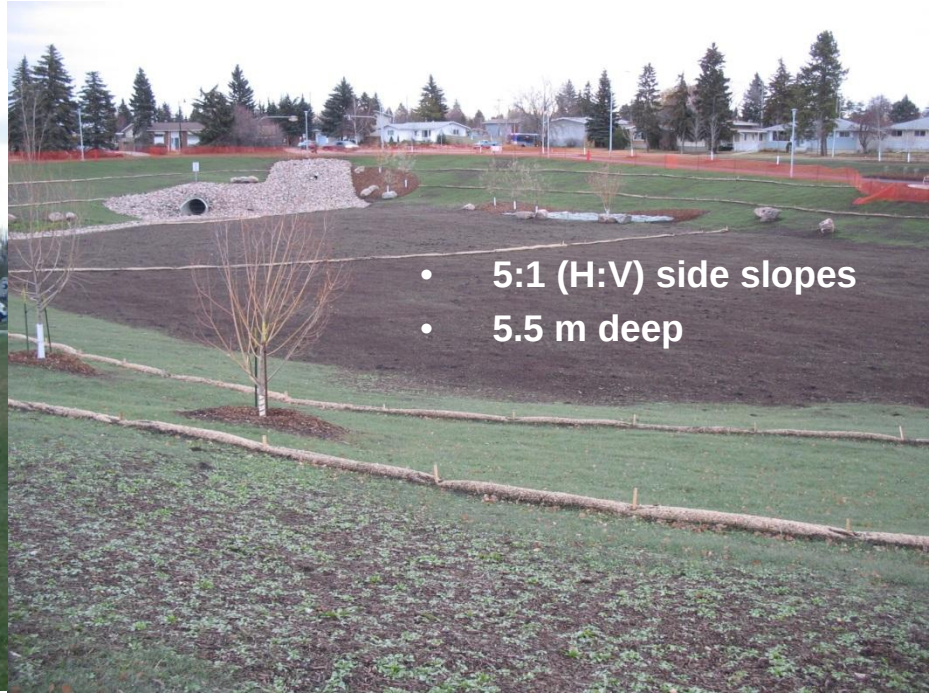


Existing Dry Ponds Side-Slope Comparison

Example – Lendrum Dry Pond



Example – Malmo South Campus Pond



Dry Ponds Site - Existing Fields

Dry Pond Option 1

Dry Pond Option 2

Dry Pond Option 3

Dry Pond Options Comparison

Option	# of Sports Fields	Advantages	Disadvantages
Existing	3 baseball (2 large shale, 1* small grass) 5 soccer (1 large, 1 med, 2+1* small) 4 tennis		
1	1 baseball (250’ shale) 1 soccer (330’ x 220’) 4 tennis	All 4 tennis courts remain	More trees to be removed
2	1 baseball (250’ shale) 2 soccer (330’ x 220’) 2 tennis	Maximizes number of fields	2 tennis courts lost Baseball diamond is in the lowest part of the pond
3	1 baseball (250’ shale) 2 soccer (330’ x 220’ & 330’ x 195’) No tennis	Further distance between the south cell and Edith Rogers School	All tennis courts are lost

*Shared Field

Project Timing

- Original Plan:
  - Start design 2018, construction 2019 – 2024 (pond 2019 - 2020)
- Project advanced due to Provincial funding for pond
- Advanced Plan:
  - Design started June 2015, draft concept review completed
  - Preliminary and detailed design to continue to March 2016
  - Pond construction tentatively to start fall 2016 or fall 2017
  - Sewer improvements construction timing to be determined
    - possibly advance to 2018 to 2021
  - Considerations: Projects coordination, LRT on 66 St., construction resources (tunnelling), provincial and City funding

Stakeholder Communications

- Millbourne Flood Mitigation Task Force – updates
- School administration, staff and councils
  - Meetings in October & November; future as needed
- Public Meetings
  - Information Session - November 19
  - Open House prior to pond construction – Fall 2016
  - Open House prior to sewer upgrades construction
- Drainage website
  - edmonton.ca > Residential & Neighbourhoods > Flooding & Prevention
- Via community leagues
- Direct email to stakeholder database

Input

- Pond options
  - Replaced sports fields / amenities
  - Pond safety (side slopes, warning systems, lighting etc.)
- Pond Construction Issues
  - Sports fields / park areas during construction
  - Safety, noise etc.
  - Construction access to site
- Sewer upgrades and other issues

Next Steps

- Use stakeholder input & work with Community Services to complete design of ponds & sewer upgrades
- Procure contractor for pond construction & hold open house

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