



Laurier Heights Storm System Upgrading

Laurier Heights Community
Consultation

November 29, 2012

Meeting Agenda

1. Provide update on what's been done in area to reduce flood risk
2. Present information about a recommended dry pond for Laurier Heights
3. Discuss timing and next steps
4. Answer questions/get input and feedback

After Today's Meeting

1. Summarize and share meeting dialogue
2. Consider community input in work ahead
3. Keep community informed on progress
4. Come back to the community for pre-construction information session

Flood Prevention Program

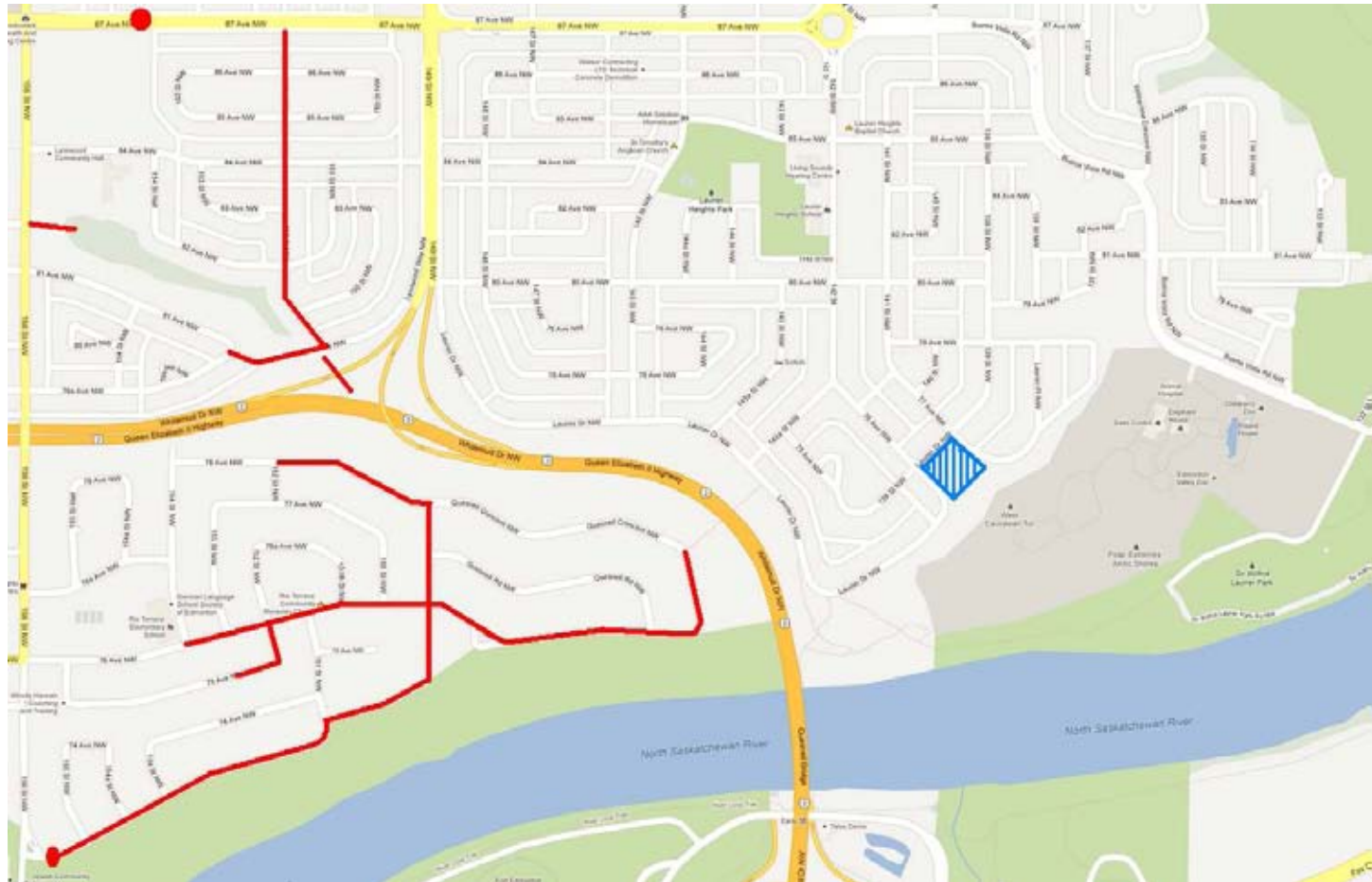
Flood Prevention Program

- July 2004 - extreme storm - 4,500 flooded homes
- 2006 - \$146M Flood Prevention Program approved by City Council
- The program includes:
 - Upgrading existing sewers and building new sewers
 - Installation of new storm water management facilities where possible

Progress City-Wide

- 12 neighbourhoods are completed
- 10 neighbourhoods on-going and to be completed by 2014
- Total of 22/31 (70%) neighbourhoods complete by 2014
- Total expenditure to date is \$105M

Progress in Laurier Heights



Laurier Heights Storm System Upgrade

Why is the project needed?

- 139 Street and 76 Avenue - “trap low”
- Engineering analysis:
 - depth of water 0.54m - 1 in a 100 year storm
 - City standard - maximum of 0.35m
- Risk of flooding to cars, homes and pedestrians
- Anecdotal evidence of vehicle flooding

What options were considered?

- Storm trunk sewer upgrading downstream
- Underground storage facility
- Swale to Valley Zoo
- Dry pond in park adjacent to 139 Street & 76 Avenue

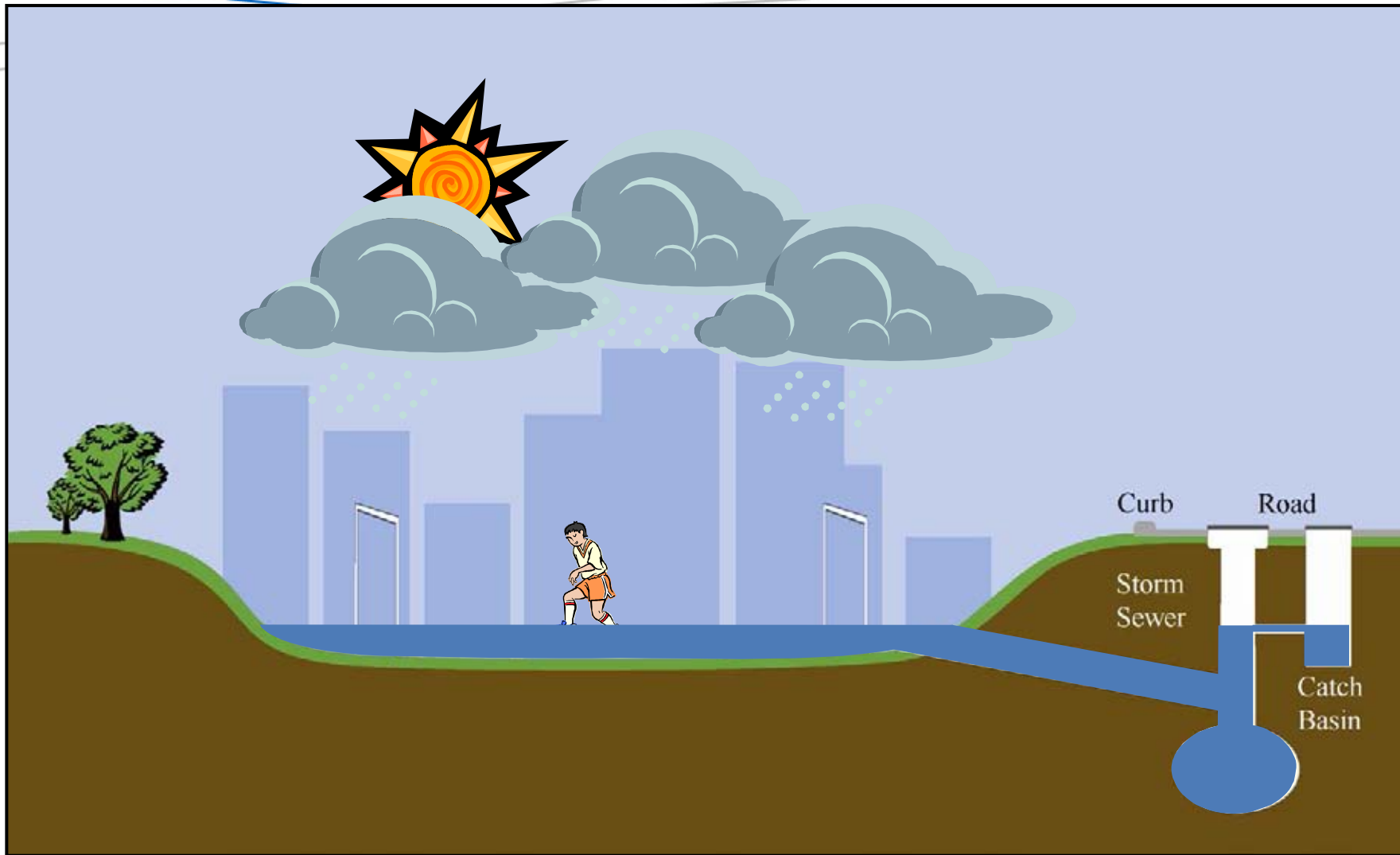
Proposed Dry Pond Project

The proposed dry pond project includes

- a modified curb at the intersection
- a short swale
- the dry pond
- piping to the local stormwater sewer

Recommended Pond Layout





Benefit & Impacts of Dry Pond Project

Benefit:

- Maximum depth of ponding at 139 St & 76 Ave reduced - all major events
- Maximum depth of 0.35m for 1 in 100 year event, consistent with City standards

Impacts:

- Visual impact
- Recreational use
 - Upland park area
 - Minor impact to toboggan hill

Recommended Pond Layout



Looking SE from 139 Street



Existing

Looking SE from 139 Street



Proposed Dry Pond

Looking SE from 139 Street



Looking SW from Laurier Place



Existing

Looking SW from Laurier Place



Proposed

Looking SW from Laurier Place



Example of Dry Pond Following Construction



Pond Safety

- Gentle slopes - 5 vertical to one horizontal
- Shallow - less than 2m
- Dry - do not have water in them most of the time
- Water drains very quickly
- Hazard signs

Landscape Considerations

Trees

- Pond location - minimize the impact on trees
- Some aspen poplar trees to be removed
- City's tree removal policy - trees will be replaced with trees of at least equivalent value.

Amenities

- Potential to add park benches, etc.

Recommended Pond Layout



Toboggan Hill

- Pond will impact the top of the toboggan hill
- Pond design:
 - Minimize the impact on the toboggan hill without compromising pond function
 - Minimize impact on trees
- Sides of toboggan hill not impacted

Pond Impact on Tobogganing Hill



Pond Impact on Tobogganing Hill



Pond Impact on Tobogganing Hill



Existing

Pond Impact on Tobogganing Hill



Proposed

Pond Impact on Tobogganing Hill



Optional Rain Garden

- Promotes infiltration and improves stormwater quality
- City supports rain gardens as a way to improve the water quality in the North Saskatchewan River
- Subject to further investigation and budget considerations

Examples: Rain Garden



Pond Layout & Optional Rain Garden



Existing

Pond Layout & Optional Rain Garden



Proposed

Pond Layout & Optional Rain Garden



Construction Schedule

- Construction scheduled for summer / fall of 2013
- Dry pond completion prior to 2014 neighbourhood upgrading
- Construction duration - 2 to 3 months (weather permitting)
- Open house prior to construction

Discussion and Feedback

Clarifying Questions?



Issues, comments, concerns?



Additional information needs?