



Integrated Stormwater Management Plan

Regulatory Review & Financing Options

ISMP COMPONENTS

Guiding Document, Roadmap, and Public Engagement Plan

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

TWP #1 – Technical Background

TWP #3 – Policy and Regulations

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

TWP #2 – Engineering & Asset Management Issues

TWP #4 – Financial Options

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

Guiding Document and Action Roadmap
Presentation to Council (Aug 30, 2021)

Public Engagement (September 2021)

PRESENTATION OUTLINE

1. Technical Working Paper #3 – Policy & Regulatory Review
2. Technical Working Paper #4 – Financing Options
3. Next Steps

POLICY & REGULATORY REVIEW

BYLAW COMPARISONS

- Kelowna
- Kamloops
- Nanaimo
- Squamish
- Whistler
- City of North Vancouver
- District of West Vancouver
- Vancouver
- Abbotsford
- Chilliwack
- Maple Ridge
- Langley
- Comox
- Courtney
- Surrey
- Saskatoon
- Calgary
- Edmonton
- Guelph
- Kitchener
- Sudbury
- Thunder Bay



PROHIBITED DISCHARGES & COST RECOVERY

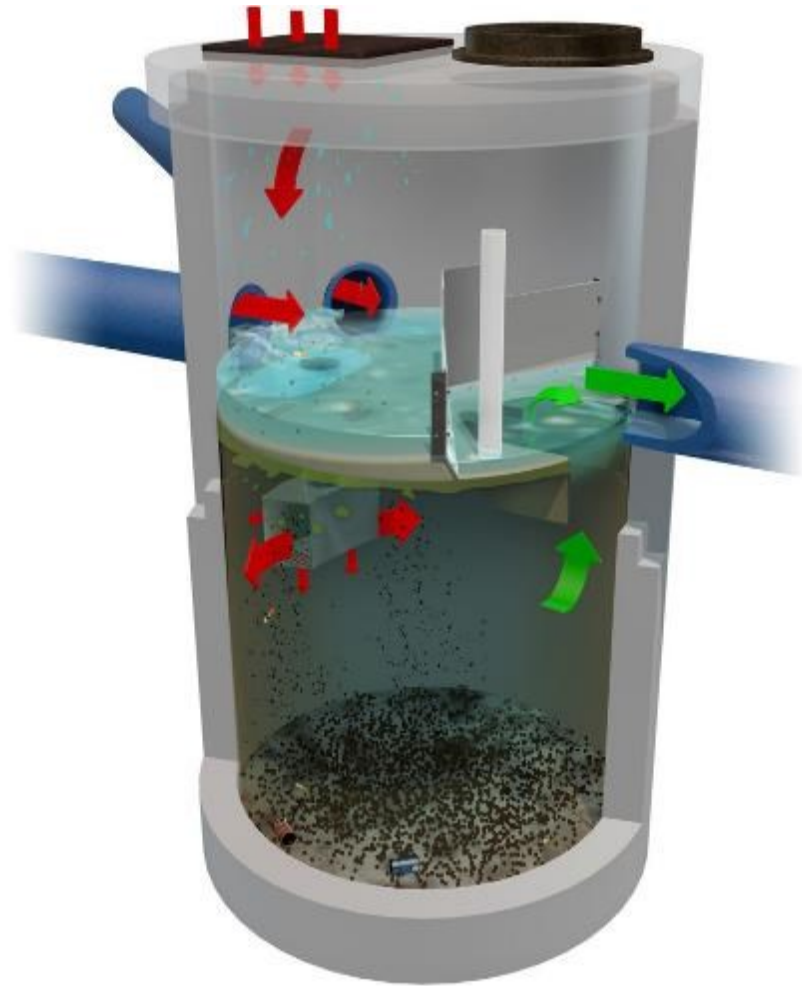
ONSITE STORMWATER CONTROL



MORE INTENSE RAINFALL



OIL & GRIT ISSUES



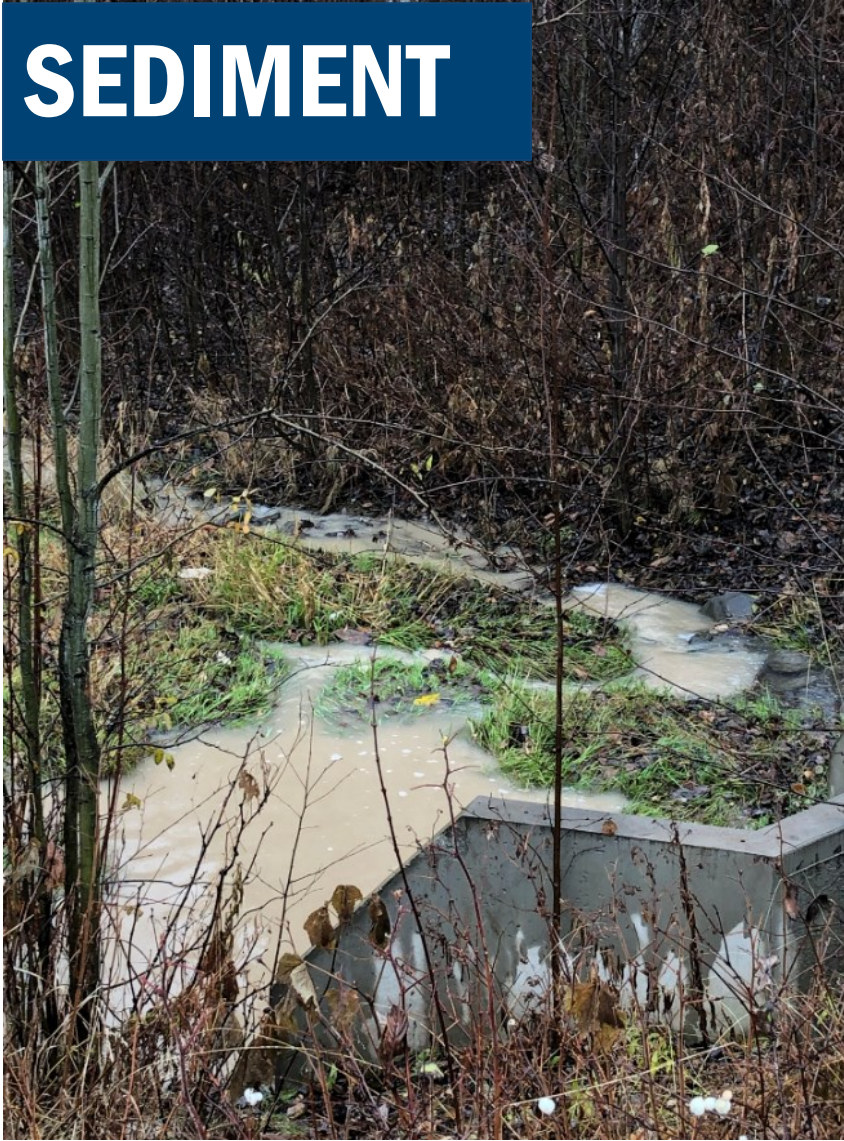


RIPARIAN PROTECTION

EROSION



SEDIMENT



SEDIMENT & EROSION



SEDIMENT & EROSION



SEDIMENT REDUCTION

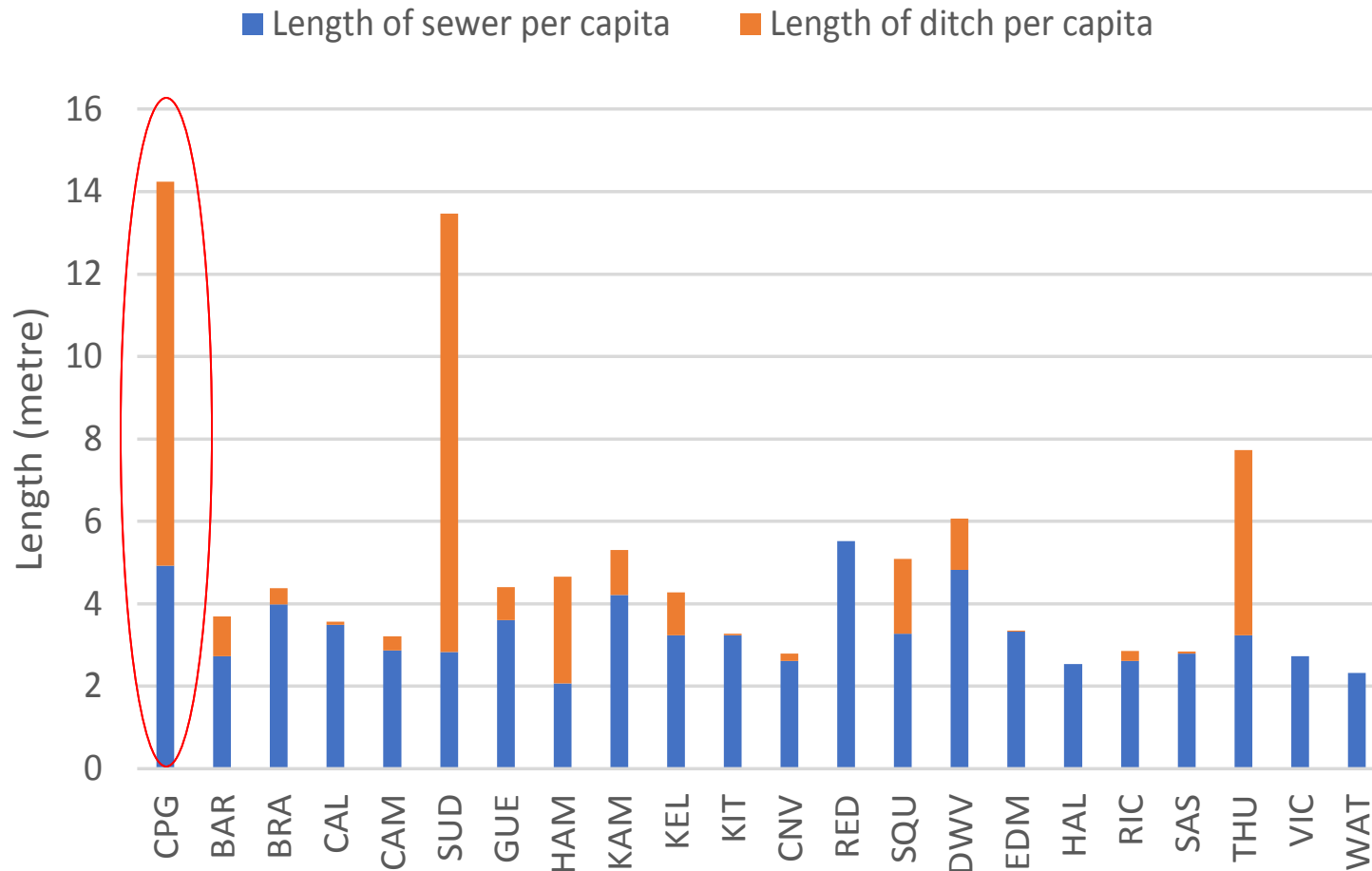


PRIVATE DRIVEWAY CULVERT OWNERSHIP



FINANCING OPTIONS

INVENTORY COMPARISON



FUNDING: EXISTING vs NEEDED

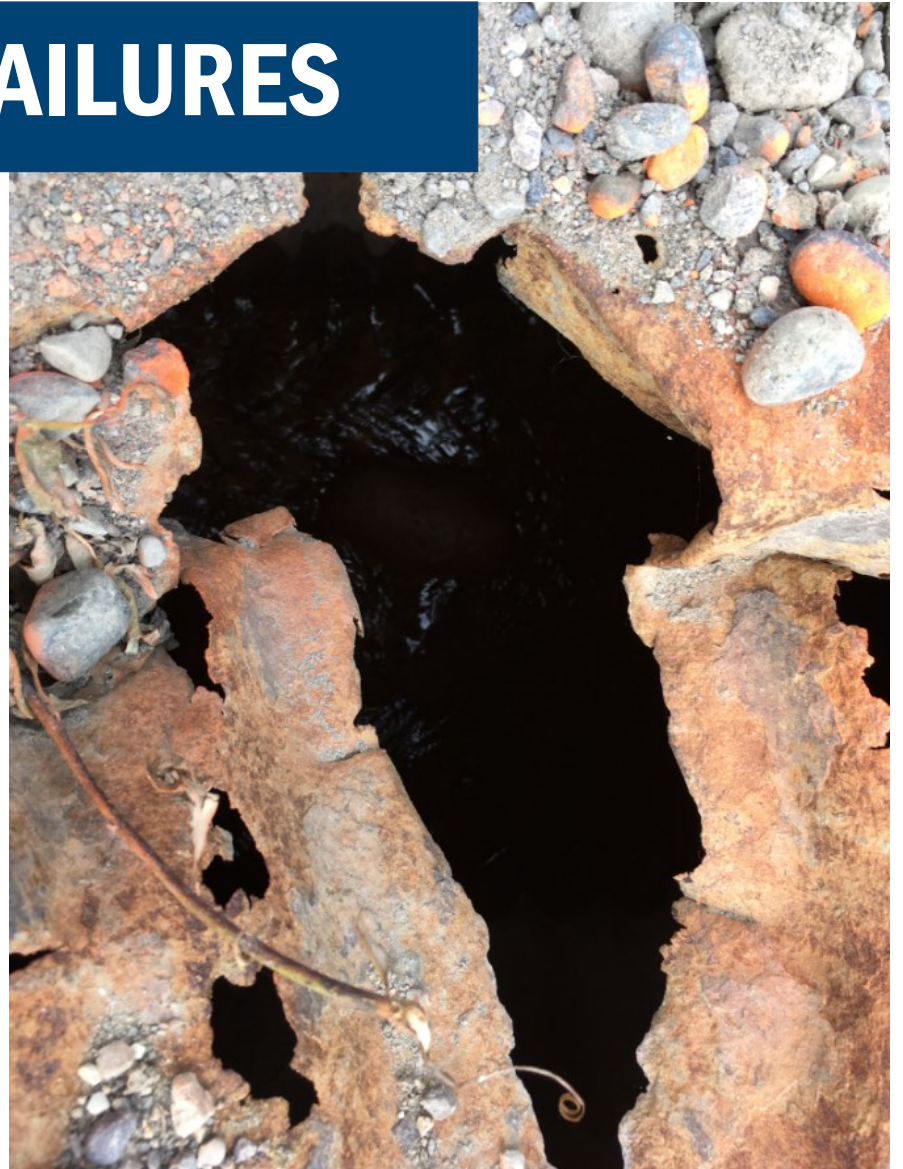
	Actual					Budget	Average
	2016	2017	2018	2019	2020	2021	
Renewal	\$1,425,683	\$3,087,343	\$2,514,895	\$1,079,798	\$505,307	\$1,940,596	\$1,758,937
Upgrades	\$0	\$66,441	\$1,719,250	\$167	\$0	\$0	\$297,643
New – not DCC funded	\$1,208,170	\$21,402	\$1,739,037	\$586,157	\$42,405	\$1,900,000	\$916,195
O&M	\$1,178,461	\$1,734,648	\$1,664,428	\$1,701,389	\$1,934,164	\$1,791,669	\$1,667,460
Total	\$3,812,314	\$4,909,834	\$7,637,610	\$3,367,512	\$2,481,876	\$5,632,265	\$4,640,235

Stormwater Expenditure Type	Annual Funding Needs	Supporting Information
Renewal	\$4,400,000	AAR from Power Plan/BUILDER + pond sediment removal
Upgrades	\$1,000,000	Highest priority WDP upgrade projects over 10 years
New – not DCC funded	\$0	Assume development pays for dev't related works
Planning Studies	\$185,000	New/revised WDP every 2nd year, updated Design Guidelines/ISMP every 10 years & annual ISMP Roadmap tracking/review
O&M	\$3,468,000	Based on estimated sustainable O&M program for CPG. Does not include street sweeping.
Total	\$9,053,000	

RECOMMENDED FUNDING OPTIONS

1. Property Tax - *general tax fund*
2. Dedicated Tax Levy
3. Stormwater Rate – *flat rate*
4. Stormwater Rate – *variable rate based on land use and/or property size*
5. Stormwater Rate – *variable rate based on actual or estimated impervious area*
6. Water/Wastewater Rate
7. Development Related Charges and Fees
8. Grants

INFRASTRUCTURE FAILURES



INFRASTRUCTURE FAILURES



INFRASTRUCTURE FAILURES

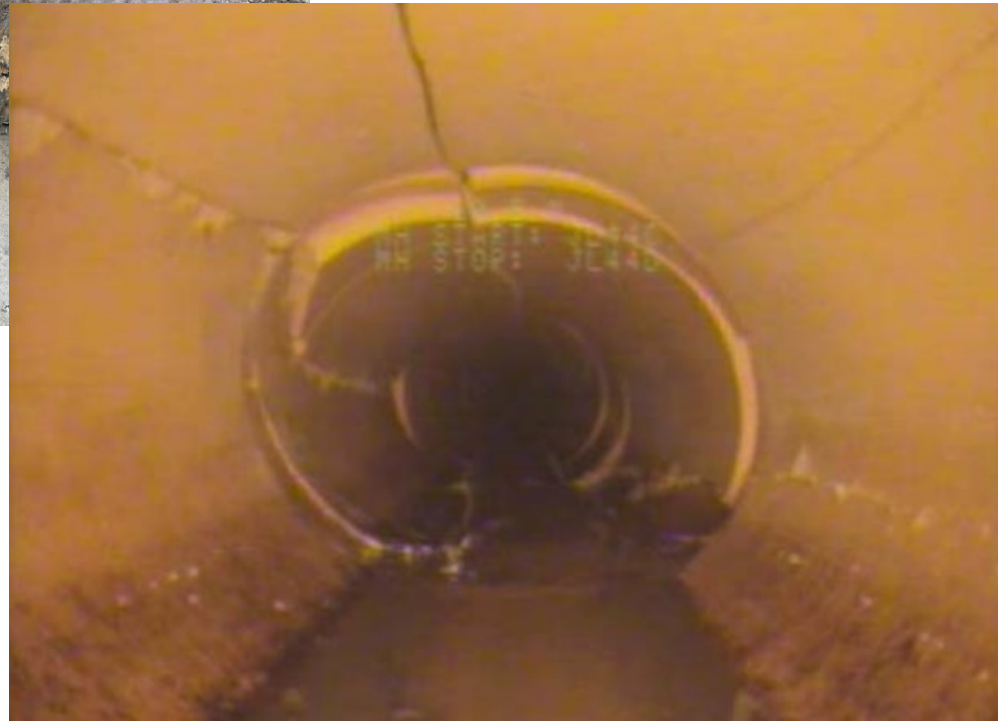


INFRASTRUCTURE FAILURES



Source: CTV Ottawa Sinkhole

AGING INFRASTRUCTURE



FLOODING



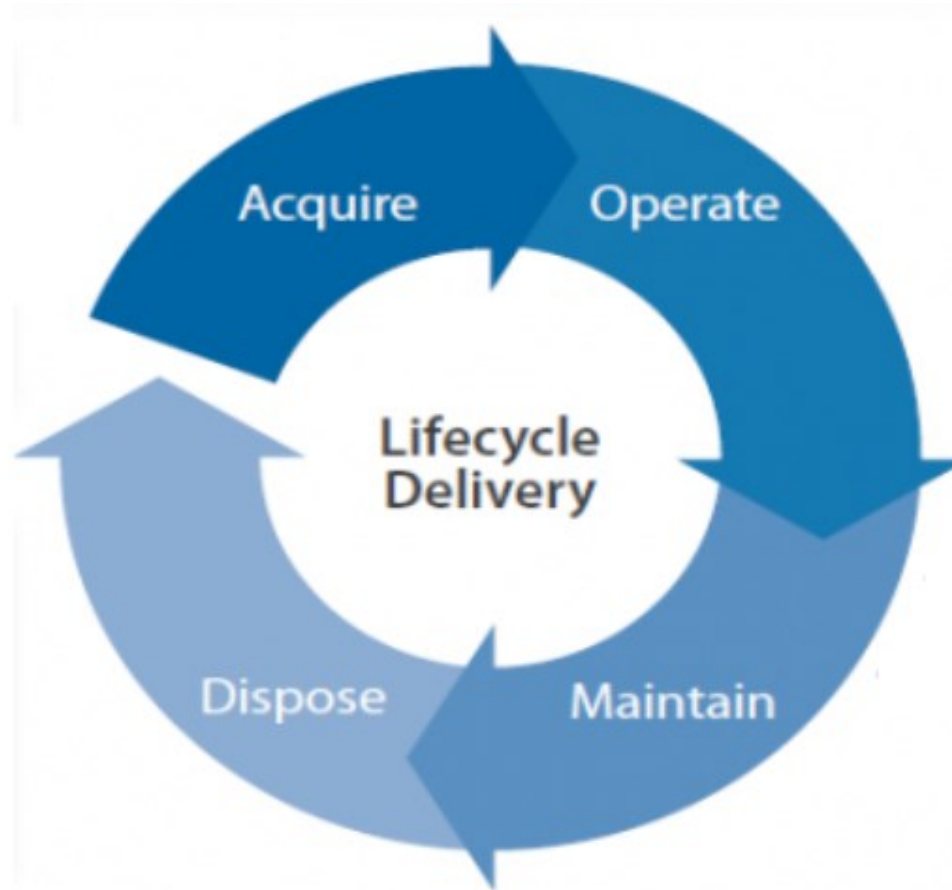
MAINTENANCE



MAINTENANCE



LIFECYCLE OF AN ASSET



NEXT STEPS:



Guiding Document & Roadmap





THANK YOU