



Integrated Stormwater Management Plan

Overview & Technical Background

PRESENTATION OUTLINE:

- Overview of an Integrated Stormwater Management Plan:
 - a. Purpose
 - b. Benefits
- Technical Background Summary

WHAT IS AN ISMP?



Source: PG Naturalists Club

A NEW APPROACH TO STORMWATER MANAGEMENT

TRADITIONAL STORMWATER MANAGEMENT

Goals:

- Remove runoff quickly

Approach:

- Engineering

Scale:

- Sewer System

Action:

- Reactive



INTEGRATED STORMWATER MANAGEMENT

Goals:

- Reduce runoff volumes
- Maximize all watershed values

Approach:

- Holistic

Scale:

- Watershed

Action:

- Proactive

WHAT IS ITS PURPOSE?



WHAT ARE THE BENEFITS OF HAVING AN ISMP?



STORMWATER SYSTEM FLOODING

Source: My Prince George Now

EROSION & SEDIMENT





DEVELOPMENT & STORMWATER MANAGEMENT



DEVELOPMENT & STORMWATER MANAGEMENT



WHERE STORMWATER MANAGEMENT BEGINS

AGING INFRASTRUCTURE



Source: Prince George Matters

FAILED CULVERT & ROAD CLOSURE



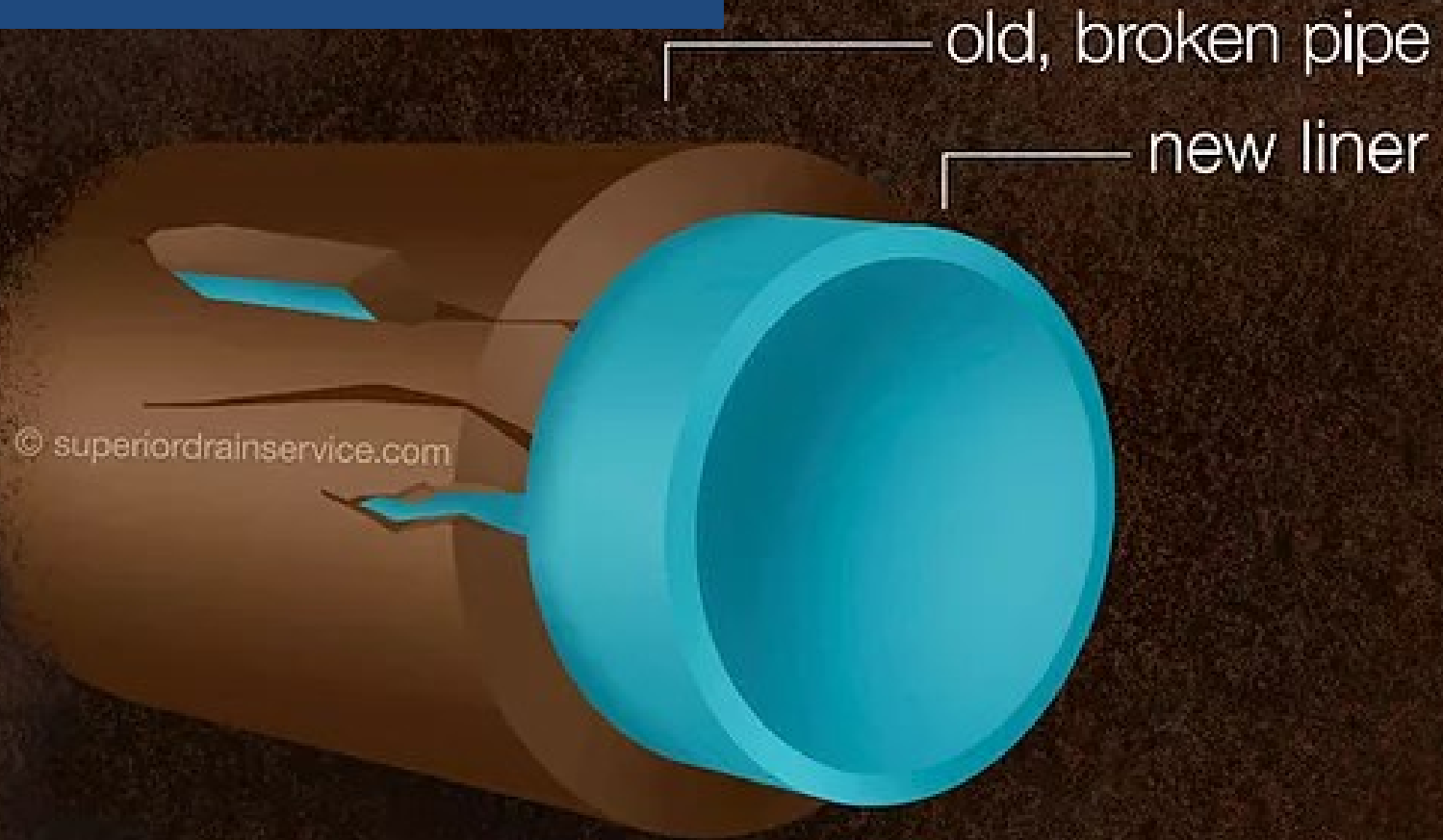


STORMWATER INFRASTRUCTURE

ONSITE STORMWATER MANAGEMENT



EXTENDING ASSET LIFE

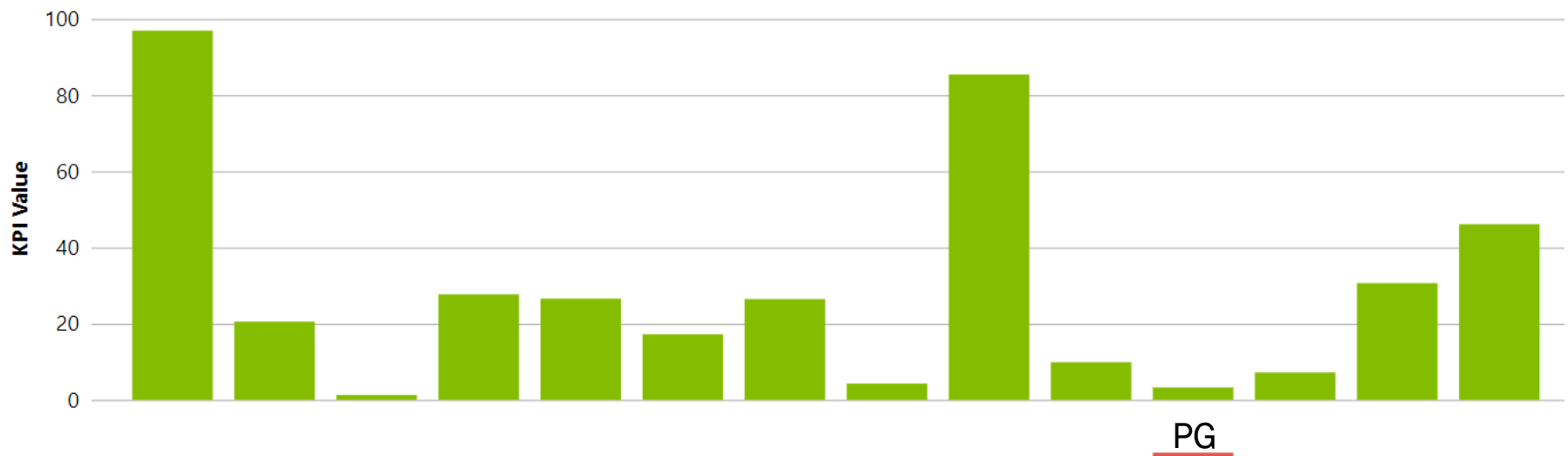


Trenchless (No-Dig) Pipe Lining

Source: Superior Sewer & Drain Service

PEER MUNICIPALITIES COMPARISON

Catch Basin Sumps Cleaned (% of Network)



PUBLIC ENGAGEMENT



NATURAL ASSETS



Source: PG Naturalists Club



Source: Accessible BC

COMMUNITY AMENITIES

ISMP COMPONENTS

Guiding Document, Roadmap, and Public Engagement Plan

- *Guiding Document with key messages*
- *Public Engagement Plan*
- *Action Plan – Roadmap*

TWP #1 – Technical Background

- *WDP Review*
- *Climate Projections*
- *Prioritization Framework*
- *WDP Gap Reduction Plan*
- *GIS Consolidation & Review and Gap Reduction Plan*
- *Recommendations*

TWP #3 – Policy and Regulations

- Review Plans, Bylaws, Fines, Authority and Enforcement
- Gap Analysis and Peer Municipal Comparison

TWP #2 – Engineering Issues

- Rain Gauge Monitoring Program
- Green Assets Strategy
- Condition Assessment Program
- Asset Longevity
- Sub'd Bylaw & Design Guidelines
- Network Level Risk Assessment
- Best Practices Review
- Replacement Costs
- Development Contributed Assets

TWP #4 – Financial Options

- Review Previous funding initiative
- Summary of other Municipal Stormwater financing models

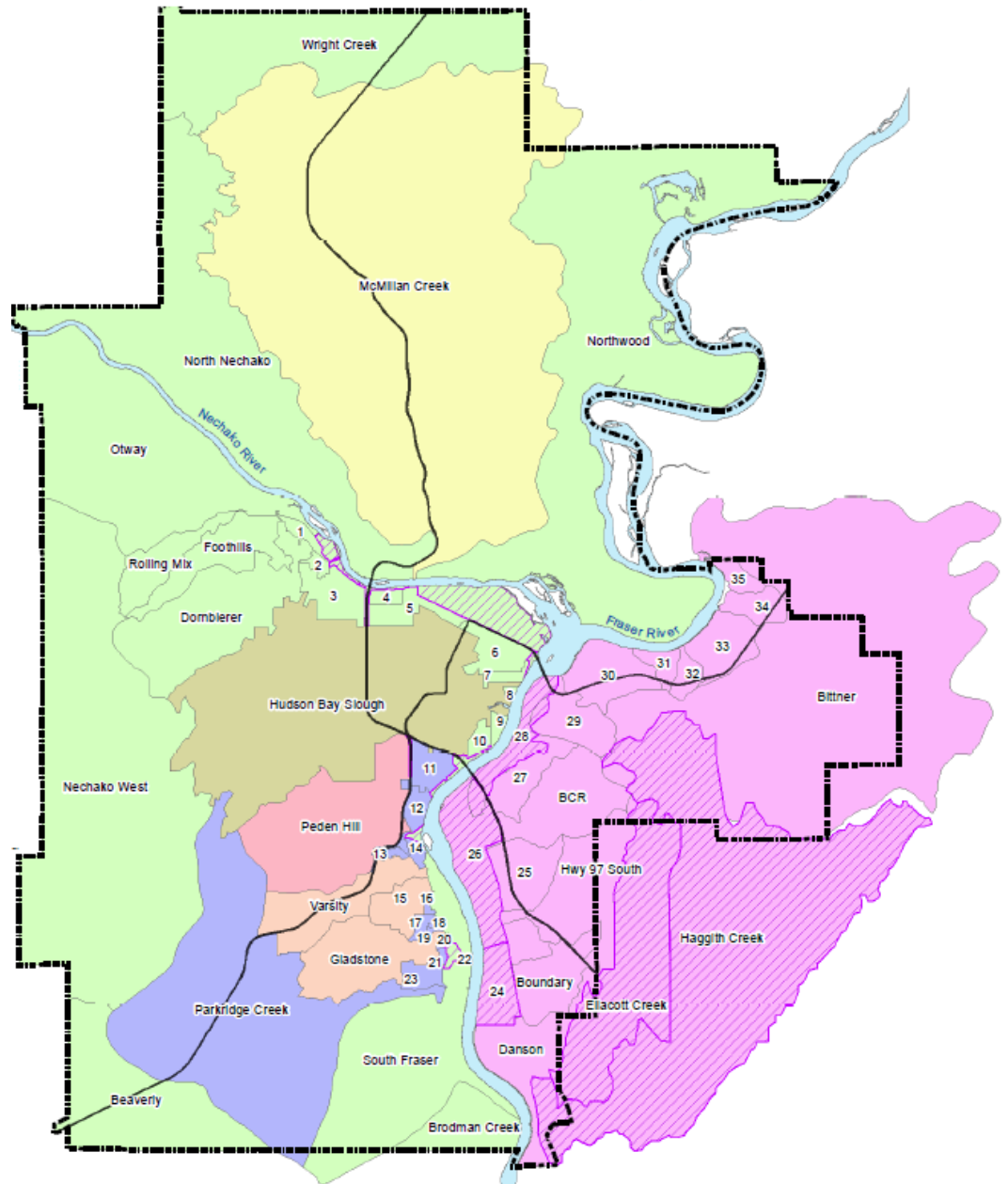
Final Presentation to Council (Summer 2021)

Public Engagement (Summer/Fall 2021)

TWP #1: TECHNICAL BACKGROUND

- WDP Review
- Prioritization Framework
- GIS Inventory

EXISTING WATERSHED DRAINAGE PLANS & GAPS



TOP 10 ACTIONS

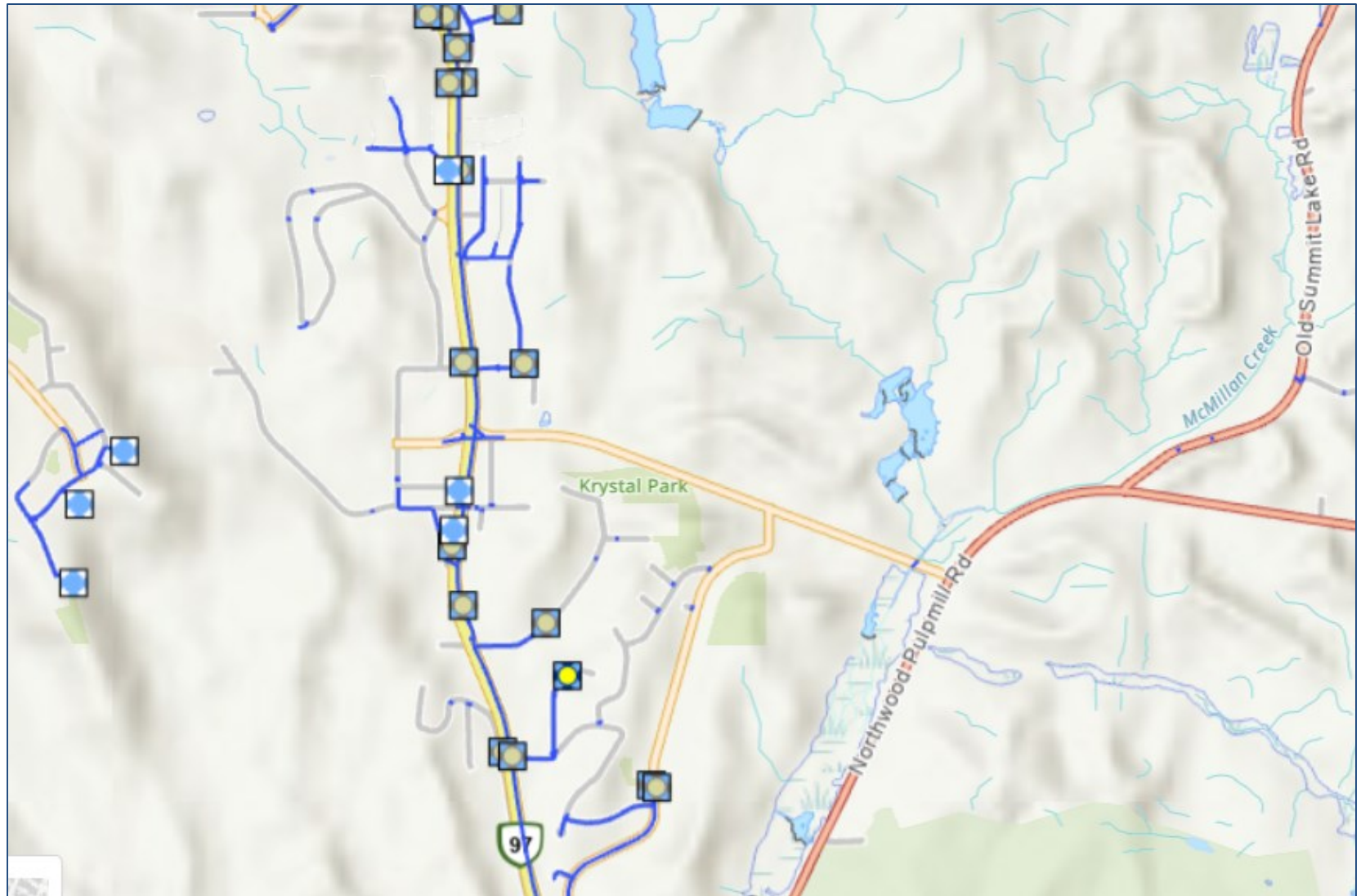
1. Parkridge Creek – Replace Domano Culvert
2. Create Erosion & Sediment Control Bylaw
3. Wetlands & Riparian area protection
4. Update Design Guidelines to consider climate change
5. Secure sustainable levels of stormwater funding
6. Replace high priority cross culverts in poor condition
7. Habitat protection
8. Update Design Guidelines to include Low Impact Development standards
9. Expand floodplain development permit areas along Parkridge Creek
10. Update Bylaws (DCC, Development, Tree Protection)



ESTIMATED COSTS OVER THE LONGTERM

Score	# of Action Items	Lower range (-50%) Cost Estimate	Upper range (+100%) Cost Estimate
9	1	\$ 500,000	\$ 2,000,000
8	4	\$ 15,000	\$ 60,000
7	26	\$ 730,000	\$ 2,920,000
6	24	\$ 2,093,000	\$ 8,371,000
5	45	\$ 4,135,000	\$ 16,542,000
4	88	\$ 9,006,000	\$ 36,024,000
3	52	\$ 7,549,000	\$ 30,196,000
2	9	\$ 6,096,000	\$ 24,384,000
1	4	\$ 1,100,000	\$ 4,400,000
0	0	\$ -	\$ -
Total	253	\$ 31,224,000	\$124,896,000

ASSET INVENTORY UPDATES

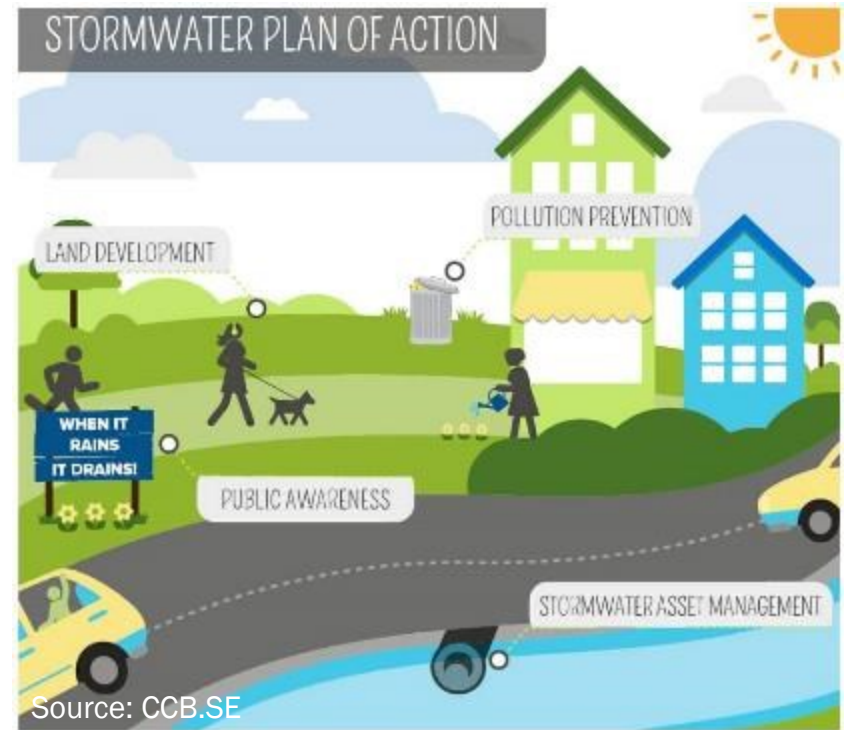


WHAT'S NEXT:

TECHNICAL WORKING PAPER #2

Engineering Issues:

- Rain Gauge Monitoring Program
- Natural Assets Strategy
- Condition Assessment Program
- Asset Longevity
- Sub'd Bylaw & Design Guidelines
- Network Level Risk Assessment
- Best Practices Review
- Replacement Costs
- Development Contributed Assets



A scenic view of a lake framed by trees and reeds. The foreground is filled with tall green reeds and some yellow flowers. The lake is calm, reflecting the sky and the surrounding greenery. In the background, there are more trees and a small white structure on the right. The text "THANK YOU" is overlaid in the center in a white box with blue letters.

THANK YOU