



# Duggan Dry Pond and Storm Sewer Improvements



Public Information Session #1 - May 30, 2013



# Introduction

- Introduction of project team
- Housekeeping items
- Presentation
- Question period
- Information boards
- Exit Survey

**Please hold questions until after presentation**



# Today's Meeting

- Share information on previous flooding
- Discuss flood improvement plan
- Discuss pond landscaping options
- Present benefits
- Present project schedule
- Answer questions



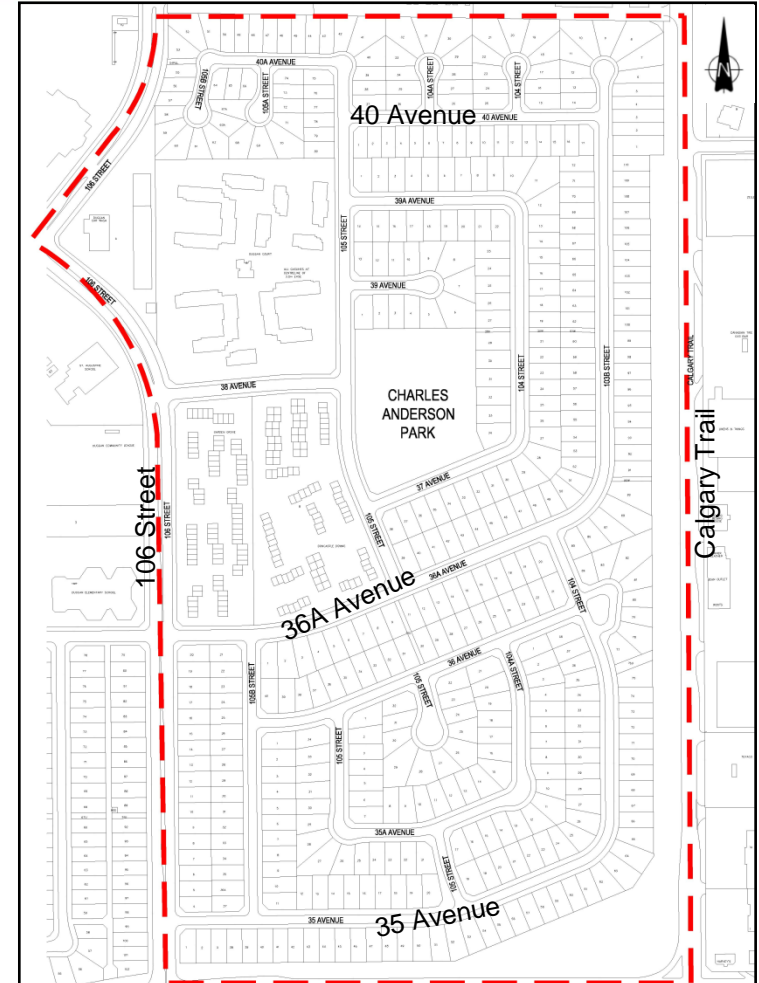
# After Today's Meeting

- Summarize and share community input
- Consider community input in work ahead
- Report progress and keep you informed
- Return to the community prior to construction





# Project Location - Duggan





# How Did We Get Here?

- Major flooding in July 2004
- Flood prevention became top priority
- The Duggan flood prevention project was established through a study conducted in 2008
- Concept Design in 2012
- In October 2012, Sameng was contracted to provide engineering services for the project



# What Has Been Done Since 2004?

- 31 neighbourhoods were identified
  - 12 are completed
  - 19 will be complete by 2014
- Project Life: 2006 – 2020
- Project Budget: \$146M  
(\$105M spent so far)





# What Contributed to the Flooding?



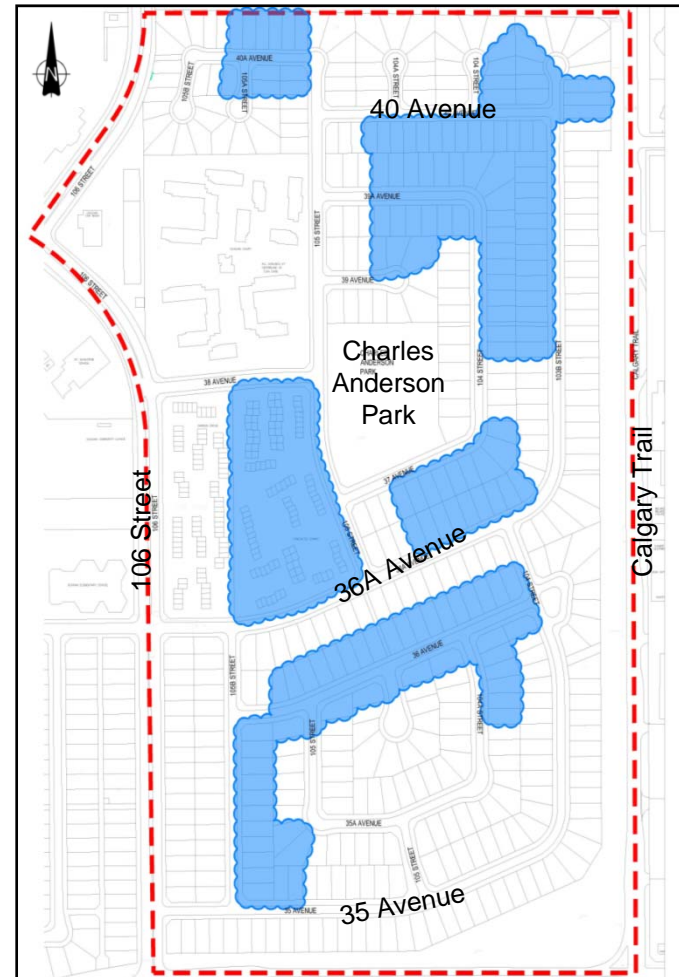
- Intense rainfall with large runoff volumes
- Stormwater flows exceeding storm sewer capacity
- Water ponding in low areas on the street and around houses
- Stormwater infiltrating into sanitary sewers
- Plugging of catchbasins with hail, vegetation and debris



# Reported Basement Floods

- **July 2004:** Over 4,000 reported flooded basements City-wide.
- **July 2012:** Over 1,200 reported flooded basements City-wide.

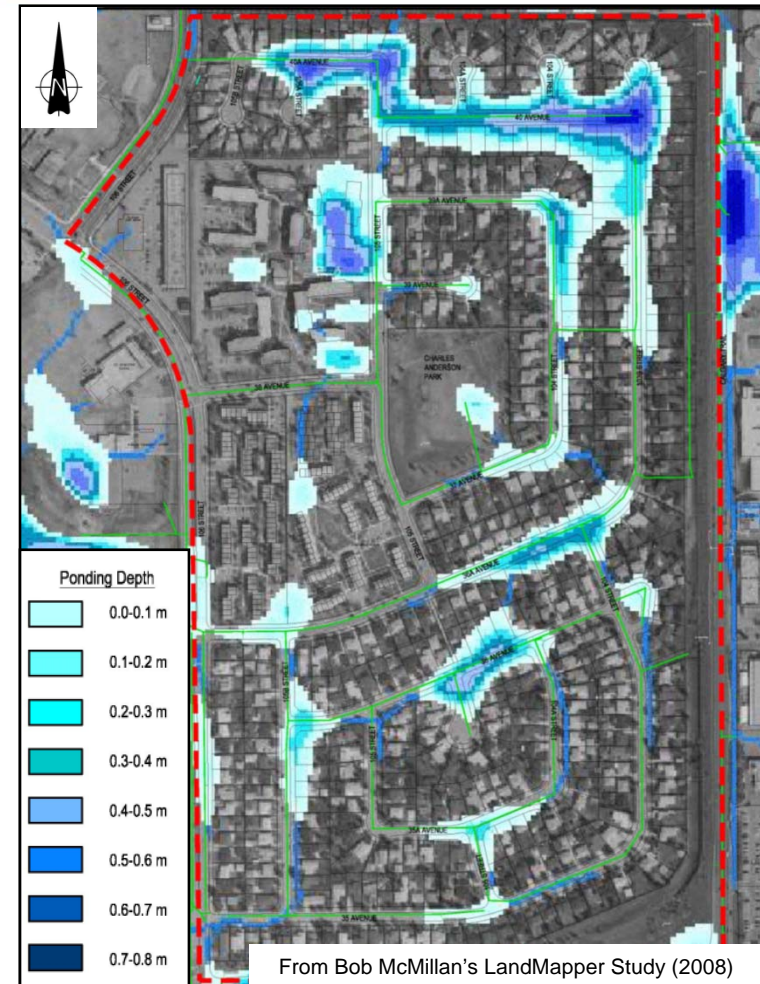
| Year         | Reported Basement Floods<br>Duggan - East of 106 Street |
|--------------|---|
| 1978         | 25  |
| 1991         | 5   |
| 2004         | 45  |
| 2012         | 5   |
| Others       | 5   |
| <b>Total</b> | <b>85</b>   |





# Surface Ponding Areas

- Surface drainage is generally from south to north
- Natural low areas fill up with water during severe rainfall events





# Options Considered

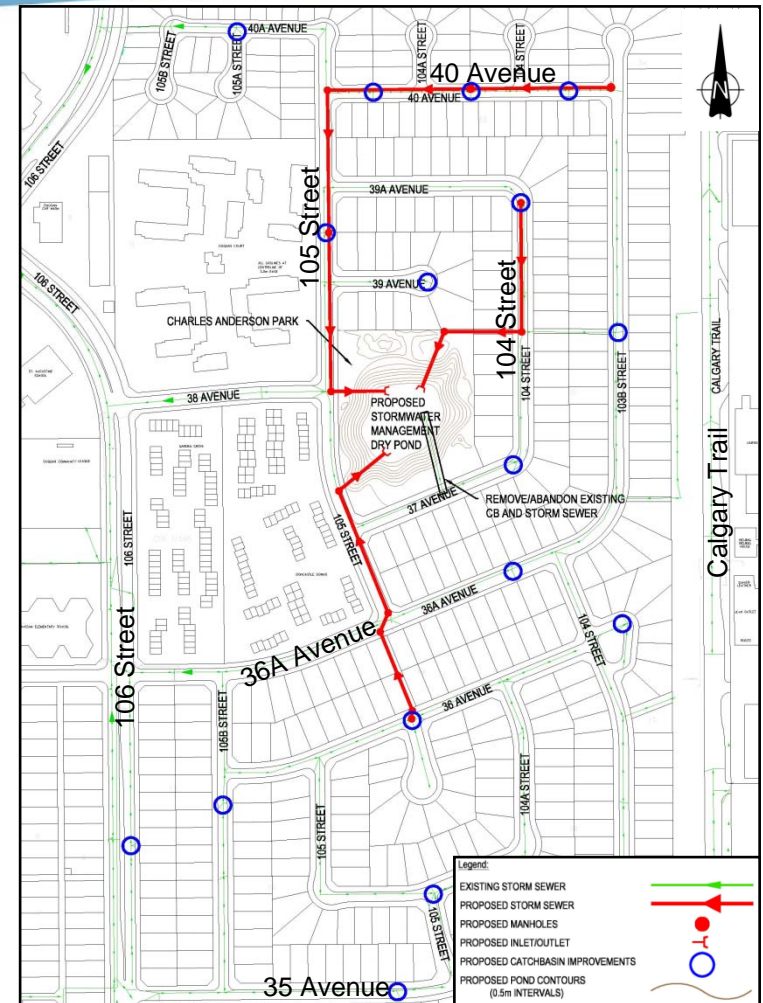
- Conveyance improvements in the downstream trunk
- Dry pond on school site in Rideau Park
- Underground storage at Charles Anderson Park
- Dry pond at Charles Anderson Park (several options)



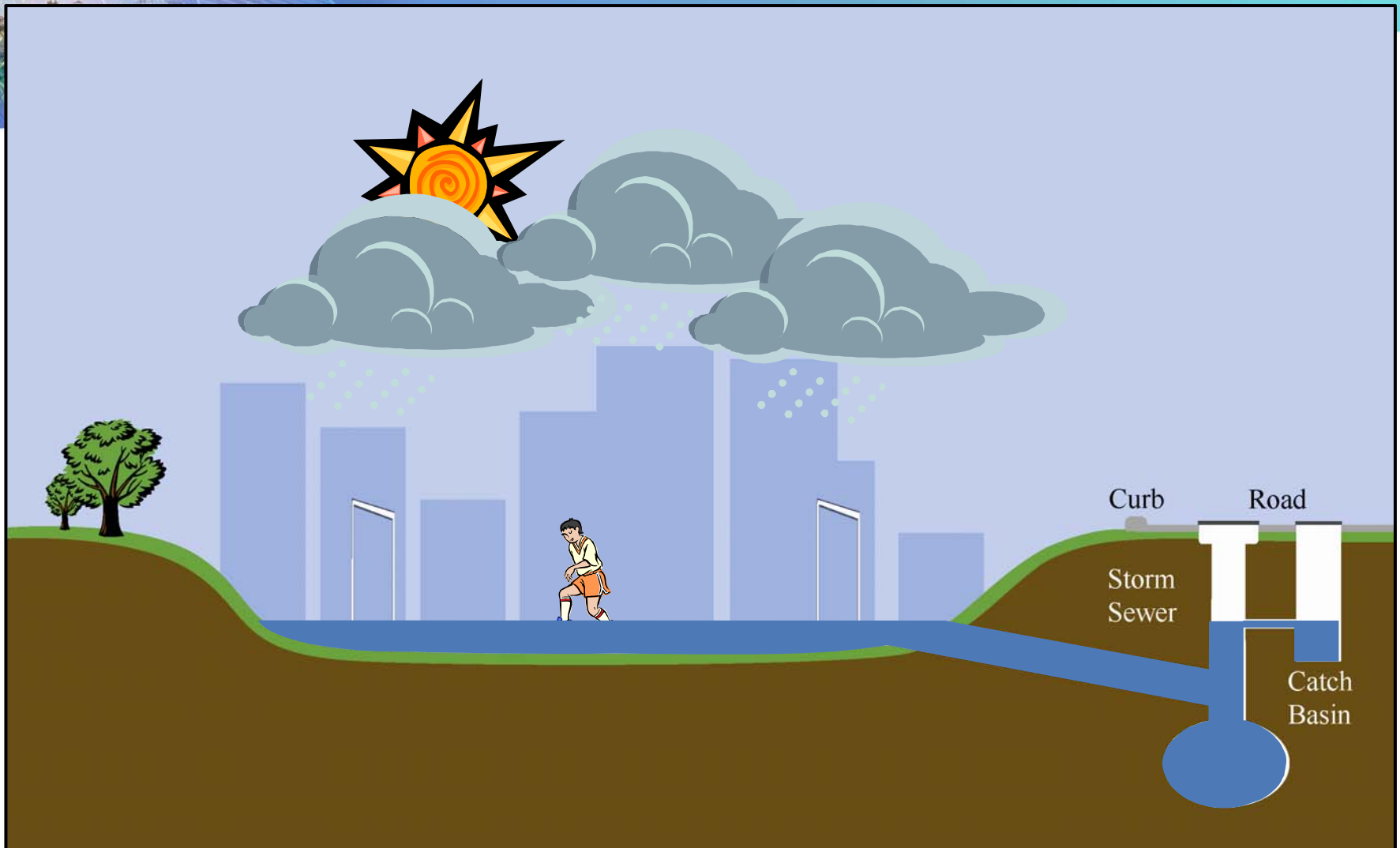


# Proposed Sewer Improvements

- Dry pond at Charles Anderson Park
- Storm sewer improvements
- Catchbasin improvements
- Sanitary manhole sealing



# How Do Dry Ponds Work?







# Examples of Dry Ponds

## Malmo Dry Pond







# Examples of Dry Ponds

## Malmo Dry Pond







# Examples of Dry Ponds

## Lendrum Dry Pond





# Charles Anderson Park Existing Conditions

## Passive Park

- Few mature trees
- Small hills
- Park benches
- Picnic tables







# Duggan Dry Pond – Landscaping Option 1 – Passive Park

- Open play area



# Duggan Dry Pond – Landscaping Option 2 – Informal Recreation

- Informal soccer play area
- Disk golf course
- Fitness equipment





# Duggan Dry Pond – Landscaping Option 3 – Naturalized Landscape

- Bio retention area
- Native grasses
- Open play area
- Sliding area







# What are the Benefits?

- Reduced surface ponding
- Reduced likelihood of sanitary backups and basement floods
- Less property damage
- Savings of time, money and inconvenience



# Project Schedule

- **Where we are now:** Preliminary Design
- **Public Information Session #2:** To be determined
- **Construction:** Proposed to commence in Spring 2014 with construction completion in Fall 2014
- **Final Commissioning:** Anticipated in September 2015



# Recommendations for Homeowners

- Install and routinely check backwater prevention valve
- Ensure that sump pump is functioning properly
- Improve lot grading to get surface water away from house
- Install/maintain adequate eavestroughs and downspouts
- Check foundations for cracks and leaks
- Flood Prevention Checkup Program (for advice call: 780-944-7777)
- **See the Flood Prevention Program Team for more information**







# Discussion and Feedback

Clarifying Questions?



Issues, comments, concerns?



Additional information needs?