City of Edmonton

Drainage Services
Flood Prevention Program

Rio Terrace, Quesnell Heights and Laurier Heights Community Consultation

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Flooding in Edmonton

- **Recurring problem in many areas**
- **Causes disruptions; cost time and money**
- **Flood prevention top priority**
- **Flood prevention program goals:**
  - Find primary causes
  - Identify options
  - Work with communities/other stakeholders to implement viable solutions that improves flood prevention

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Actions Since the Flood

- Emergency response in July
- Homeowner subsidy program for backwater valves: $3M committed to date
- Public meetings in Sept./04
- Engineering studies of high risk neighbourhoods completed Feb./05

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Actions Since the Flood

- **Commitment to public consultation and education**
  - Share knowledge and information
  - Stay in touch through regular communications
  - Consult the community before taking further action
  - Reflect community needs and preferences in the action plan

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Today's Meeting

1. Share engineering findings
2. Lay out various options
3. Get community input and feedback to help define best outcomes for homeowners and City

No final decisions tonight

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After Today's Meeting

1. Summarize and share input
2. Incorporate input into action plan recommendations
3. Come back to the community to discuss plan and get feedback
4. Report progress

Consultation will continue as required

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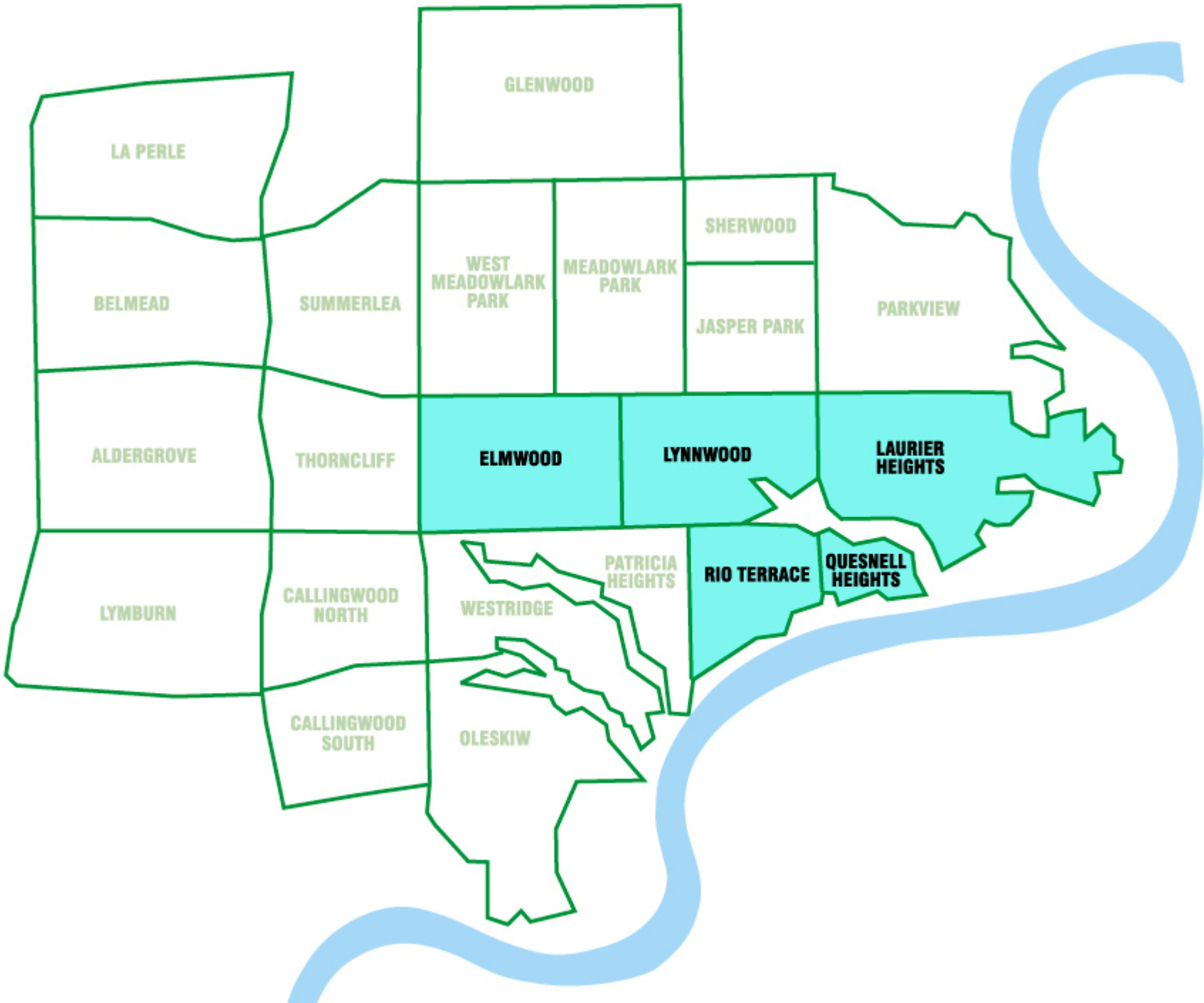
Why a Joint Meeting?

- Drainage patterns and trouble spots common to both communities
- Similar causes for flooding
- Options to improve flood prevention have impacts on both communities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LA PERLE
BELMEAD
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WEST MEADOWLARK PARK
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SHERWOOD
JASPER PARK
PARKVIEW
ALDERGROVE
THORNCLIFF
ELMWOOD
LYNNWOOD
LAURIER HEIGHTS
LYMBURN
CALLINGWOOD NORTH
WESTRIDGE
PATRICIA HEIGHTS
RIO TERRACE
QUESNELL HEIGHTS
CALLINGWOOD SOUTH
OLESKIW

July Flood Impact

<u>All 3 neighbourhoods</u>

- 238 homes flooded in 2004 floods
- 57 homes flooded before 2004
- 1,520 homes in total

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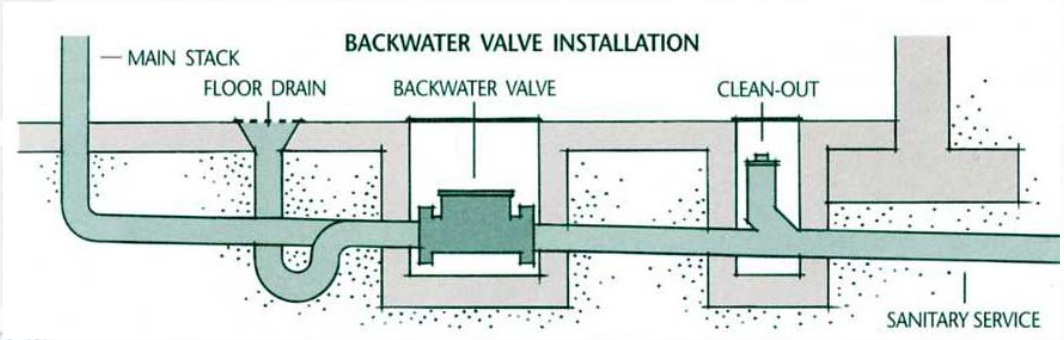
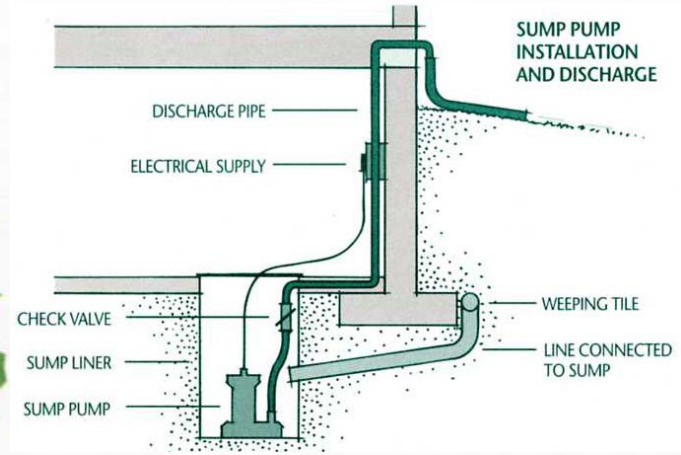
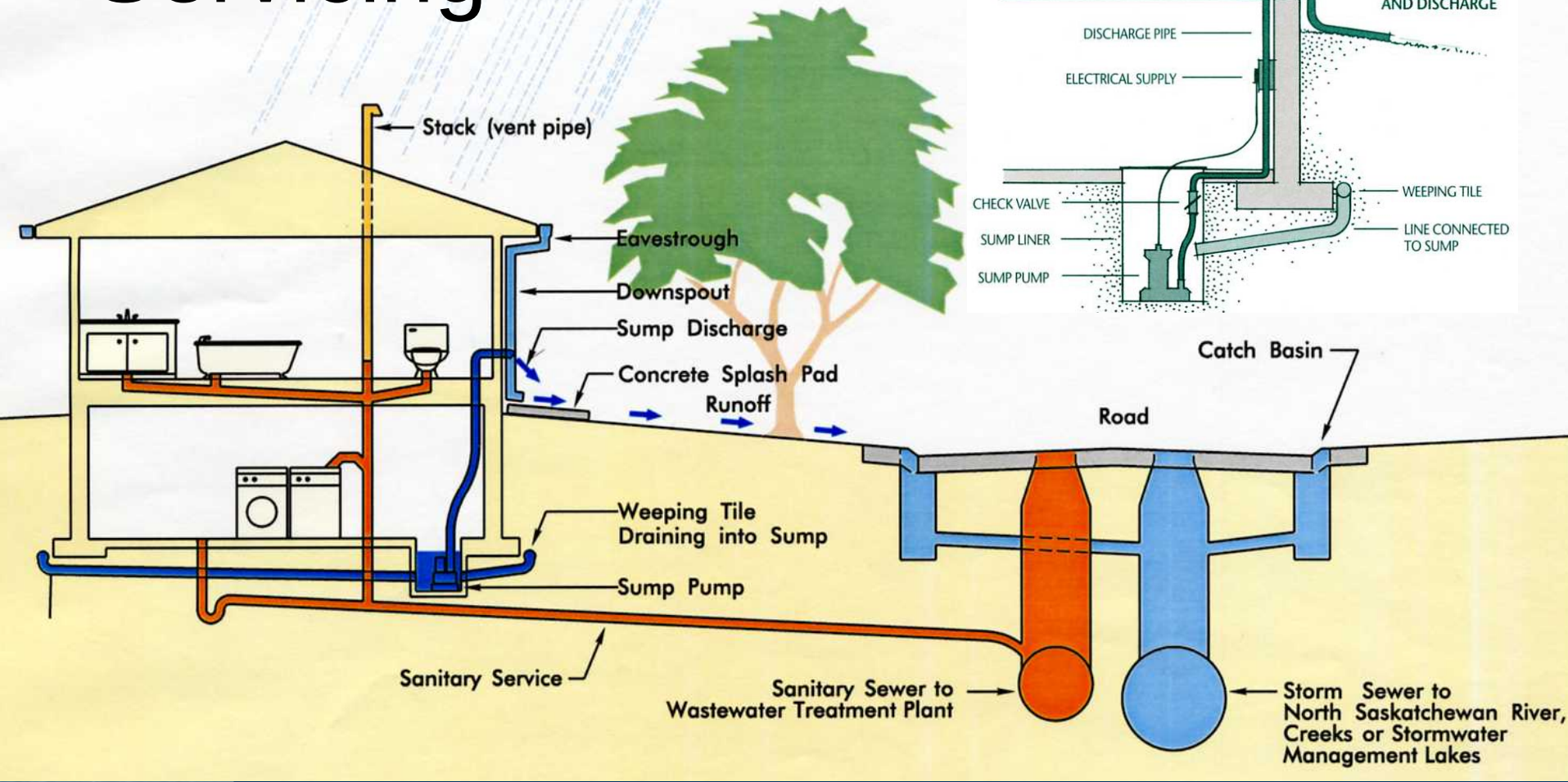
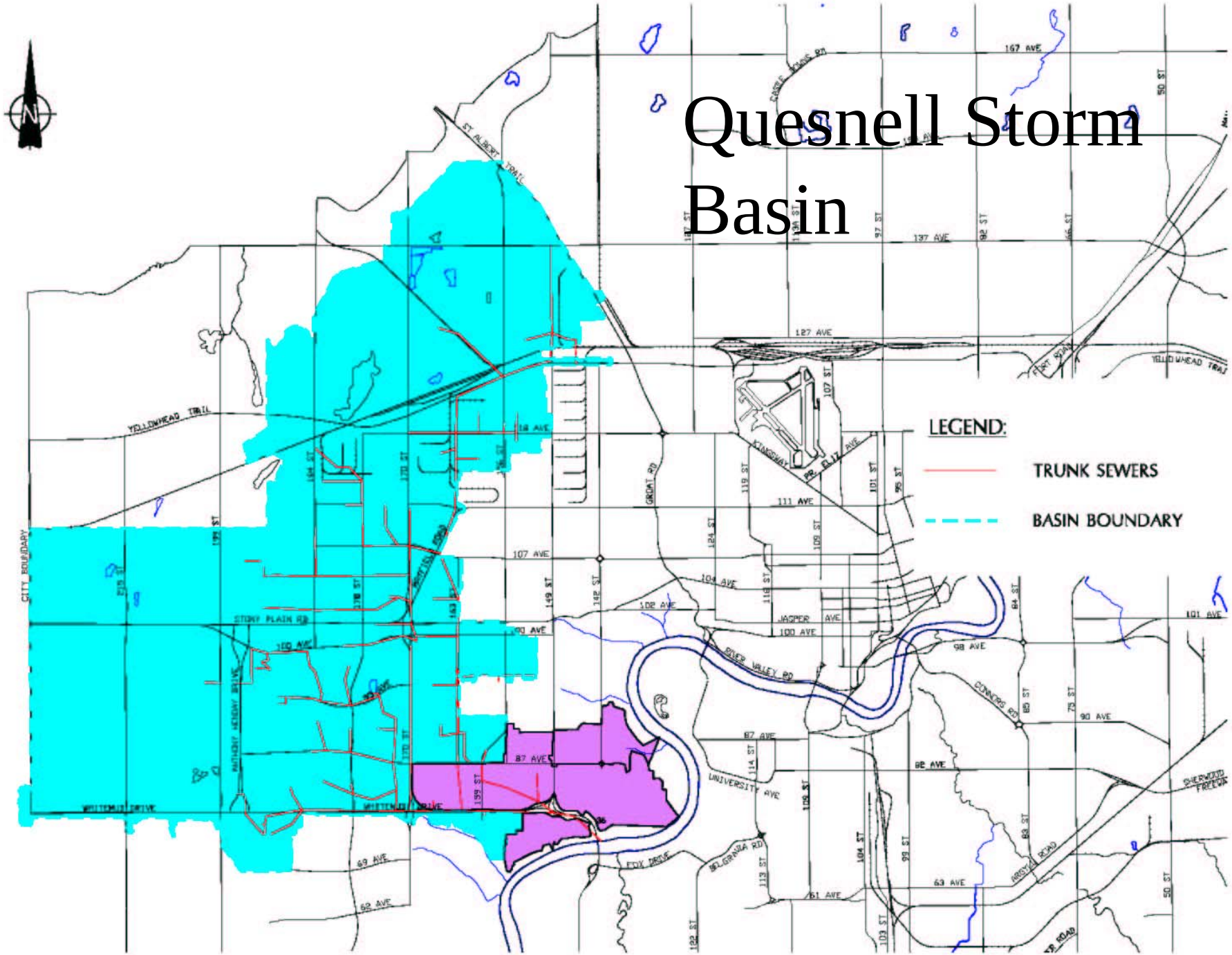
Typical New Home Servicing

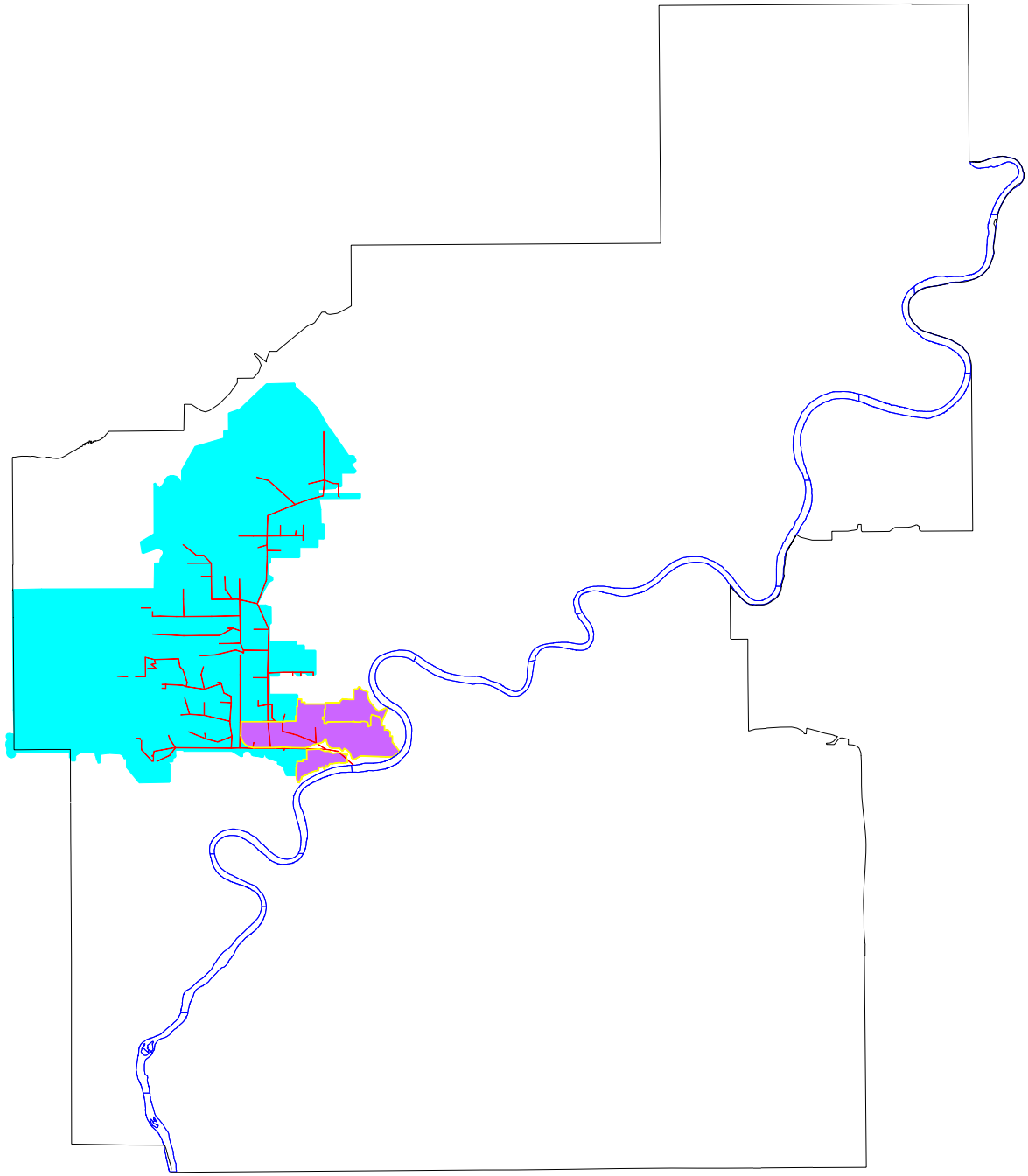




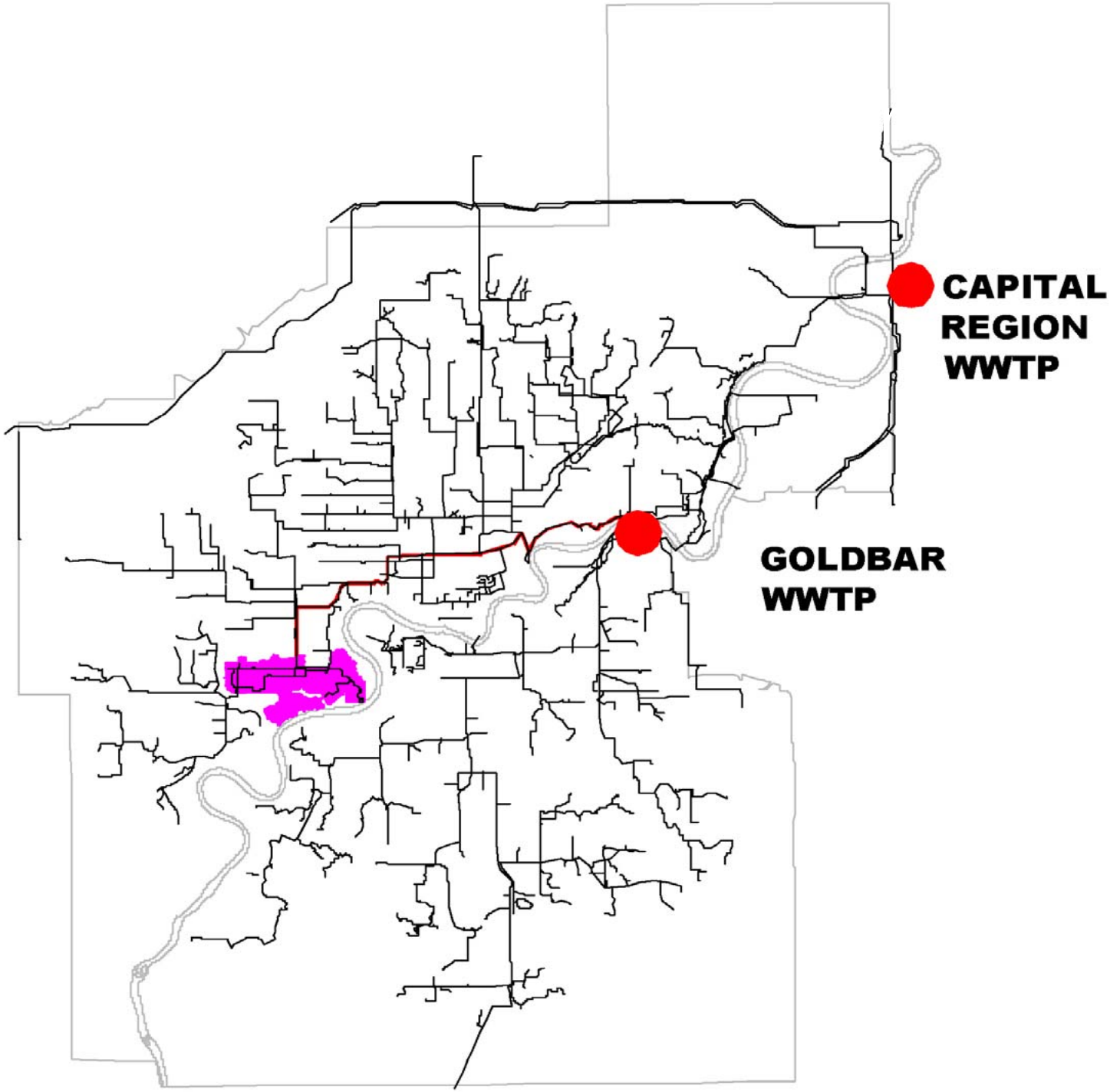


Quesnell Storm Basin





QUESNELL STORM BASIN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Engineering Findings

- **Water volume exceeded storm sewer capacity**
- **Stormwater got into sanitary system via:**
  - Flooded manhole covers
  - Weeping tile connected to home's sanitary sewer
- **Most flooded basements caused by sanitary sewer backup**

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Engineering Findings

- **Common characteristics of flooded homes**
  - 60% had yard elevations above the street curb of 0.5 metres or less
  - 37% had landscaping or lot grading that caused water to drain toward the house
  - 30% had no roof leader or extensions were less than recommended length
  - Only 3% had backflow prevention valves

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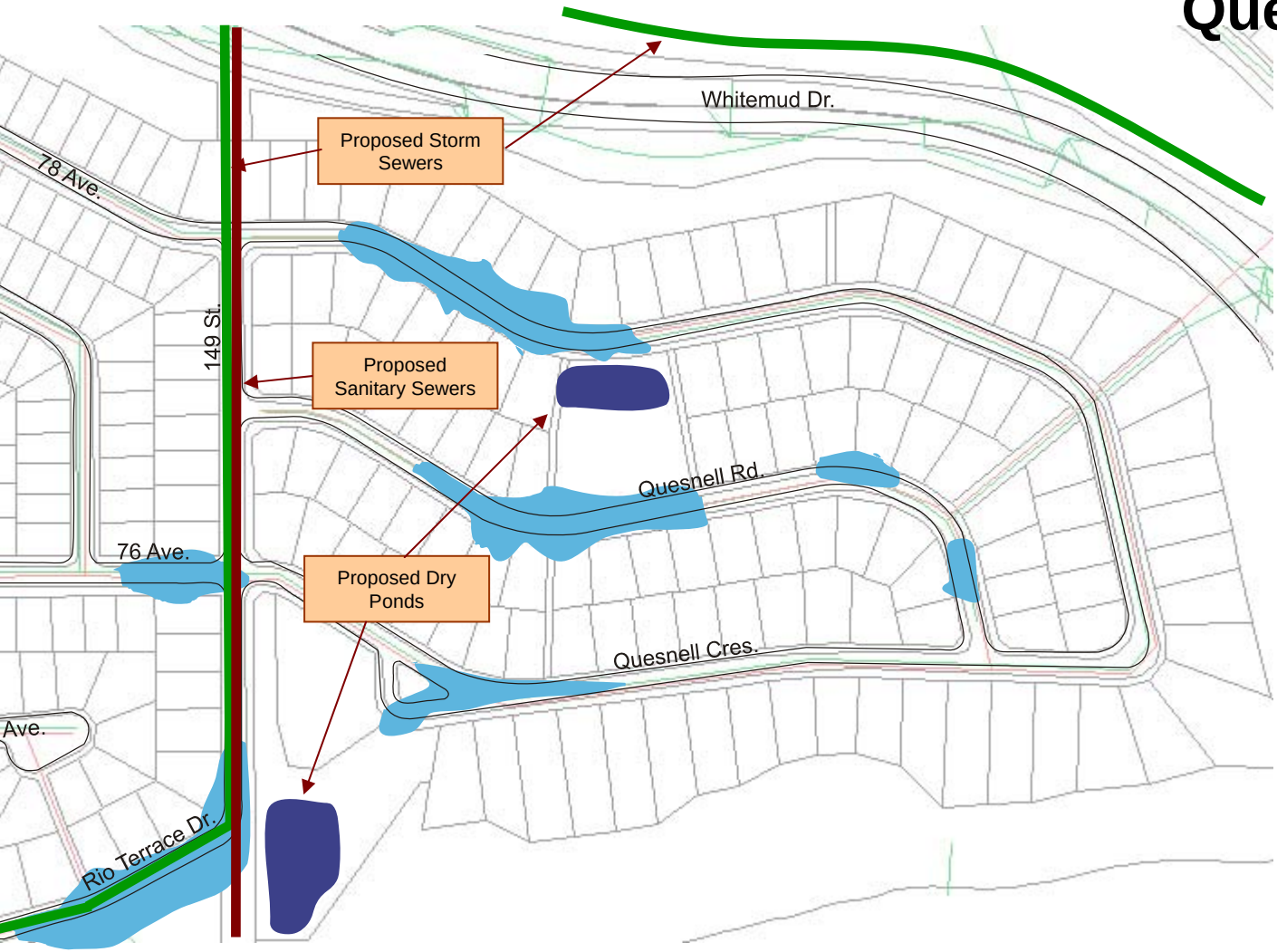
What Does it Mean?

- Better flood prevention requires joint effort from homeowners and City
- System improvements needed; involves significant time and expense
- Cooperation needed from others who manage or own private property
- Support needed from community to move ahead

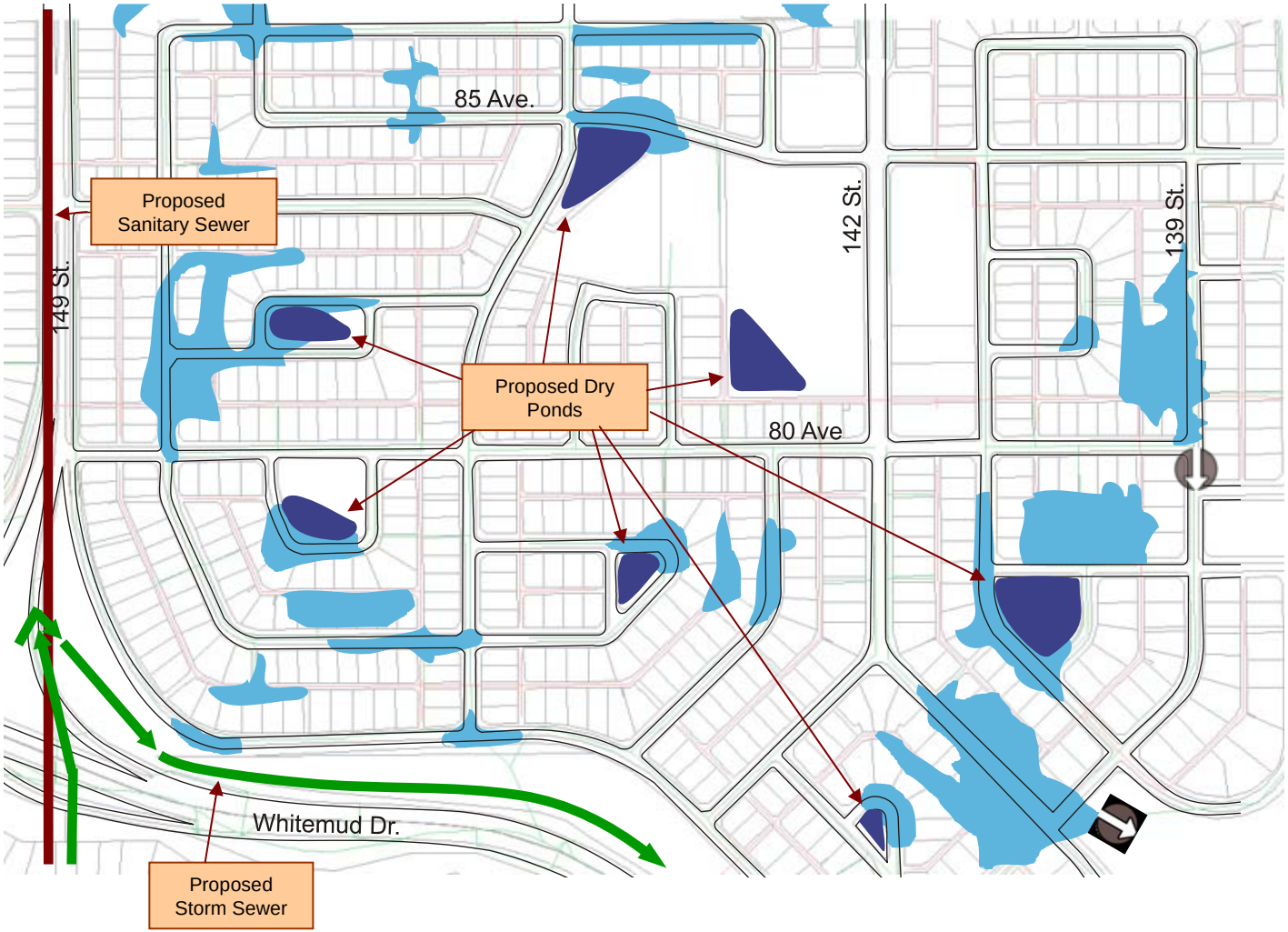
Rio Terrace/ Quesnell Heights



Legend

- Low Areas
- Surface Storage
- New Sanitary System
- New Storm System

Laurier Heights



Legend

- Low Areas
- Surface Storage
- New Sanitary System
- New Storm System
- Proposed Street Regrading

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Improvement Options

Intercept sanitary sewer trunk	$4,800,000
Add storm tunnel to Quesnell trunk	$2,700,000
Build dry ponds in Quesnell and Laurier Heights	$855,000
Do street re-grading	$100,000
Total	$8,455,000

Twin the Quesnell Storm Trunk $5,800,000

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Homeowner Options

- Improve lot grading to get surface water away from house
- Install/maintain adequate eavestroughs: 6 inch wide trough recommended
- Set in place downspouts: 1.5 metre extensions
- Install backflow prevention valve
- Install sump pump

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What are the Benefits?

- Quicker overall drainage
- Less pooling of water on the surface
- Less likelihood of basement flooding
- Less property damage
- Savings of time, money and inconvenience

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Discussion and Feedback

Clarifying Questions?

▼▼

Issues, comments, concerns?

▼▼

Ideas and suggestions?

▼▼

Preferred options?