

# Stormwater Funding Business Case and Implementation Plan

Phase 1: Blueprint for a predictable future

Presentation to Council | September 25, 2023



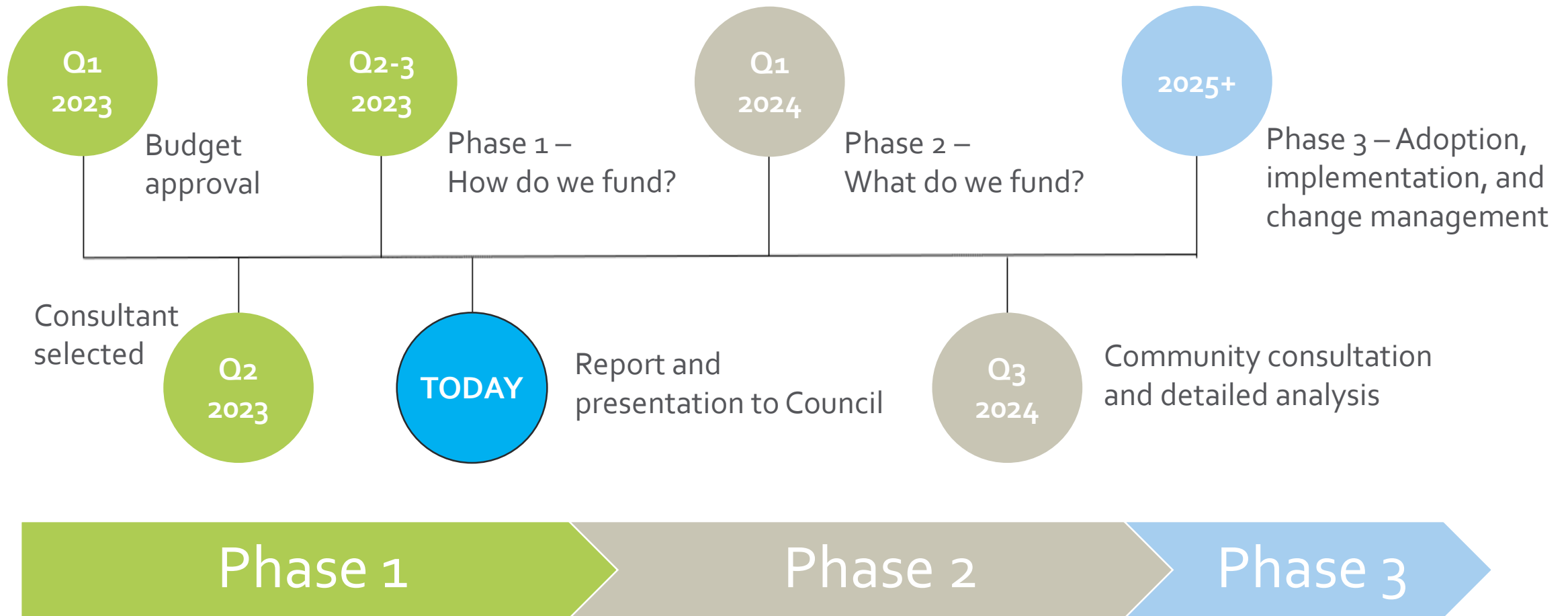
# Agenda

- Background and process
- What is stormwater management and how is it funded?
- Drivers and funding options
- Conclusion



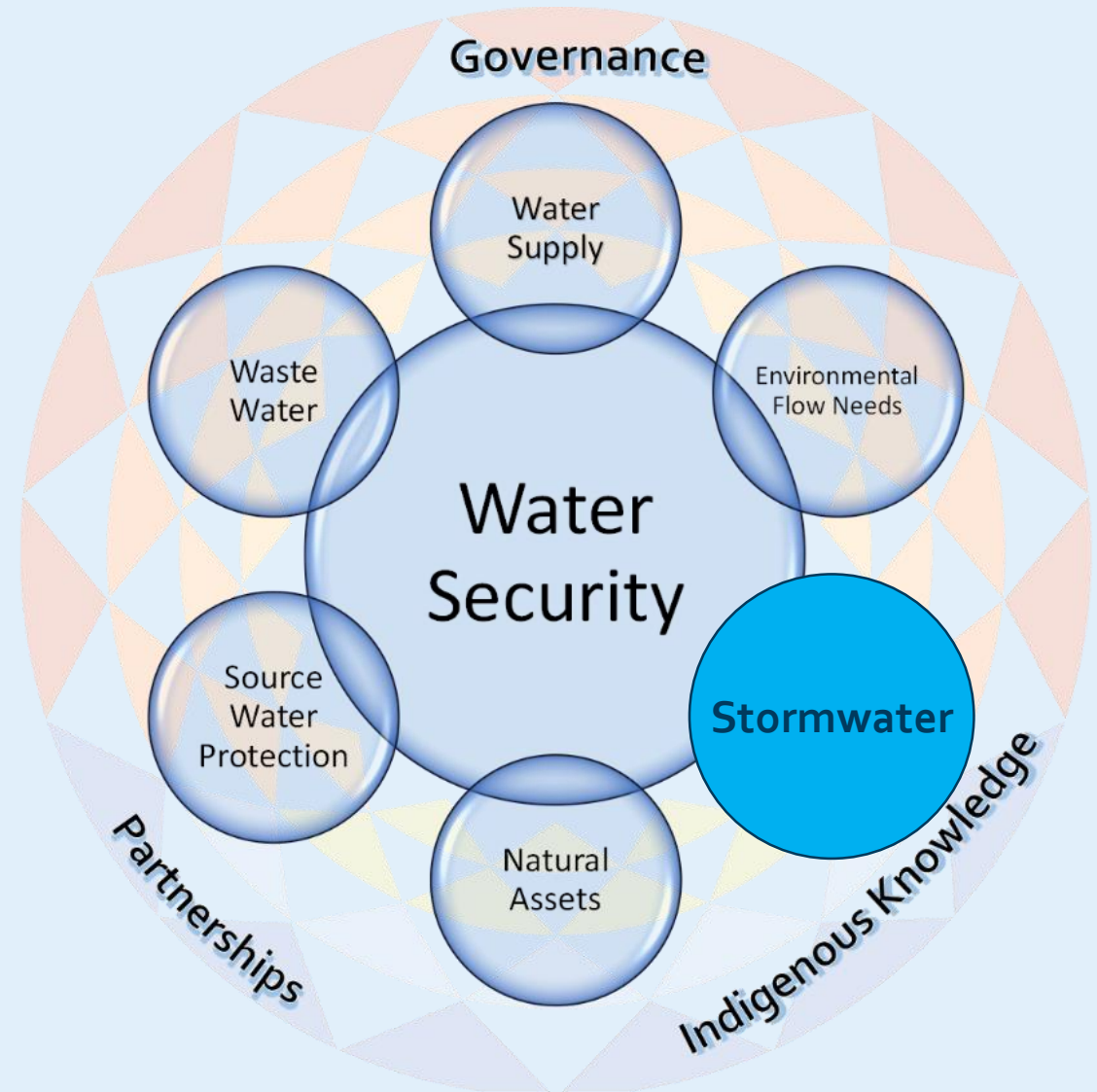
*Stormwater runoff discharges to surface waterbodies throughout the City.*

# Phased approach



# Water Security Plan

**Principle 3:** “Stormwater is effectively managed without negatively impacting riparian areas, infrastructure, property, or Okanagan Lake.”



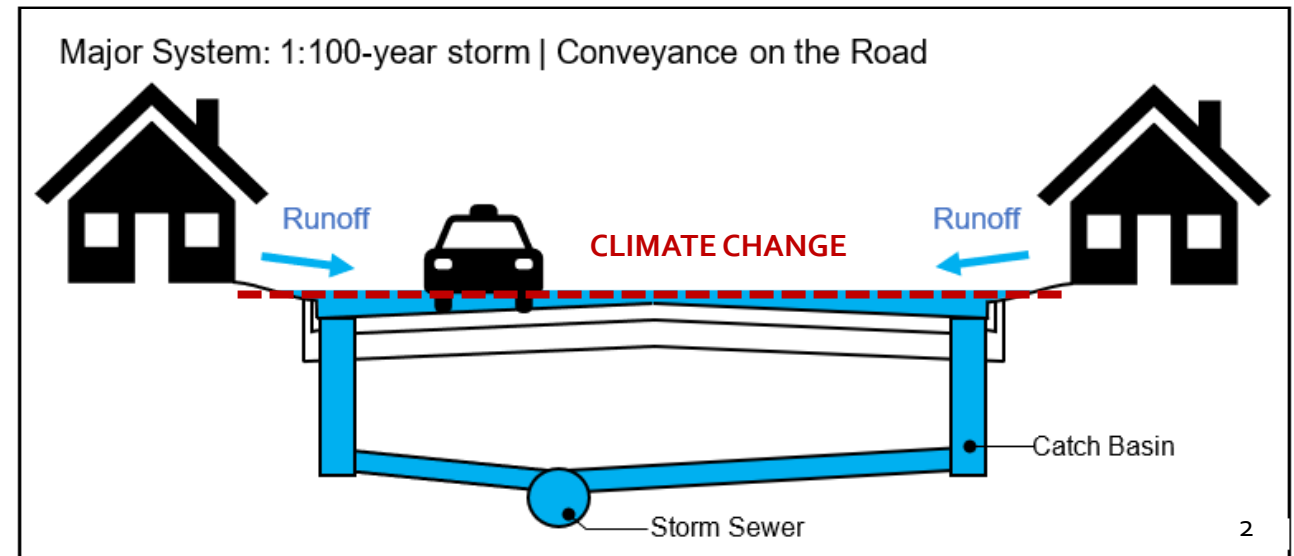
*The six water sectors outlined in the City's Water Security Planning Process*

# What is stormwater?

Rain, melting snow, and ice that washes off driveways, parking lots, roads, yards, rooftops, and other surfaces.<sup>1</sup>



*Impervious surfaces prevent rain and melted snow from naturally soaking into the ground.*

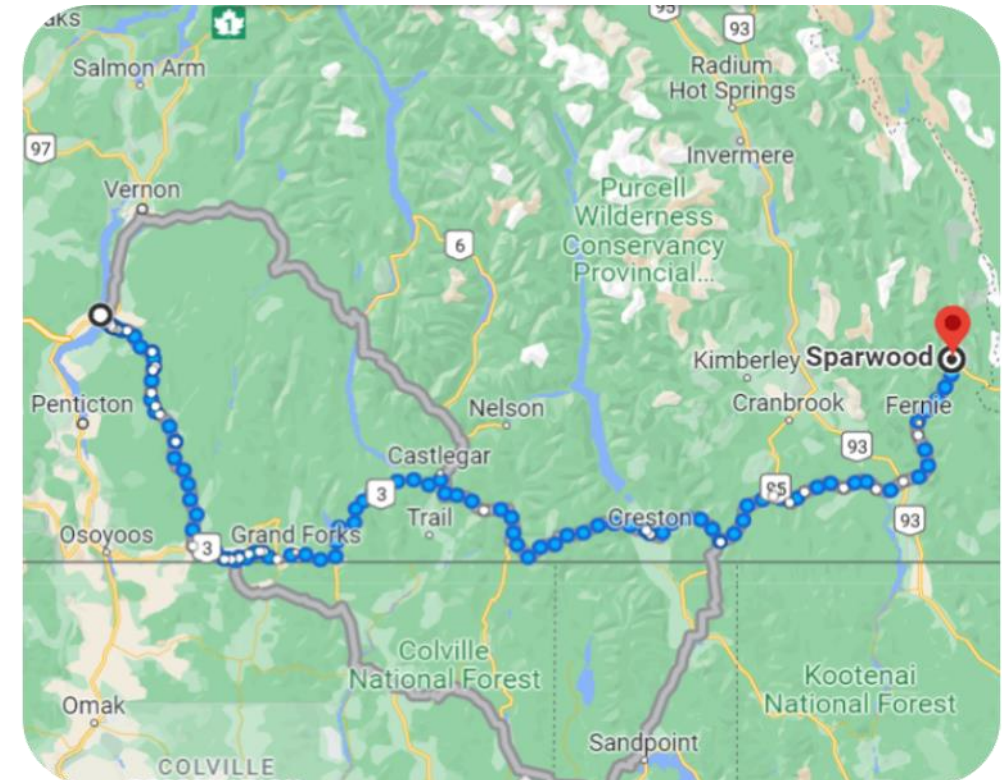


*The minor system relies on pipes, culverts, and ditches to convey stormwater runoff, while roads act as flow routes during major storms.*



# System snapshot

System component	Inventory
Storm sewers	440 km
Ditches	130 km
Watercourses	24 km
Culverts	1,350 units
Catch basins	12,300 units
Underground storage	19 facilities
Stormwater ponds	86 ponds
Pump stations	4 permanent
Stormwater separators	56 units
Surface infiltration	4 facilities
Subsurface infiltration	22 facilities
Precipitation monitoring	10+ stations



*If the City's storm sewers and ditches were placed end-on-end, they would stretch from Kelowna to Sparwood. That's a 7.5-hour drive!*

**Approximate value of \$350 million**





*Outfalls to surface waterbodies*



*Rain gauges for monitoring*



*Vacuum trucks for cleaning and flushing*



*Water quality sampling program*



*Constructed stormwater wetland*



*Stormwater separators*

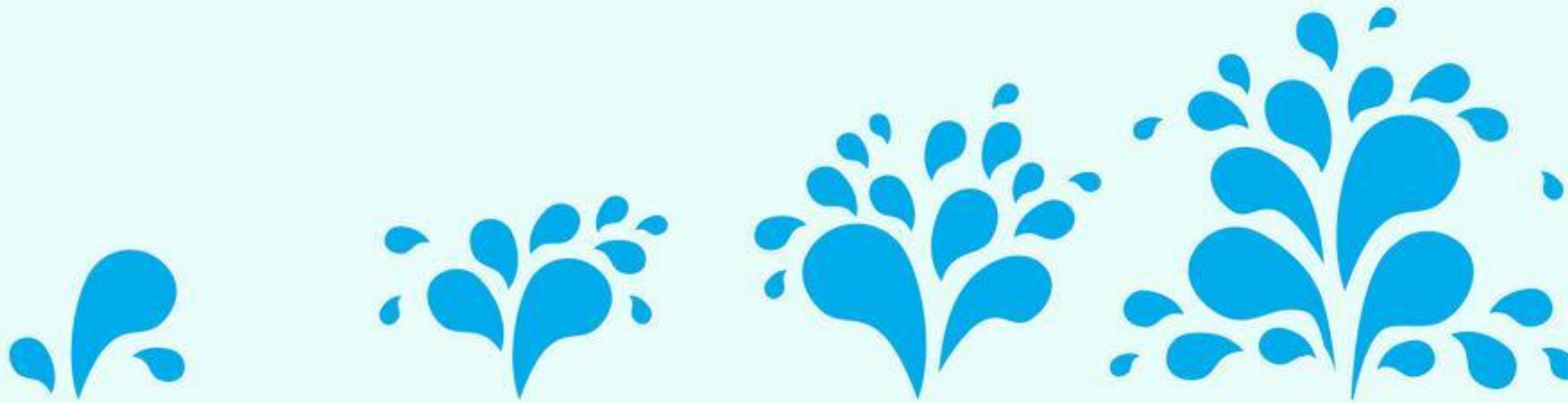


# How are stormwater management services currently funded?

- ▶ Stormwater management services are currently funded by:
  - ▶ General property taxation
  - ▶ Grants
  - ▶ Non-dedicated reserves
- ▶ Recently adopted Drainage DCCs help fund major flood projects



# Why adopt a utility-based rate structure?

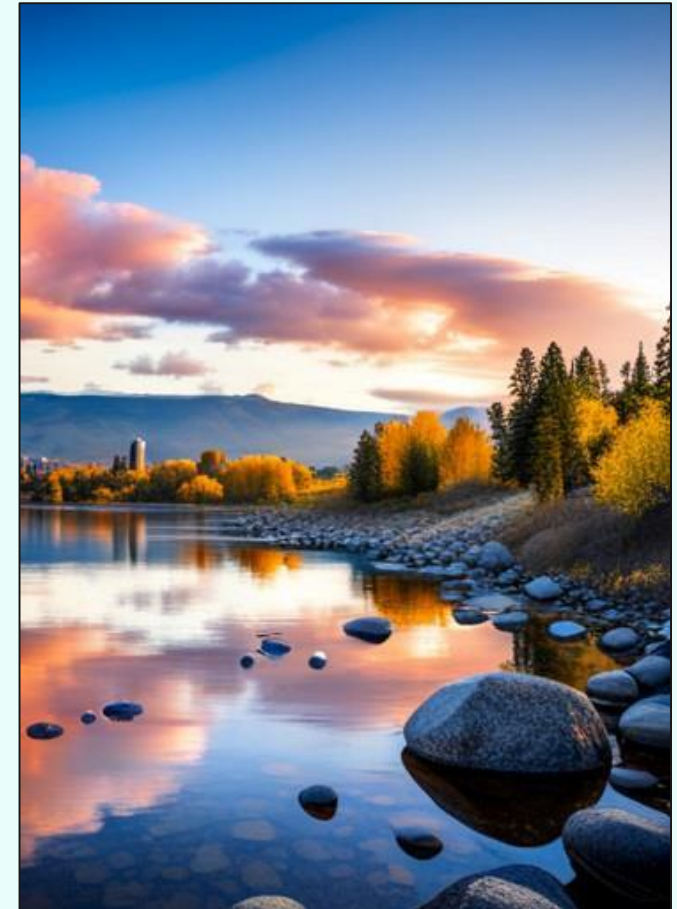


Provide predictable  
and dedicated  
stormwater funding

Encourage better  
private-side  
stormwater practices

Support long-term  
infrastructure  
planning

Protects creeks and  
Okanagan Lake AND  
increases resilience  
to climate change



*Effective stormwater management is key in the  
City of the future.*

# Stormwater funding drivers



Protect Okanagan Lake water quality



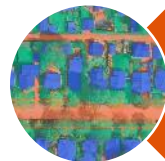
Promote good private-side stormwater practices



Provide predictable funding



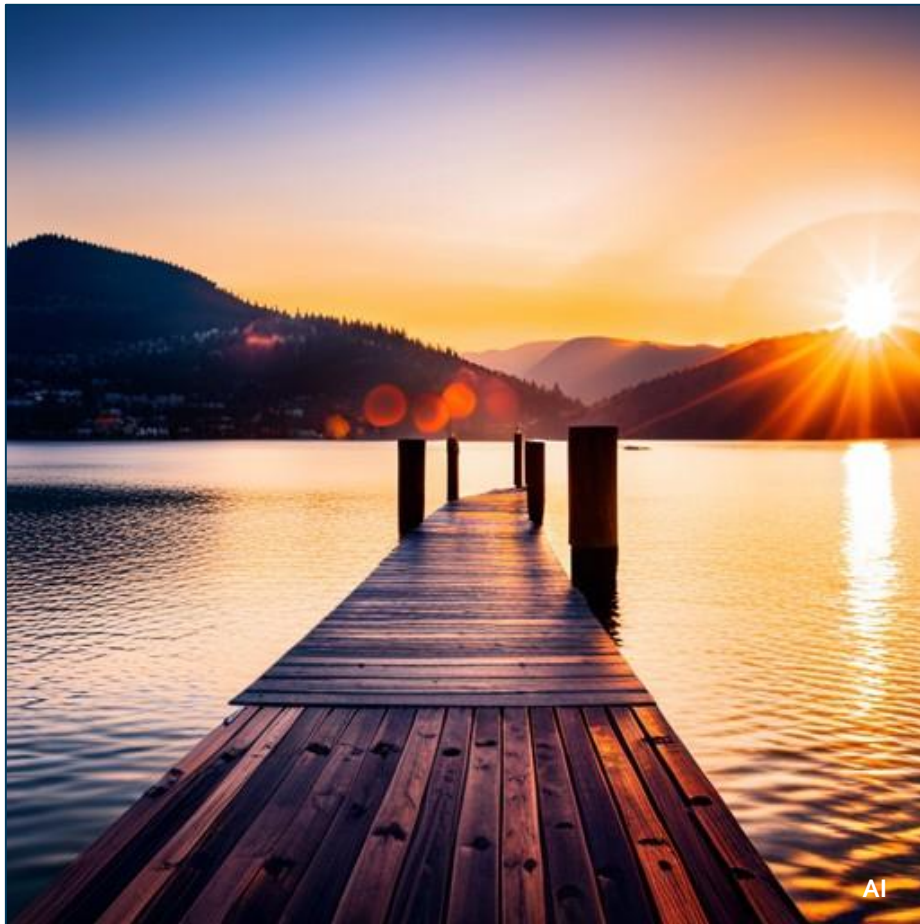
Charge users fairly



Be administratively simple



# Stormwater funding drivers



Protect Okanagan Lake water quality



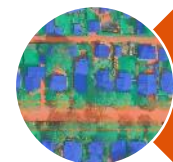
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# Stormwater funding drivers



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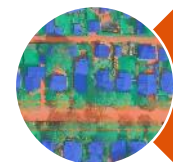
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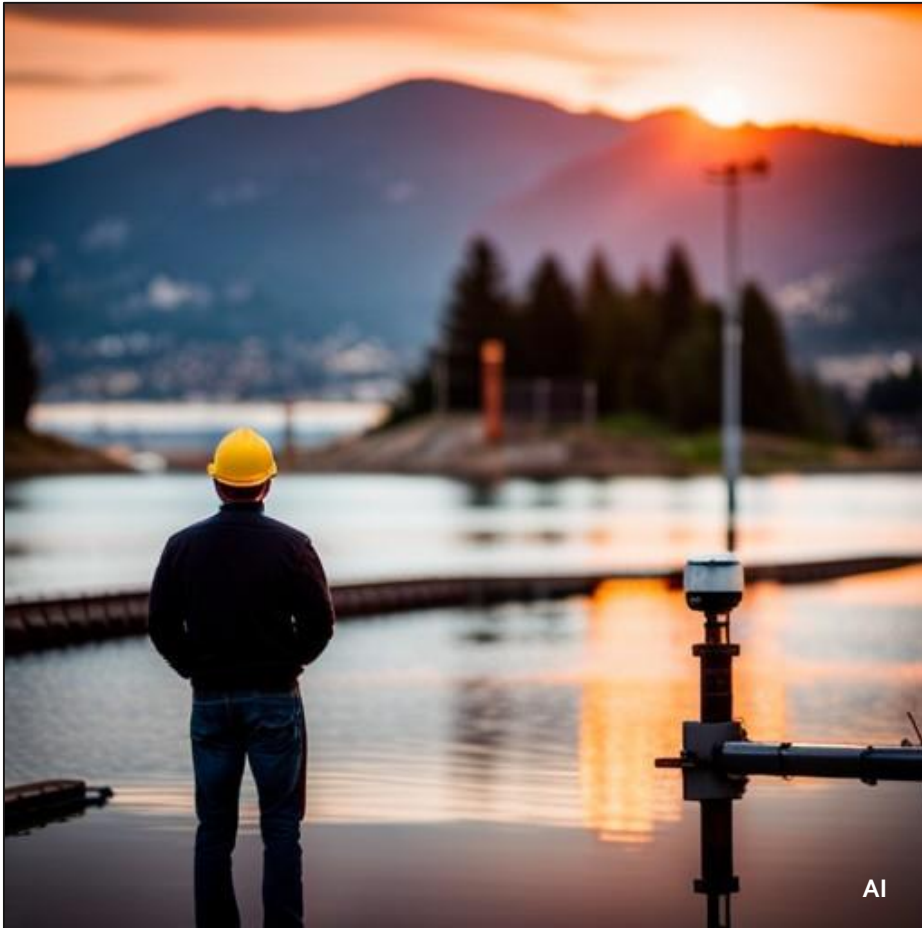
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# Stormwater funding drivers



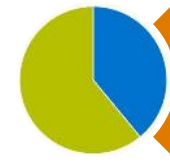
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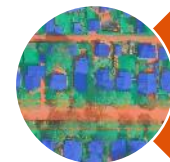
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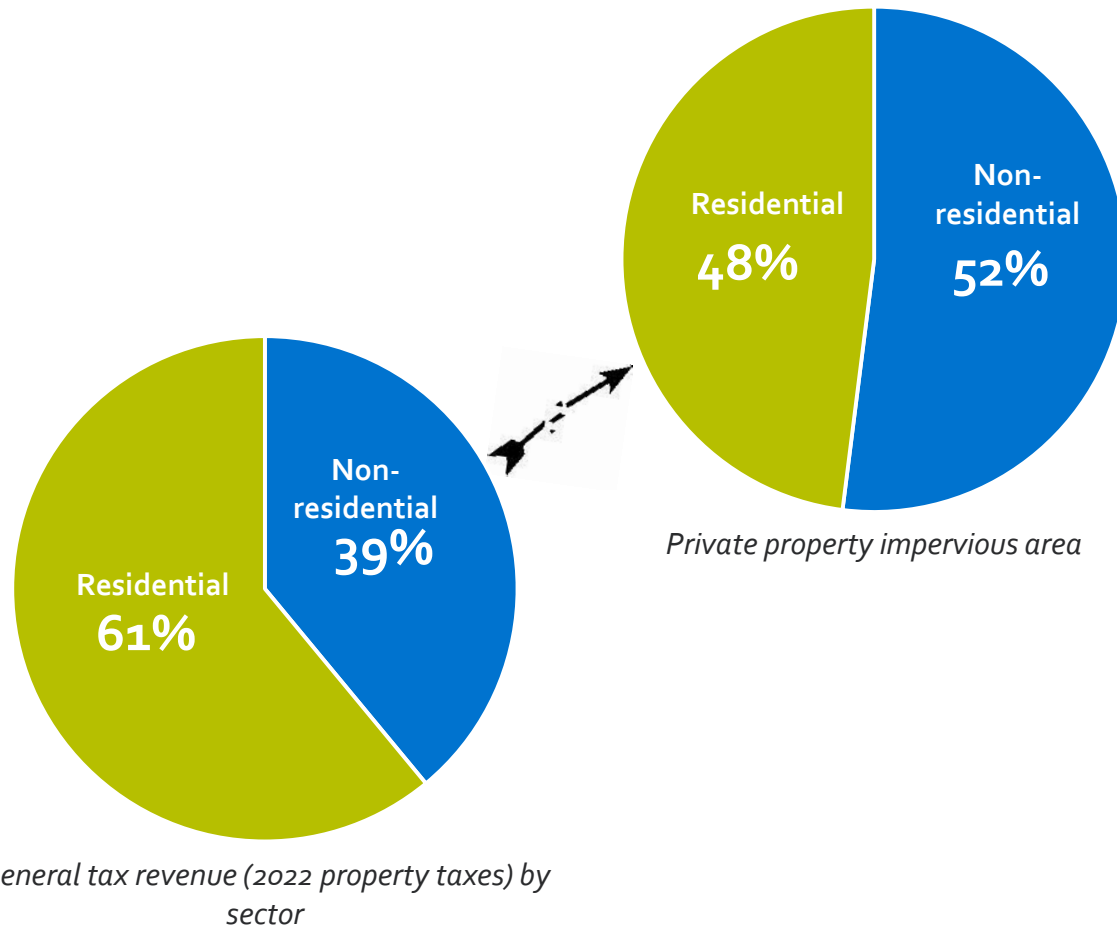


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# Stormwater funding drivers



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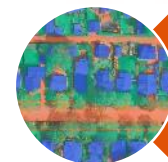
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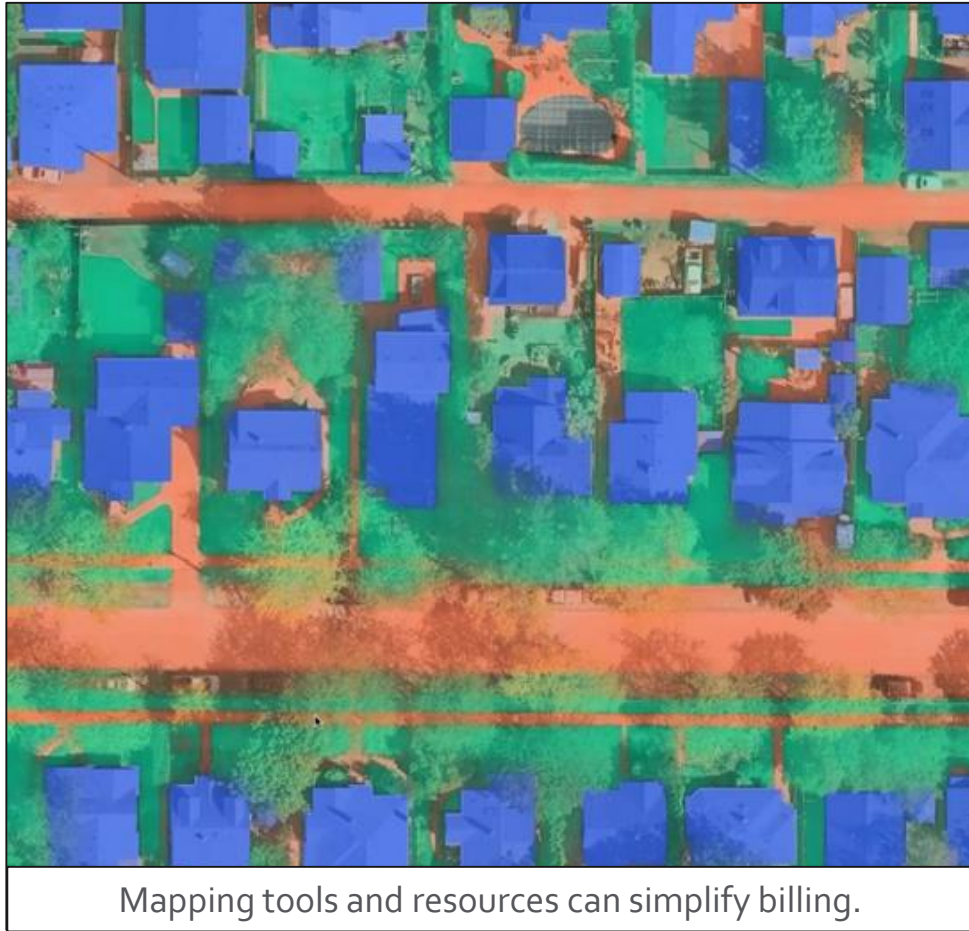
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# Stormwater funding drivers



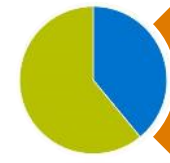
Protect Okanagan Lake water quality



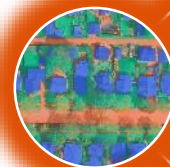
Promote good private-side stormwater practices



Provide predictable funding





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Be administratively simple

# Stormwater funding options

	Stormwater Funding Model	Description
Tax Levy	1. General	<ul style="list-style-type: none"> <li>- Local property taxes</li> <li>- Most common method in Canada</li> </ul>
	2. Dedicated	<ul style="list-style-type: none"> <li>- Dedicated levy administered specifically to raise revenue for stormwater services</li> <li>- Often based on assessed value of property</li> </ul>
Stormwater Rates	3. Tiered Flat Fee	<ul style="list-style-type: none"> <li>- Based on property size and land use.</li> <li>- Loosely related to the amount of stormwater runoff from a property</li> </ul>
	4. Equivalent Residential Unit	<ul style="list-style-type: none"> <li>- Residential properties are charged the same fee based on average impervious area</li> <li>- Non-residential properties are charged based on actual impervious area</li> </ul> 
	5. Single Family Unit	<ul style="list-style-type: none"> <li>- Residential properties are charged based on average impervious area for different residential types</li> <li>- Non-residential properties are charged based on actual impervious area</li> </ul> 



Pairs well with credit programs , i.e., reward good private-side management with credits.

# Stormwater funding evaluation

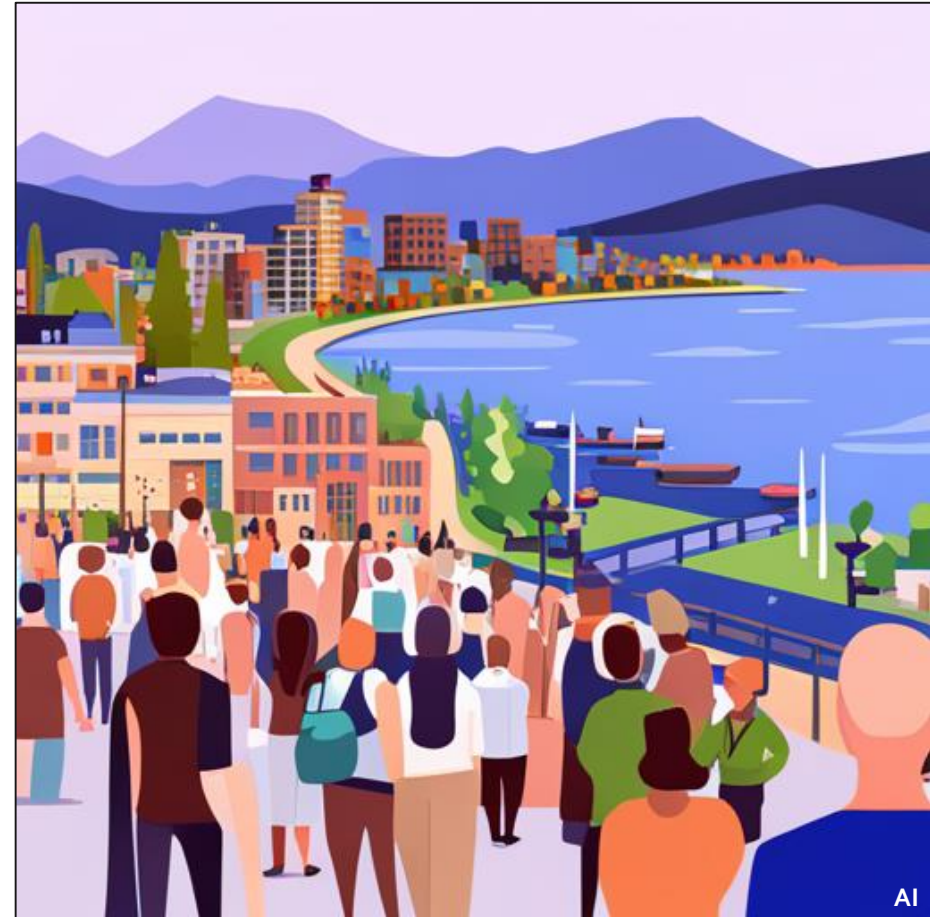
	Stormwater Funding Model	Used By	Single Family Residential	Multi-residential ≤ 6 units	ICI and large multi-res	Drivers				
						Protect Okanagan Lake water quality	Promote good private SW practices	Predictable funding	Fair & equitable	Simple
Tax Levy	1. General	~70% cities, Kelowna	Assessed value & tax rate class except tax exempt properties							
	2. Dedicated	City of North Vancouver	Assessed value & tax rate class except tax exempt properties							
Stormwater Rates	3. Tiered Flat Fee	West Vancouver, Surrey	Land use, property size							
	4. Equivalent Residential Unit	Guelph, Ajax, Saskatoon	Average residential impervious area		Measured impervious area & credit program					
	5. Single Family Unit	Windsor	Avg. SFU imp area	Avg. multi-res imp. area	Measured impervious area & credit program					

RECOMMENDED



# Conclusion

- Staff recommend two options for stormwater utility rate structures for further evaluation.
- Should Council adopt the recommendations in this report, future public engagement in Phase 2 will be based on rate structure options 4 and 5.



*As per the City's Engage Policy, the City recognizes that the decision-making process is improved by engaging citizens and other stakeholder groups when appropriate.*



*Questions?*

For more information, visit [kelowna.ca](http://kelowna.ca).