Infrastructure Capital Planning
Water / Wastewater

Introducing the Water and Wastewater Task Force

Presentation to:
2020 Annual Contractor Meeting
March 4, 2020

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Introduction and Purpose

- Background
  - Water and Wastewater Master Plan
  - Water and Wastewater Asset Management Plan
- Inflow and Infiltration Reduction
- Water Efficiency

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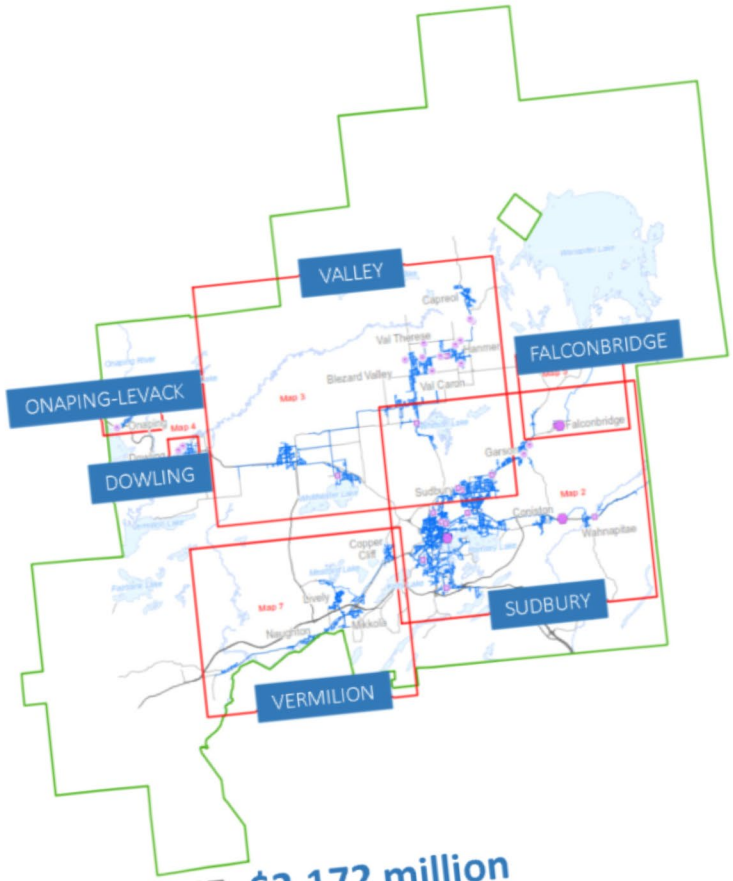
STATE OF LOCAL INFRASTRUCTURE

WATER ASSETS

6 Individual Water Systems

Watermains:	997 km
Hydrants:	5,699
Valves:	8,950
Valve Chambers:	2792
Service Connections:	906 km
Control Valves:	90
Water Meters:	47,940
Meter Stations:	6
Treatment Facilities:	28
Supply Facilities:	35



LINEAR REPLACEMENT VALUE: $2,172 million

VERTICAL REPLACEMENT VALUE: $179 million

WSP

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STATE OF LOCAL INFRASTRUCTURE

WASTEWATER ASSETS

13 Individual Wastewater Systems

Gravity Mains:	791 km
Service Connection:	381km
Pressurized Main:	9.7km
Service Connections:	382km
Force Main:	53km
Maintenance Holes:	11,726
Control Valves:	70
Drop Shafts:	21
Collection Facilities:	69
Treatment Facilities:	14

LINEAR REPLACEMENT VALUE: $1,473 million

VERTICAL REPLACEMENT VALUE: $656 million

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Water and Wastewater Master Plan

- Official Plan – growth where and when
- City to identify long term replacements/expansion of the water and wastewater servicing networks
- Considers:
  - Safe & robust
  - Accommodate planned growth
  - Ensure system performance and efficiency
  - Comply with existing legal and regulatory requirements

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Asset Management Plan

- Plan helps the City to make decisions regarding the building, operating, maintaining, renewing, replacing, disposing and funding of water and wastewater assets
- Considers:
  - State of infrastructure
  - Levels of service
  - Asset Management strategy
  - Financial strategy

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WET WEATHER FLOW

WHAT PROBLEMS DOES I&I CAUSE?

- Increases wet weather flow in wastewater system
  - Causes surcharging
  - Uses up LS and WWTP capacities
- Increases costs to run wastewater system
- Can potentially cause bypasses and basement flooding events
- An issue in many municipalities

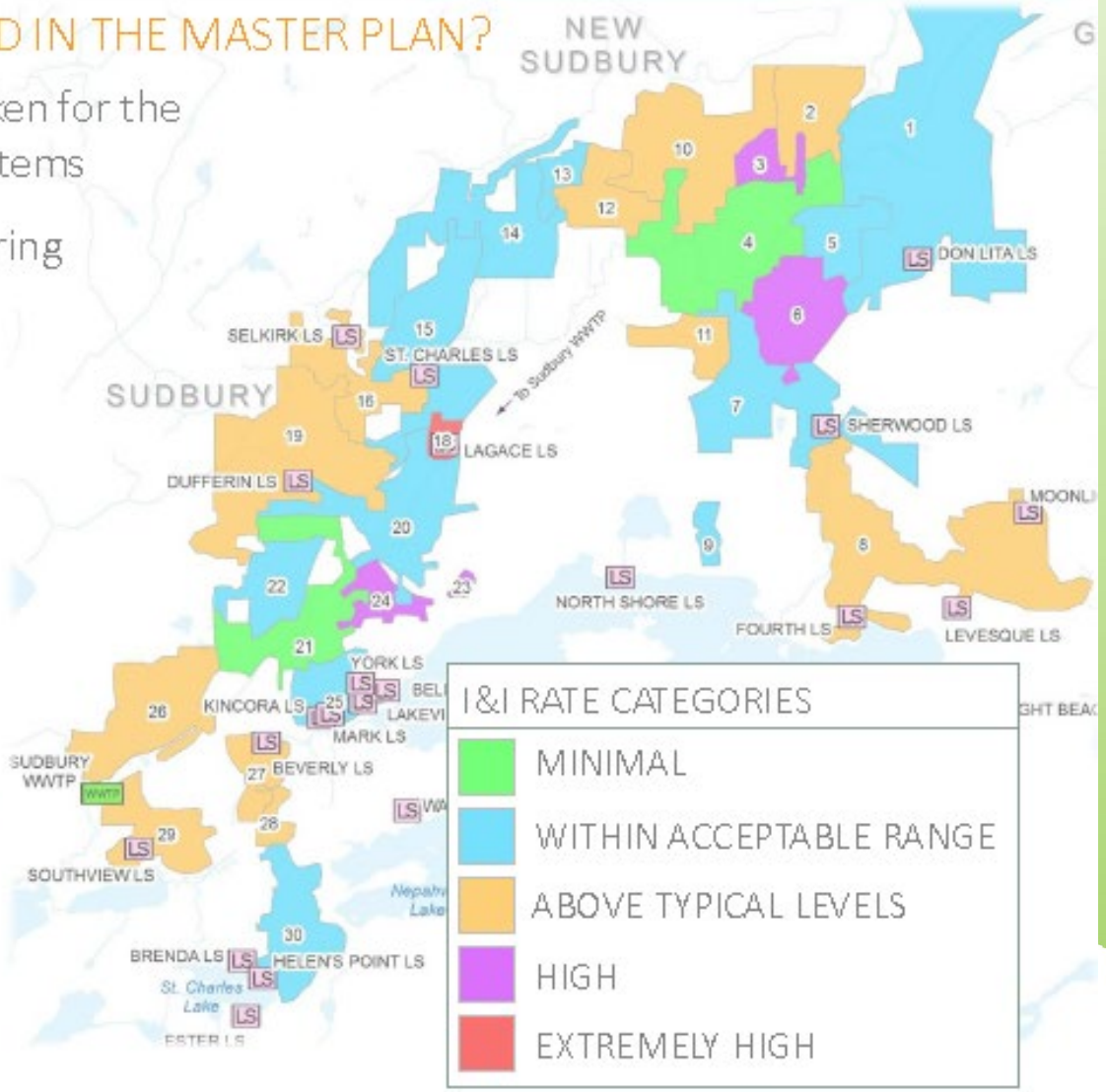
WET WEATHER FLOW

HOW HAS I&I BEEN INVESTIGATED IN THE MASTER PLAN?

- Flow monitoring program undertaken for the Sudbury and Valley wastewater systems
- Reviewed all available flow monitoring data to determine I&I rates
- Categorized severity of I&I in each community
- Assigned recommendations to mitigate potential issues
- Further investigation required

Example I&I Rate Analysis

Note: Separate studies investigated I&I reduction/mitigation for Azilda, Chelmsford and Lively-Walden



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W/WW Task Force Initiatives

- Inflow and Infiltration Reduction

✓Flow monitoring new subdivisions

✓Maintenance Hole Rehabilitation

✓Condition Assessment

✓Private disconnection solutions

✓Canvasing, Education & Outreach

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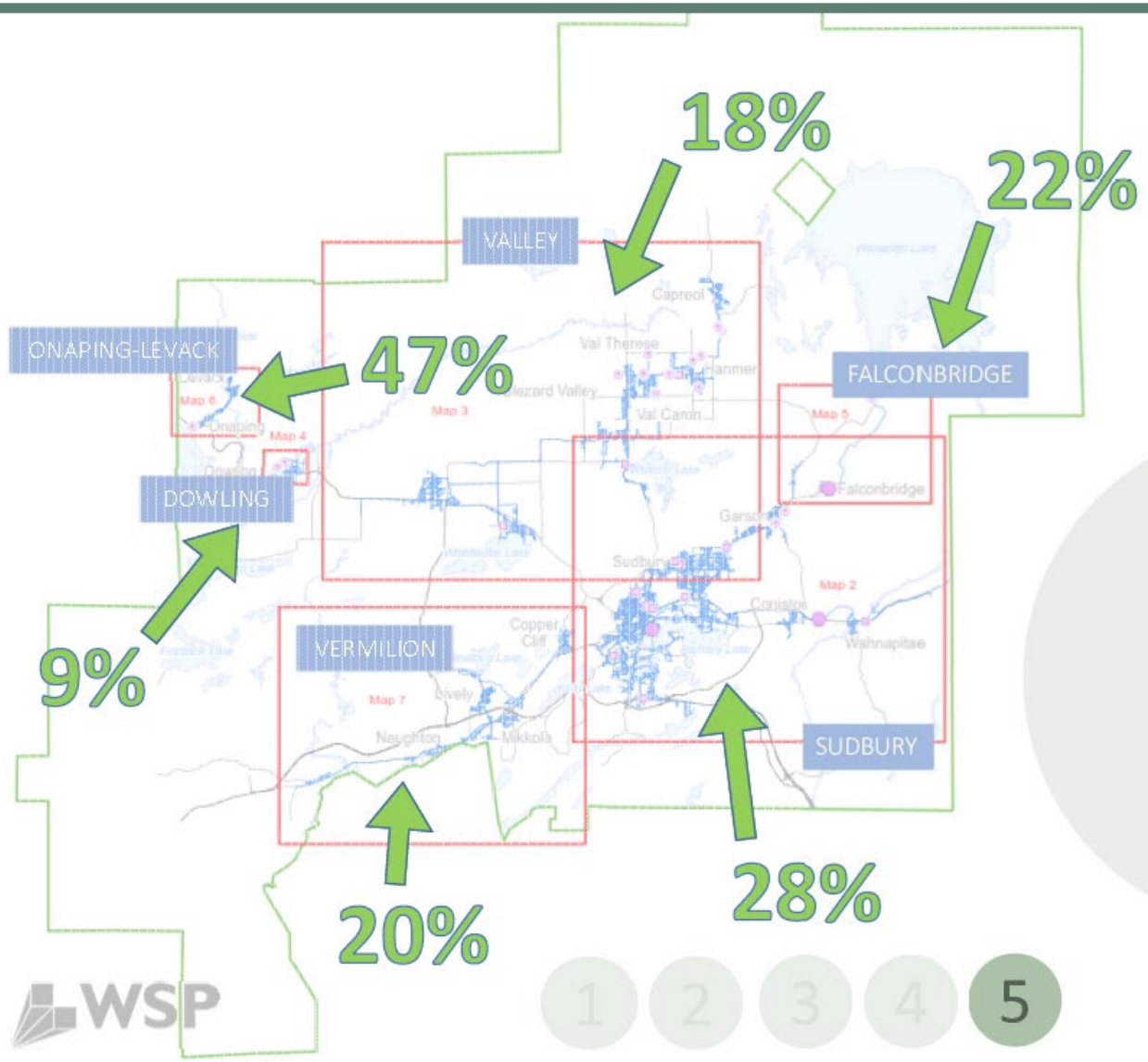
Leakage Rates Per Community



*Target Leakage should be 15%

LEAKAGE

W/WW Task Force Initiatives

- Water Efficiency

  - ✓ District Metered Areas (DMA)
  - ✓ Water Efficiency Plan
  - ✓ Condition assessment
  - ✓ Education and outreach

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Thank You

Further questions can be directed to:

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