

DATE: February 26, 2024

TO: MAYOR AND COUNCIL

NAME AND TITLE: Deanna Wasnik, Director Planning & Development

SUBJECT: Integrated Stormwater Management Plan (ISMP) Update

ATTACHMENT(S): Powerpoint Presentation

RECOMMENDATION(S):

That Council RECEIVES FOR INFORMATION the report dated February 26, 2024 from the Director of Planning & Development and titled 'Integrated Stormwater Management Plan (ISMP) Update.'

PURPOSE:

To provide an update on the City's progress with the actions identified in its Integrated Stormwater Management Plan (ISMP).

BACKGROUND:

The City manages stormwater to prevent flooding and erosion and to protect watersheds, including creeks, rivers, and groundwater aquifers. In order to do this the City has constructed over \$380 million of stormwater infrastructure since the 1970's, including storm sewers, ditches, culverts, pumping stations and engineered ponds. This means that the City is responsible for inspecting, cleaning, repairing, and replacing these assets, as required. There are also natural assets, like wetlands, that help manage and convey stormwater that require maintenance from time to time.

The ISMP was developed to help the City work through the stormwater management challenges it currently faces:

- Sprawling development;
- Aging infrastructure;
- Increase in environmental and safety regulations;
- Climate change;
- Localized flooding;
- Erosion;
- Lack of dedicated funding;
- Protection of natural assets that help manage stormwater; and
- Need for updated City bylaws.

The ISMP was created in 5 parts: 4 technical working papers and an overarching guiding document. The guiding document includes a roadmap that identifies the vision, goals and top actions required for the City's stormwater management service delivery to be sustainable into the future.

STRATEGIC PRIORITIES:

The City's ISMP supports Council's 2023-2026 Strategic Plan priorities: Preserve the environment and continue to improve processes and practices to support effective and efficient service delivery.

PROGRESS MADE IN 2022/2023:

Since the finalization of the ISMP at the end of 2021, several actions have been completed or are underway:

- Stormwater management information sharing continues to be available through the City's website,
- Renewing and replacing existing infrastructure is one of the top priorities and since the end of 2021, a variety of stormwater assets have been renewed and replaced,
- Protecting natural assets like rivers and creeks.

See more details in the presentation attached.

NEXT STEPS FOR 2024 AND BEYOND:

Some of the top actions in the ISMP roadmap are related to updating bylaws and guidelines to ensure stormwater infrastructure can withstand future demands, including more severe storms. Bylaws also help the City reduce the amount of contaminants entering the storm sewer system which eventually discharge into creeks and rivers. Less contaminants in stormwater also means less required maintenance. The bylaws that will be updated over the next several years include:

- Storm Sewer Bylaw
- Subdivision and Development Servicing Bylaw and Design Guidelines
- Development Cost Charge (DCC) Bylaw
- Erosion & Sediment Control Bylaw (*NEW*)

As resources become available, a consistent condition assessment program will be implemented to gather more data to prioritize renewals. In the meantime, conducting assessments on corrugated metal storm pipe is the focus for the next few years.

Stormwater management is funded primarily through property taxes. Because this is not a dedicated source of funding, stormwater must compete each year with other infrastructure needs for funding such as parks, sidewalks, and civic buildings. Currently, \$3 to \$4 million per year is spent on the stormwater system. It is estimated that \$12 million per year, on average, is needed to keep up with repairs, maintenance and replacements of aging infrastructure over the next 20 years. This leaves a significant funding gap every year that threatens the sustainability and reliability of the stormwater service.

One of the top actions in the ISMP is to create a dedicated fund so that stormwater infrastructure doesn't have to compete with the other areas. Over the next couple of months, the City will be reaching out to the community to help us decide how we pay for stormwater management in Prince George. There will be social media posts about the importance of stormwater management and a survey will be launched in April. Council will be provided with the results of the public engagement this summer, along with, a recommendation from Administration regarding a funding model informed by the results of the survey.

See more details in the presentation attached.

SUMMARY AND CONCLUSION:

The City continues to progress in stormwater management in order to provide safe and sustainable stormwater drainage services for the community. By updating bylaws and securing a dedicated stormwater infrastructure fund, the City can ensure these services will continue to be provided for future generations.

RESPECTFULLY SUBMITTED:

Deanna Wasnik, Director Planning & Development

PREPARED BY: Kristy Bobbie, Asset Manager

APPROVED:

Andy Beesley, Acting City Manager

Meeting Date: [Enter 2024/02/26]



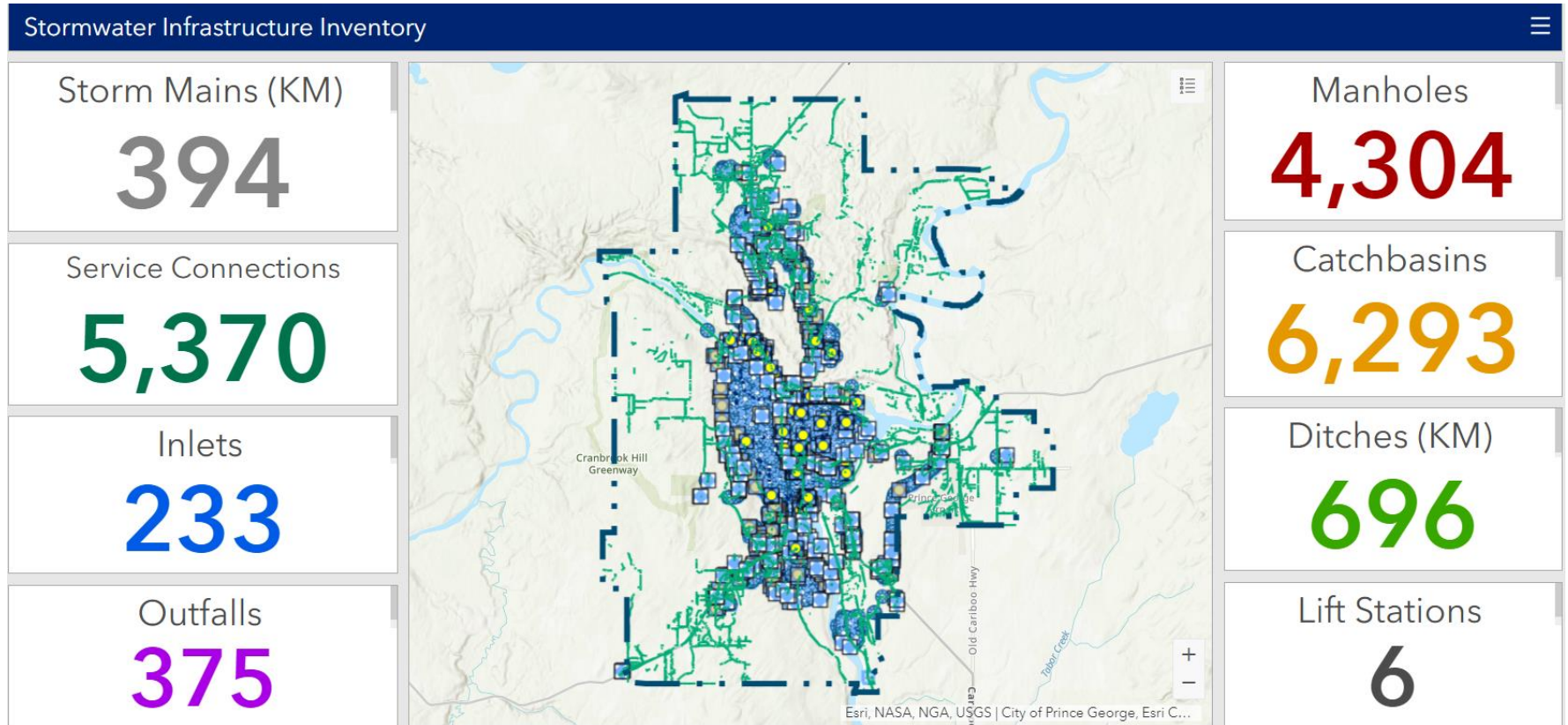
Integrated Stormwater Management Plan

Action Update

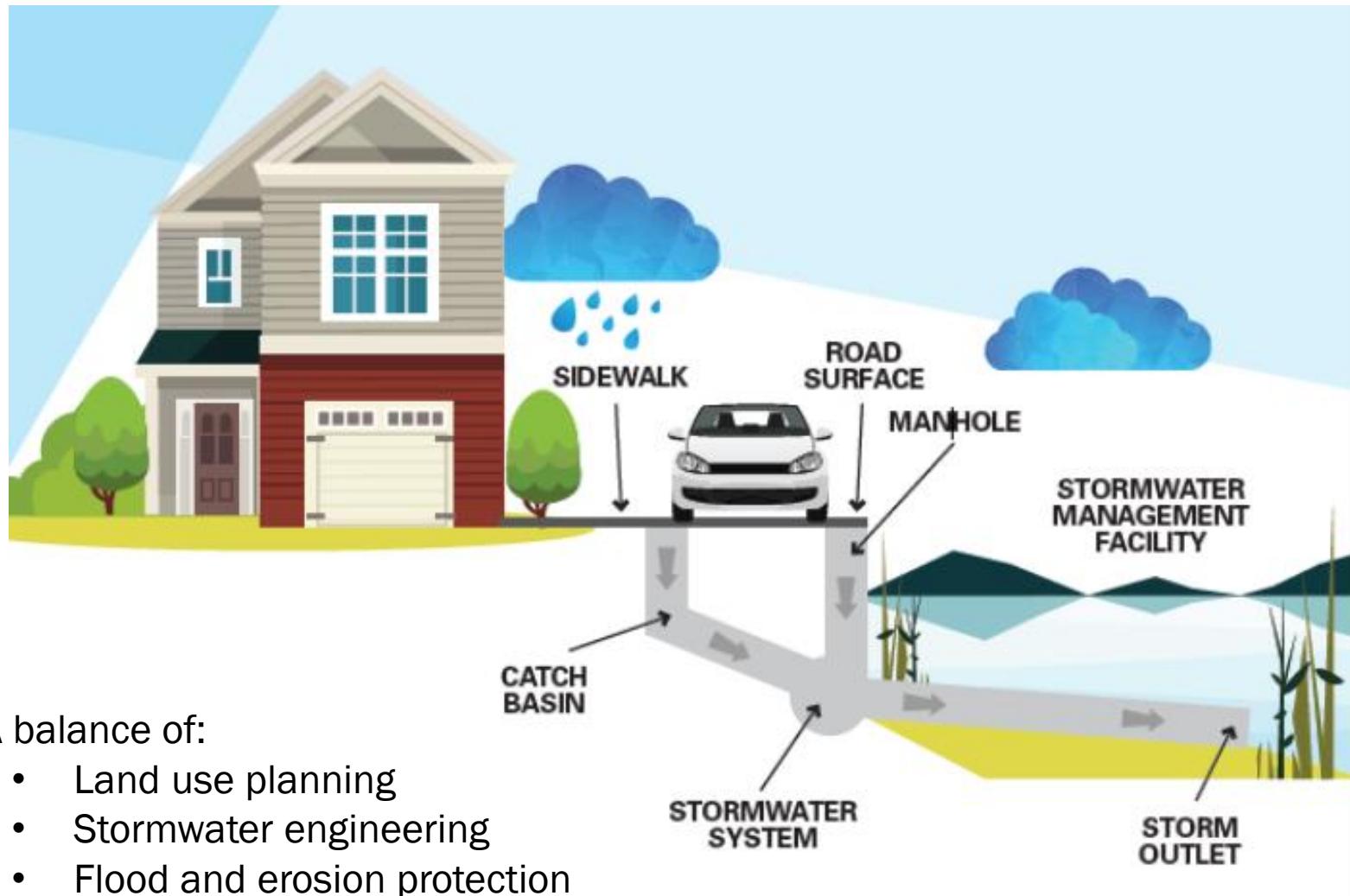
PRESENTATION OUTLINE:

- ISMP Overview
- Actions Completed
- Next Steps

STORMWATER INFRASTRUCTURE INVENTORY



WHAT IS THE PURPOSE OF AN ISMP



A balance of:

- Land use planning
- Stormwater engineering
- Flood and erosion protection
- Environmental protection

ISMP COMPONENTS

Guiding Document, Roadmap, and Public Engagement Plan

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

TWP #1 – Technical Background

- *Watershed Drainage Plans (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 & AM 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

Public Engagement (Fall 2021)

Final Presentation to Council (Dec 2021)

ISMP ROAD MAP

City of Prince George Integrated Stormwater Management Plan Roadmap

VISION

Sustainable and cost-effective service delivery of stormwater management that protects life, property, and a healthy environment.

PILLARS



Social Health & Well-being



Environmental Leadership & Climate Action



Economic Growth & Development



City Government & Infrastructure

GOALS

Enhance livability through beautification, connections to nature and recreational opportunities

Preserve and enhance the health of the community's watersheds

Protect life and property from flooding & erosion

Infrastructure costs are minimized and apportioned equitably

ACTION ITEMS

Education & Outreach

- Educate staff, Council and residents on the value of stormwater management
- Educate developers, designers, contractors and City staff on Bylaw/Design Guideline requirements



Resources

- Establish sustainable funding and sufficient staffing to implement action items and achieve goals



Asset Inspection & Renewal

- Establish storm sewer/culvert condition assessment program
- Complete highest priority stormwater asset renewal projects



Policy & Bylaw Updates

- Strengthen erosion and sediment control requirements within City bylaws
- Update Subdivision & Development Servicing Bylaw and Design Guidelines to consider climate change, control water quality and quantity, and mandate new standards
- Update the Storm Sewer Bylaw to clearly outline responsibilities and prevent harmful discharges
- Strengthen the enforceability of polluter pays principles within City bylaws
- Establish green infrastructure strategy
- Update Development Cost Charges (DCC) rates
- Protect existing natural assets that serve key watershed functions



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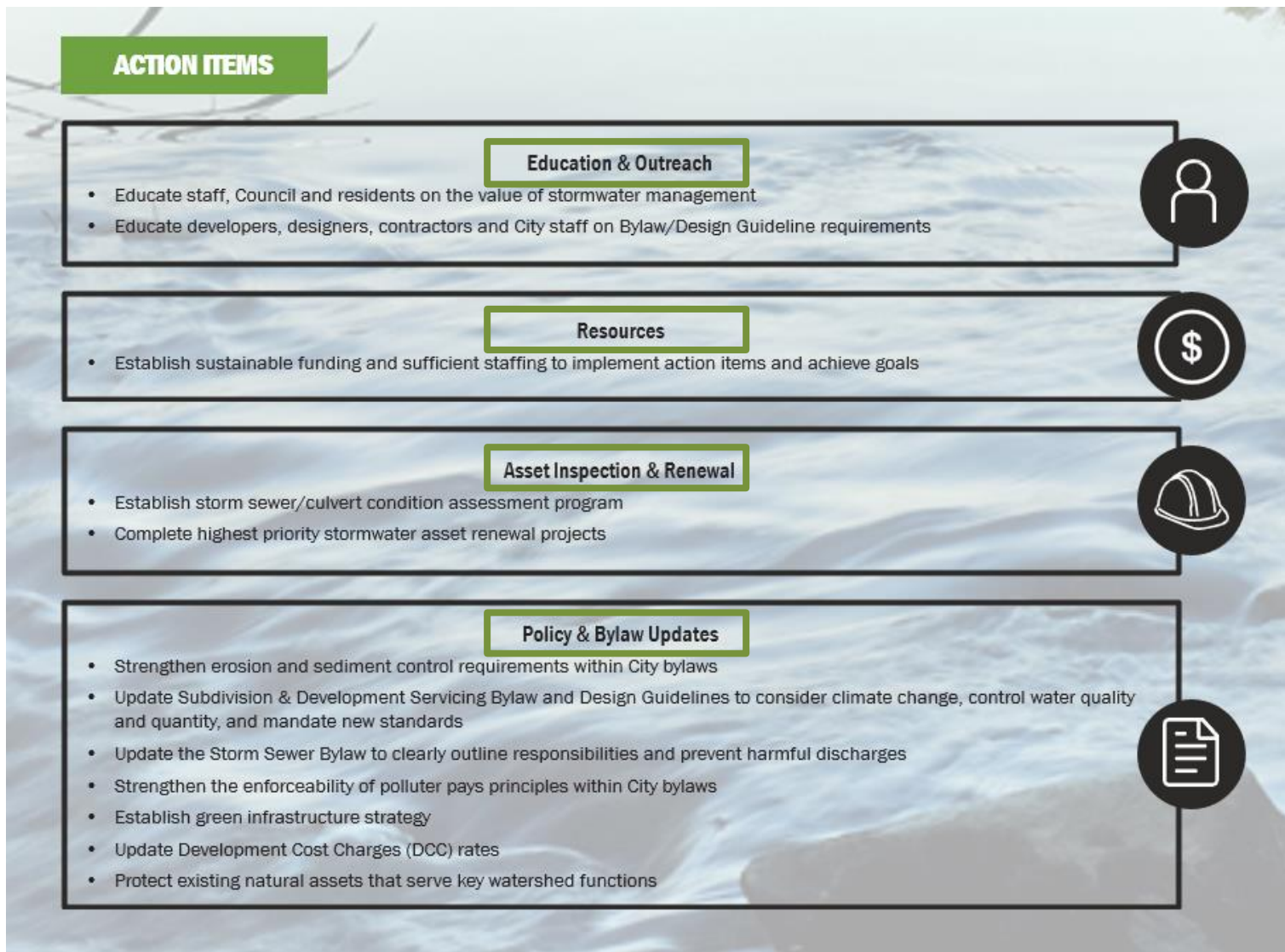
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ISMP ROAD MAP



ROADMAP ACTION ITEMS COMPLETED:

STORMWATER MANAGEMENT OUTREACH

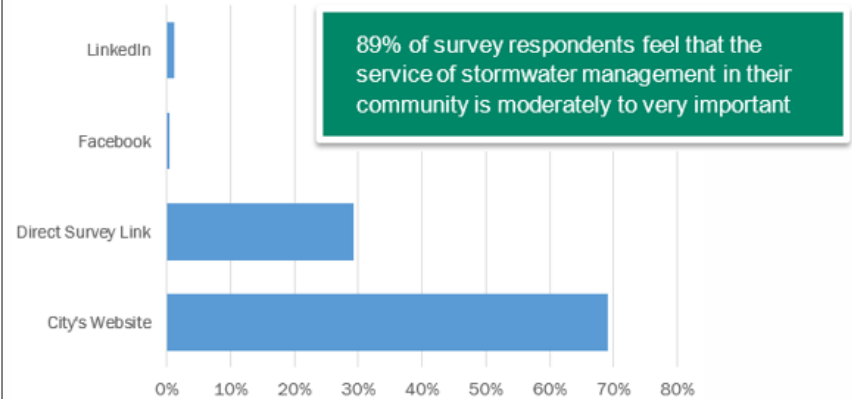
YouTube Video



Over 4,300 views of the City's stormwater video.

Online Survey

116 Survey Respondents



Stormwater plan coming

By Cheryl Jahn

Sep 22, 2021 | 4:48 PM

Facebook

Over 21,000 views of the City's Facebook post about stormwater, the ISMP and consultation process

STORMWATER MANAGEMENT OUTREACH

Our stormwater story

Stormwater & Stormwater Management

City of Prince George
September 8, 2021



CITY OF
PRINCE GEORGE

Online Services

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Move Up
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City
Services

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Stormwater Management

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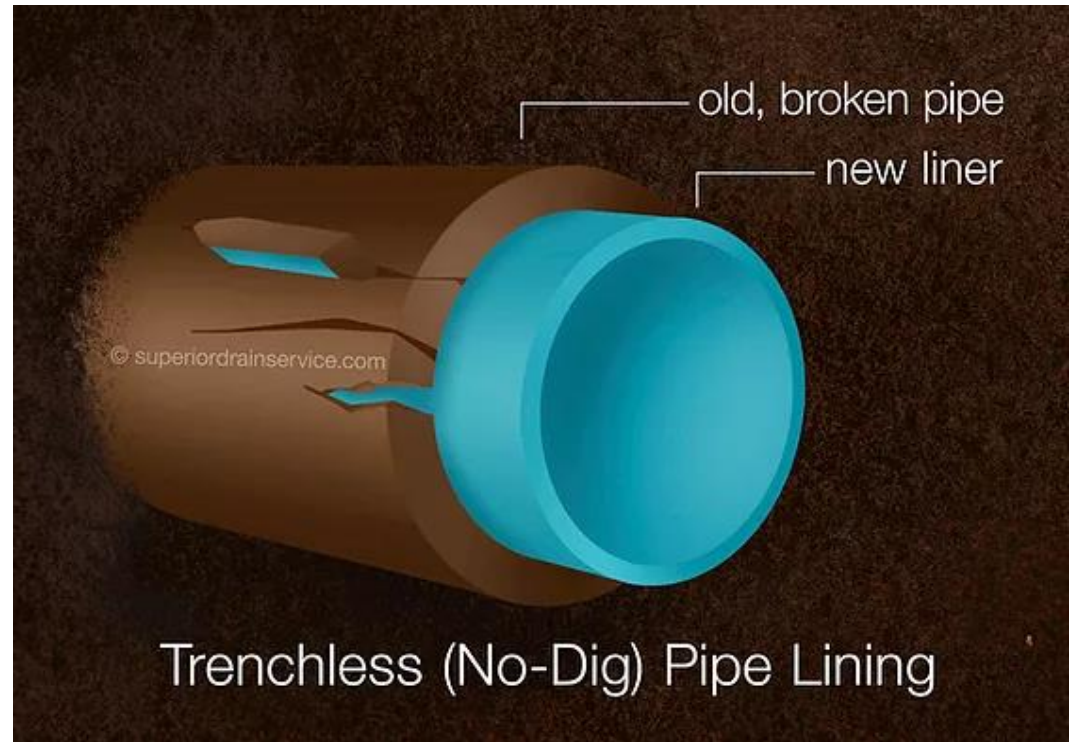
INFRASTRUCTURE RENEWALS SINCE 2022

2.3km Gravity Main Lined

Pre - Liner Installation



Post - Liner Installation



INFRASTRUCTURE RENEWALS SINCE 2022

8 Outfalls Renewed



16 Ponds Renewed



7km of Pipe Inspected Using a CCTV Camera



53 Catchbasins Renewed



PROTECTING NATURAL ASSETS



WHAT'S NEXT:

BYLAW UPDATES

- Erosion & Sediment Control Bylaw: 2024-2025



BYLAW UPDATES

- Update the Storm Sewer Bylaw to clearly outline responsibilities and prevent harmful discharges: Start in 2026.
- Strengthen enforceability of polluter pays principles with City bylaws



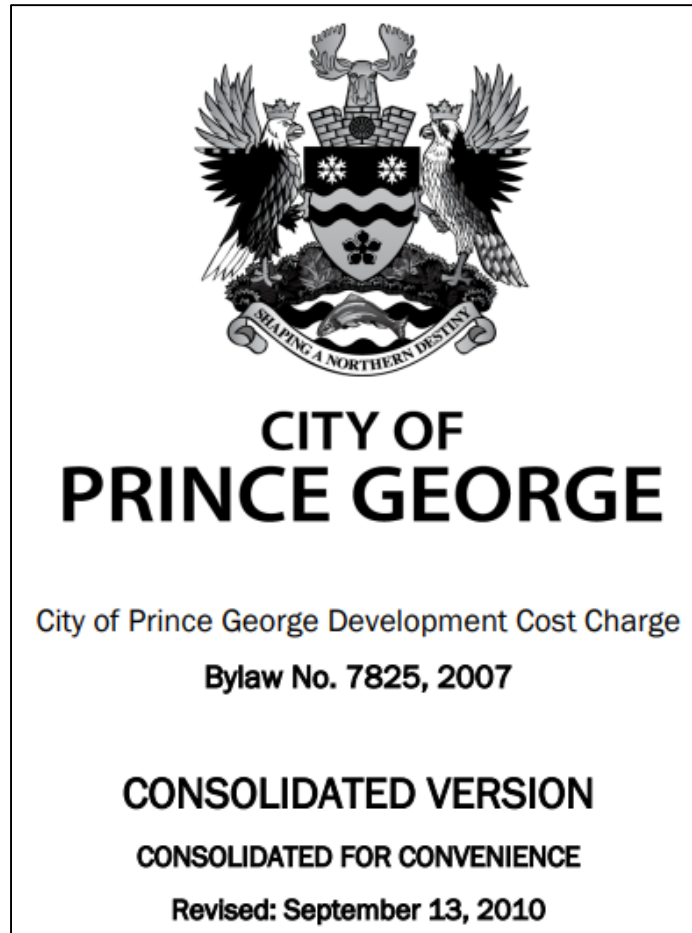
BYLAW UPDATES

- Update Subdivision & Development Servicing Bylaw and Design Guidelines to consider climate change, control water quality and quantity, and mandate new standards: Start in 2024



BYLAW UPDATES

- Update Development Cost Charge (DCC) rates: Start after adoption of OCP



The principal of
'development pays for development'
is the purpose of the DCC Bylaw

CONDITION ASSESSMENT PROGRAM

Table 25 PACP Condition Grades

Grade	Definition
5	Most significant defect grade
4	Significant defect grade
3	Moderate defect grade
2	Minor to moderate defect grade
1	Minor defect grade

Table 26 Inspected Segment Grade Interpretation

Grade	Definition
5	Immediate attention needed
4	Poor; will be become grade 5 in near future
3	Fair; moderate defects
2	Good; the pipe has not begun to deteriorate
1	Excellent; no to minor defects



Source: rauschusa.com



Source: Cityworks Inspection

Benefits:

- Forecasting when infrastructure needs to be renewed or replaced;
- Minimizing infrastructure failures and the resulting costs;
- Extend the life of the asset before it becomes completely deteriorated and must be entirely replaced.

DEDICATED FUNDING

- Public Engagement:
April 2024
- Engagement Results
Council Presentation:
Summer 2024



Managing stormwater protects our residents, homes and buildings, parks, roads, creeks, and rivers. By controlling flow runoff, we can minimize and prevent hazards like flooding, erosion, sinkholes and destruction of fisheries habitat.



Stormwater Storymap on Prince George's Website:

A scenic view of a lake framed by trees and reeds, with a blue box containing the text "THANK YOU" overlaid in the center. The lake is surrounded by lush greenery, including tall reeds in the foreground and dense trees in the background. The sky is bright and clear. The text "THANK YOU" is written in white, bold, uppercase letters on a dark blue rectangular background.

THANK YOU