

Sewer Extension South Liquid Waste Management Plan Addendum
Joint Technical and Public Advisory Committee
Meeting #3 – December 12, 2022



Welcome

The CVRD respectfully acknowledges that the proposed Sewer Extension South Project will be constructed and operated on the unceded traditional territory of the K'ómoks First Nation, the traditional keepers of the lands and waters this project strives to protect.

Today's Goals

Details on:

- Sewer Extension South Project
 - Draft Environmental Impact Study
 - Sewer Service Structure
 - Project Costs
- Decision Making Process
- Meeting #3.5

Meeting #2 Recap

- Minutes
 - Sewer Extension South Project
 - Proposed project phasing
 - Forcemain alignment
 - Collection system options
 - Pump station design
 - Decision Making Process
- Follow up questions?

Meeting #2 Questions

- Communication with residents
- Alternate forcemain alignment options
- Apportionment of project costs (existing vs. new development)
- Property tax deferral
- Collection system – LPS vs. gravity
- Collection system – boundaries, other catchments
- Equity between phases
- Newer septic systems
- Others?

Technical & Public Advisory Committee Meeting #3

Environmental Impact Study
Current Environmental Ltd.



December 12, 2022

Objectives of the Environmental Impact Study (EIS)

1. Identify and describe Valued Components (VCs).
 - a. Environmental, cultural, social, economic, historical, archaeological, and aesthetic.
2. Complete a screening-level contaminated sites assessment to identify Areas of Potential Concern (APEC).
3. Recommend mitigation strategies to reduce potential adverse impacts to VCs during construction.

Contaminated Site History



Contaminated Site History



Environmentally Sensitive Areas (ESAs): Ecosystems

- 13 possible at-risk ecological communities
- 4 habitats (Sensitive Ecosystem Inventory)

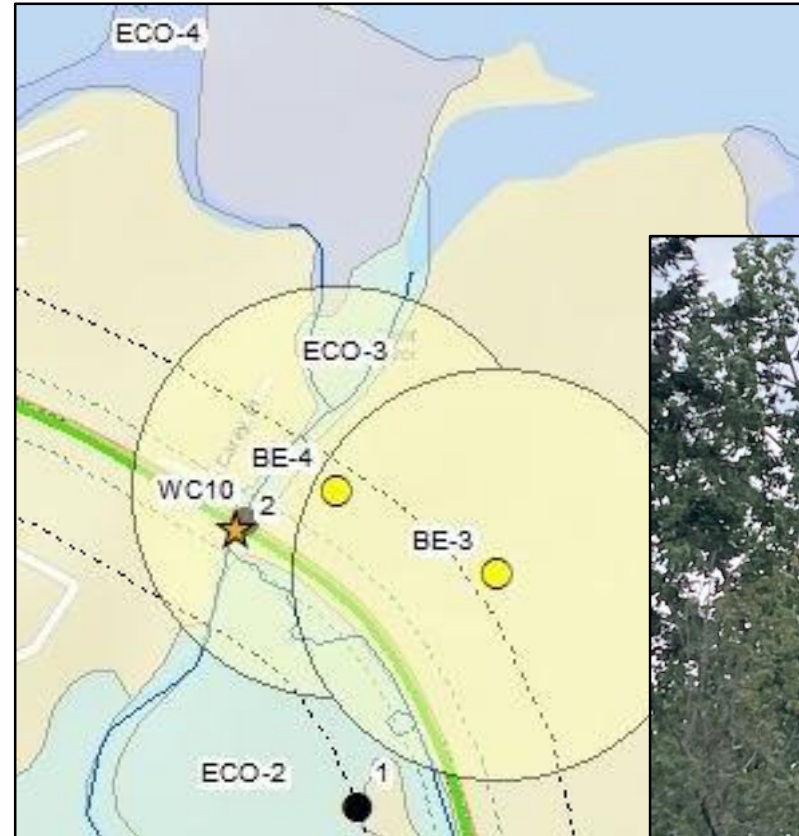


ESAs: Terrestrial fauna

- 70+ possible bird species (13 at-risk)
- Variety of mammals possible including large carnivore, ungulate, mustelid, rodent, and bat species (6 at-risk)
- 14 possible amphibian and reptile species (4 at-risk)

ESAs: Raptor and Heron Nests

- 5 active Bald Eagle nests in close proximity to the alignment
- No active Great Blue Heron nests in close proximity (according to GBHE Atlas)



ESAs: Vegetation

- CWHxm1 characteristic vegetation
- 9 possible at-risk species
- Invasive plant species



Representative vegetation along the southern portion of the proposed forcemain alignment.

ESAs: Watercourses

- 15 streams/ditches within working limits of the Project
- 9 of which are fish-bearing



Trent River crossing



Millard Creek crossing



Unnamed ditch crossing

Regulatory Requirements

- Bird nesting window (March 15 – Aug. 15)
- In-stream reduced risk window (June 15 – Sept. 15)
- DFO Request for Review, WSA Section 11
- Contaminated Sites Regulation – Phase 2 assessments
- Archaeological permits – provincial and KFN

Conclusions

- Anticipated impacts and overall risk to the environment from project construction/operation are low
- Risks can be effectively managed through best management practices and mitigation measures implemented by QEP

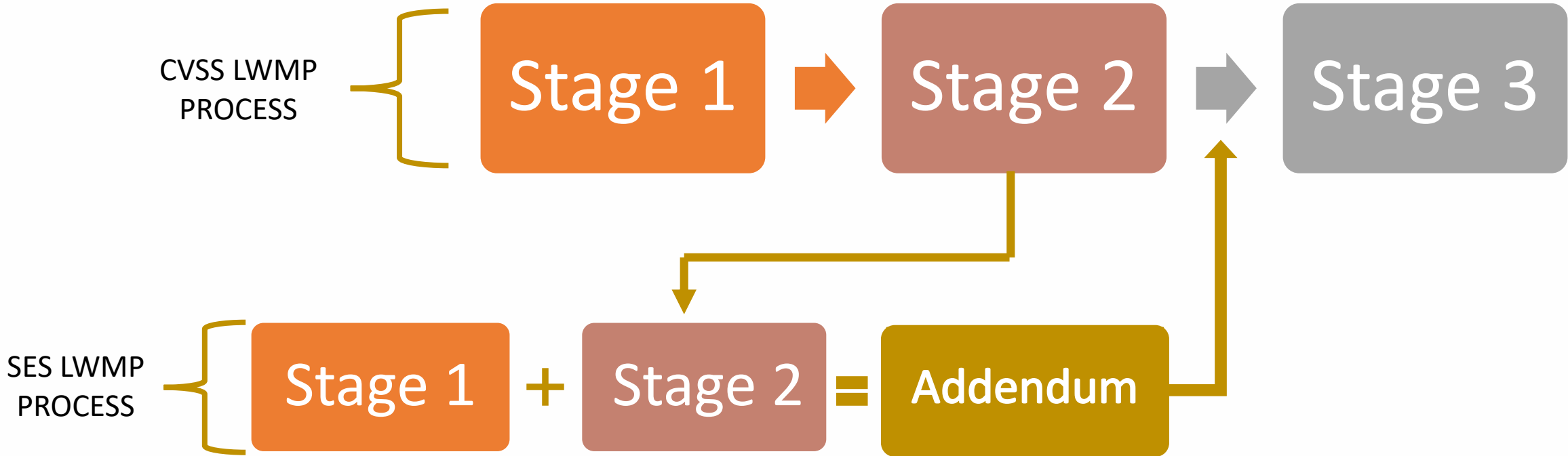
Questions



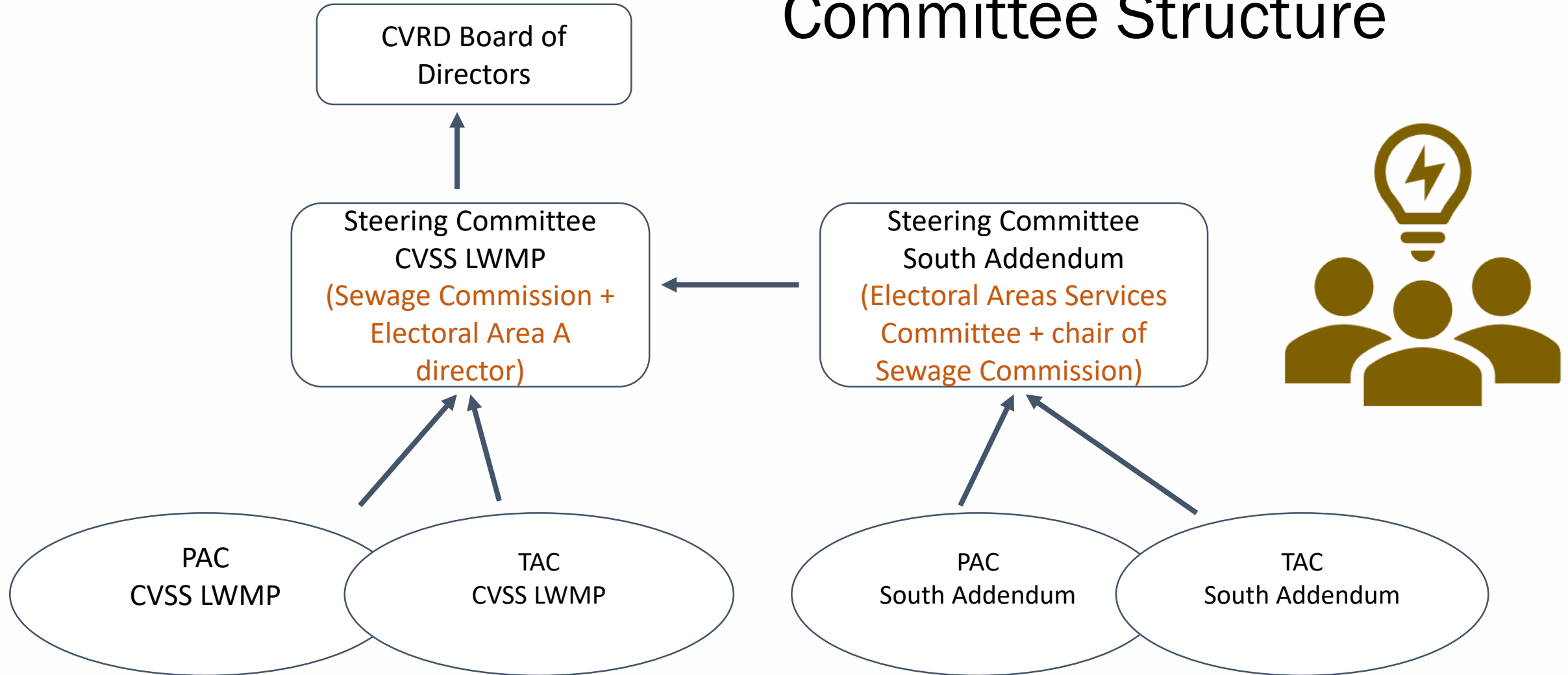
CVRD Updates



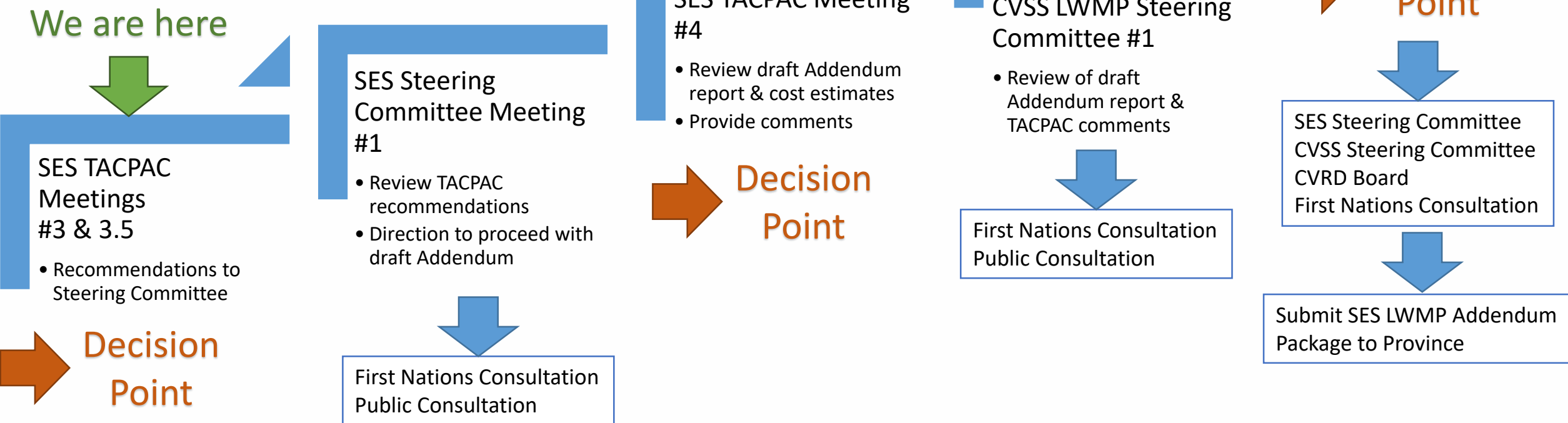
LWMP 3-Stage Process



Committee Structure



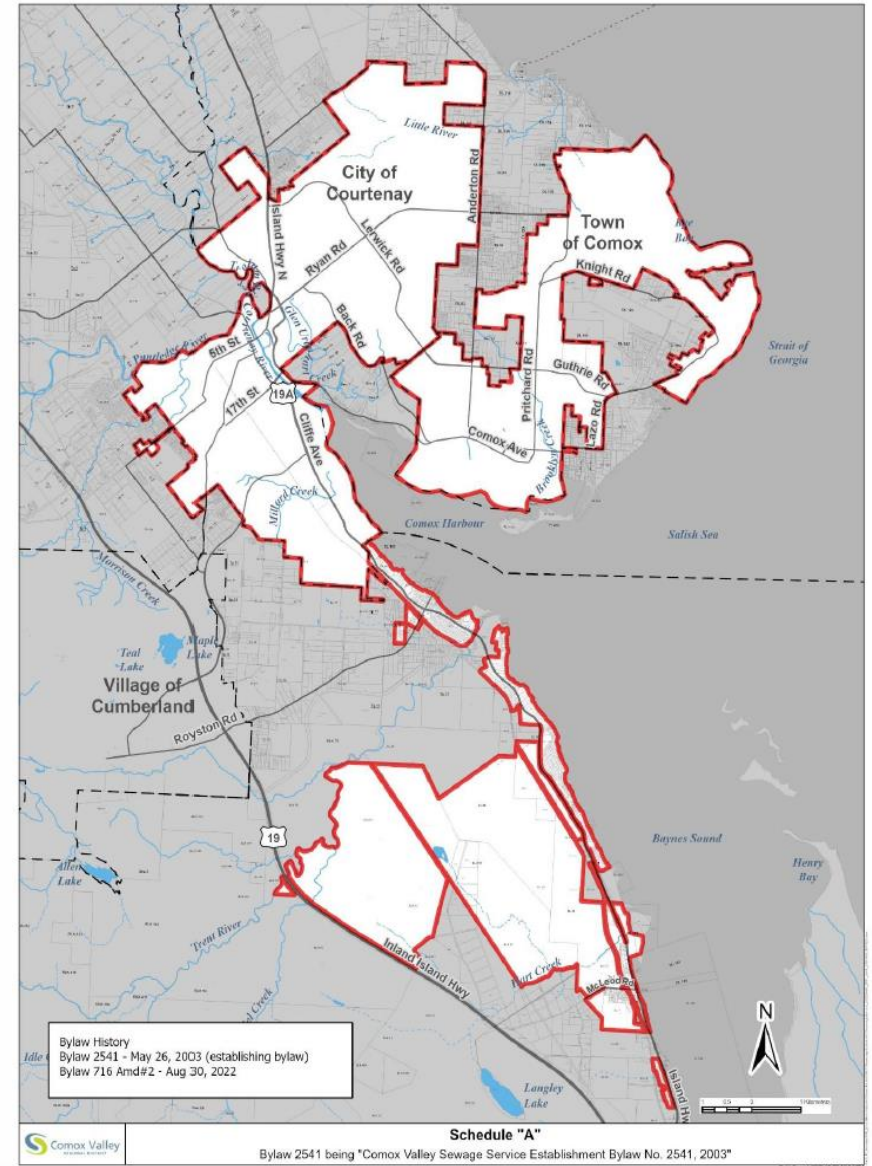
SES LWMP Addendum Process



Service Structure

CVSS Service Area Expansion

- Amendment adopted in August 2022
- Service area expanded to include portions of Area A anticipated for sewer servicing
- CVSS responsible for conveyance, treatment & discharge
 - Funds infrastructure renewal and expansion
 - Area A properties contribute to O&M once connected



Service Structure

Local Sewer Collection Services

- New services for existing Area A communities
- Provide funding for local sewage collection infrastructure

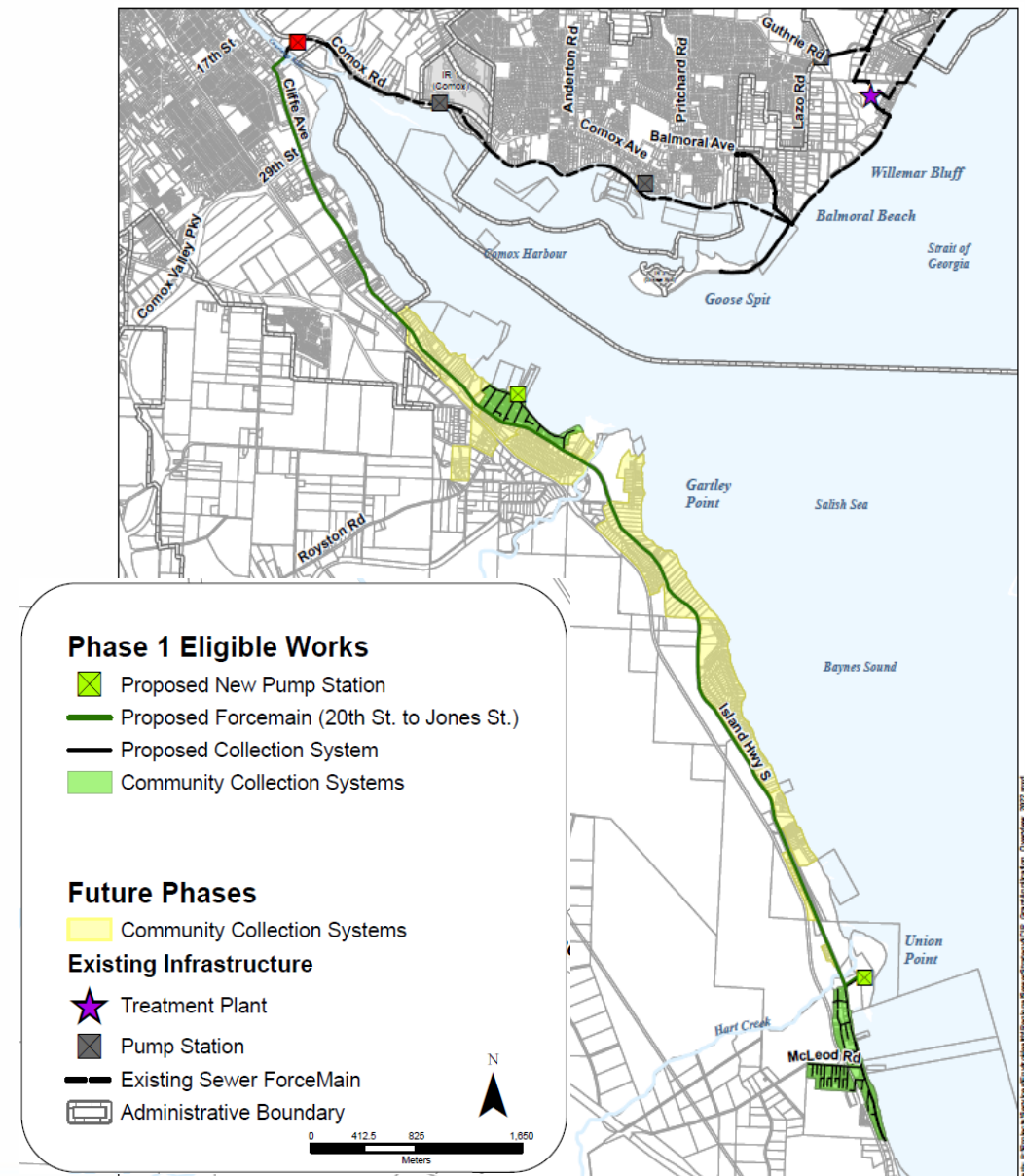


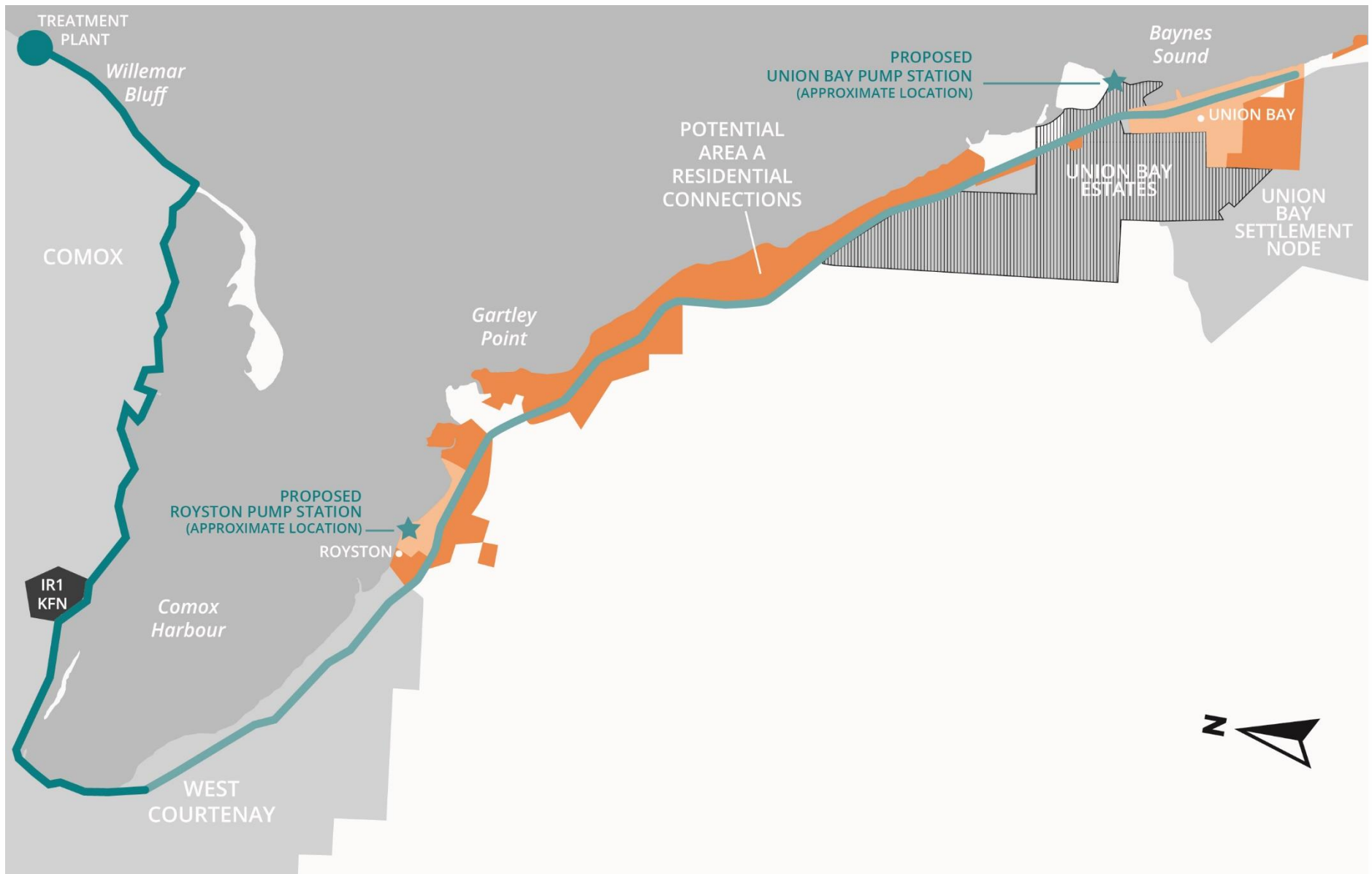
Project Costs

- Phase 1A – today, Future Phases – next meeting
- Current Cost Estimates
 - Shared conveyance infrastructure – Class ‘C’
 - Local collection infrastructure – Class ‘D’
- Escalation, Other costs
- Partner contributions
- With and without ICIP Grant
 - 26.4M in grant funding requested
 - Funding announcement in Spring 2023

Initial Phase – Overview & Rationale

- Historic core of Union Bay & part of Royston
- Technical considerations
- Environmental need
 - Oldest septic systems
 - Smallest lots
- Funding program limits





Contribution to required CVSS infrastructure upgrades

CVSS Capital Improvement Cost Charge (CICC)

=

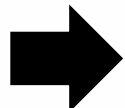
\$6,941 per single family residential connection

- Used for capacity related upgrades to CVSS conveyance and treatment works

- Same charge for all new CVSS connections
- Bylaw 3008 updated to reflect 10 year capital plan

Phase 1A Shared Infrastructure with Grant Funding

Shared Infrastructure

- Royston Pump Station - \$2.3M
 - Union Bay Pump Station - \$2.6M
 - Forcemain - \$37.6M
- = \$44.3M* 



Project Partners

- \$30.8M



Grant Funds

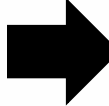
- \$13.5M

Estimated cost per property (residential) = \$0

*Includes allowance for administrative costs, land, legal, etc.

Phase 1A Shared Infrastructure without Grant Funding

Shared Infrastructure

- Royston Pump Station - \$2.3M
 - Union Bay Pump Station - \$2.6M
 - Forcemain - \$37.6M
- = \$44.3M* 



Project Partners
- \$37.5M



Borrowing
- \$6.8M

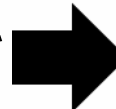
Estimated cost per property (residential) = \$13 -17K

*Includes allowance for administrative costs, land, legal, etc.

Phase 1A Collection System Infrastructure with Grant Funding

Local collection systems

- Royston S1-3 – \$5.8M
- Union Bay core – \$12.9M

= \$19.3M* 



Grant Funds

- \$12.9M



Borrowing

- \$6.4M

Estimated cost per property (residential) = \$13K – \$17K

*Includes allowance for administrative costs, land, legal, etc.

Phase 1A Collection System Infrastructure without Grant Funding

Local collection systems

- Royston S1-3 – \$5.8M
- Union Bay core – \$12.9M

= \$19.3M* 



Borrowing
- \$19.3M

Estimated cost per property (residential) = \$41K – \$45K

*Includes allowance for administrative costs, land, legal, etc.

Borrowing Cost Summary – per connection

With Grant Funding		Without Grant Funding	
Shared infrastructure	\$0	Shared Infrastructure	\$13k - \$17k
Local Collection Infrastructure	\$13k - \$17k	Local Collection Infrastructure	\$41k - \$45k
Per year, 25 year term	\$900 - \$1,200	Per year, 25 year term	\$3,900 - \$4,200

On lot costs

Description	Cost Range
Sewer connection – home to property line	\$1,500 - \$6,500
Septic System – decommissioning	\$1,000 - \$2,000
TOTAL	\$2,500 and up

Operations and Maintenance Costs

Description	Cost Range (per year)
O&M – conveyance & treatment	\$450 - \$550
O&M – local collection	\$80 - \$100
TOTAL (mid-range)	\$590

Per property – cost summary

Annual costs	(with grant)	One Time Costs	
Borrowing (capital infrastructure)	\$900 – \$1,200	CVSS CICC	\$6,941
Operations & Maintenance	\$530 - \$650	On lot costs	\$2,500 - \$8,500
TOTAL (no CICC)	\$1,430 - \$1,850	TOTAL (incl. CICC)	\$9,441 and up
TOTAL (incl. CICC)	\$1,930 - \$2,350	TOTAL (no CICC)	\$2,500 and up

*Still evaluating payment options

Septic vs sewer costs

Septic System (Type 2/3)		Sewer Service (with grant)	
System replacement	\$25,000 - \$50,000+	Sewer Infrastructure & CICC	\$19,941 - \$23,941
Annual inspection & maintenance	\$1,000 - \$1,600	Annual operations & maintenance	\$430 - \$650
Septic regulatory program – annual parcel tax	\$200 - \$300		

Additional Considerations

- Asset Life
- Borrowing costs/rates
- Property tax deferral
- Sewer – skilled operators, 24/7

Property Tax Deferral

- Borrowing costs - parcel tax, eligible for deferral
- Criteria per provincial website
 - 55 or older in current year
 - Surviving spouse of any age
 - Person with disabilities
 - Families with children

<https://www2.gov.bc.ca/gov/content/taxes/property-taxes/annual-property-tax/defer-taxes>

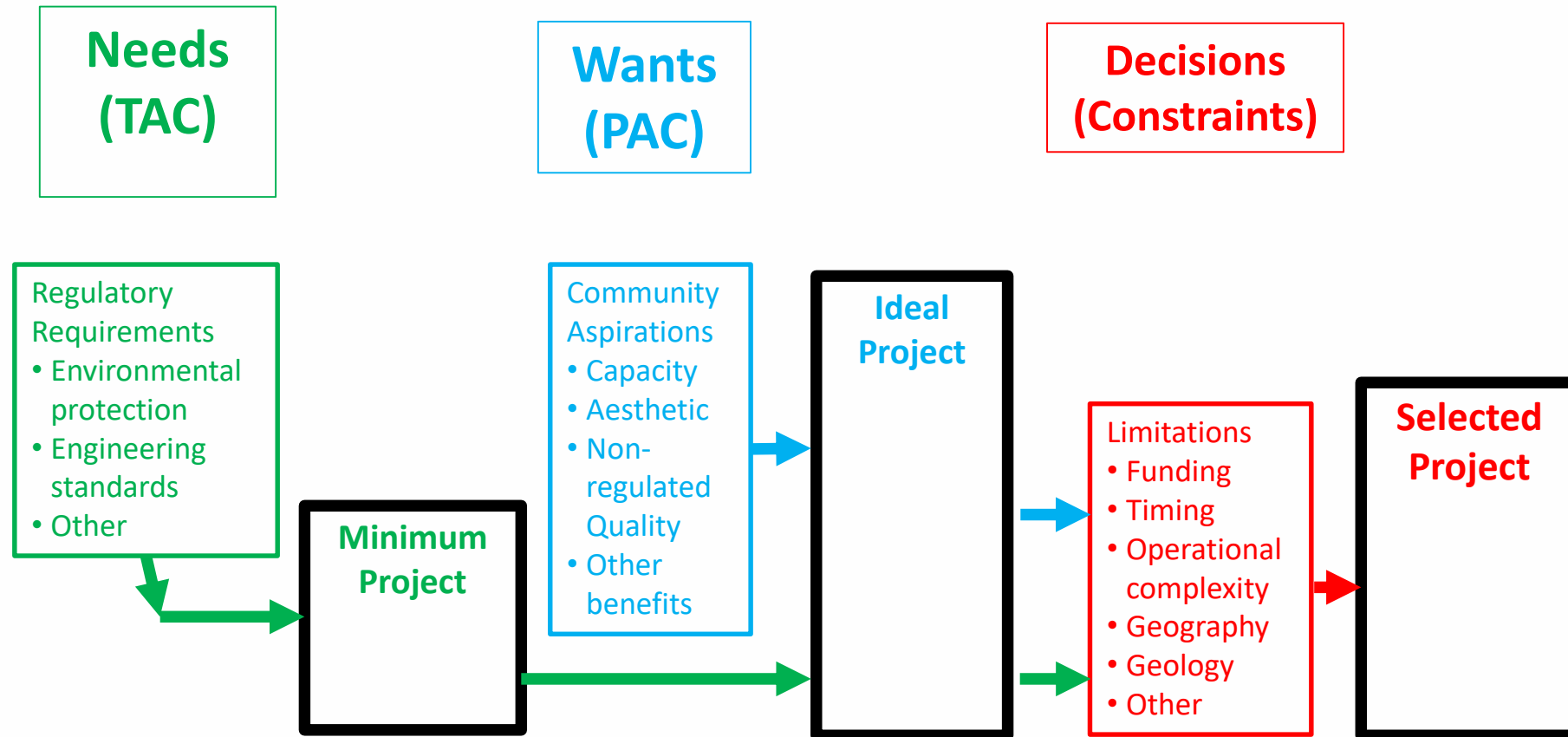
Questions



TAC/PAC Committee Process

- Work according to the Terms of Reference
- TAC and PAC will operate as a joint committee
 - Unless there is a specific need to do otherwise
- Decisions to be made by consensus
 - Balance project “needs” and community “wants”

Reconciling Needs, Wants and Reality



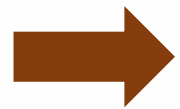
Committee Process

Next two TAC/PAC meetings

- Today – impressions / preferences
- February 6 – clear direction

Committee Process – Forcemain Design

- Does the TAC/PAC have any considerations regarding the forcemain alignment?



Value Engineering workshop

- Opportunities to add value
- Consideration of alternate alignment options → to be further evaluated by project team

Committee Process – Pump Stations

Which of the pump station designs does the TAC/PAC prefer?

- Above ground
- Below ground

Which pump station location is preferred?

- Foreshore → supports gravity collection, design options to increase resiliency
- Outside coastal flood zone → LPS



Criteria to support decision making:

- Resilience
- Cost
- Environmental Impact
- Public Amenities
- Neighbourhood impact
- Other?

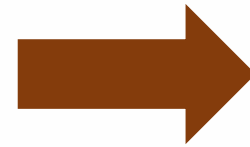
Committee Process – Collection System

Which of the collection options does the TAC/PAC prefer? Or in order of preference:

- Gravity
- LPS Grinder Pumps
- Hybrid Gravity/LPS
- Other?

For Hybrid Gravity/LPS option:

- Support LPS to minimize installation of infrastructure along the foreshore?
- Other applications where LPS should be considered?
 - Coastal flood zone?



Criteria to support decision making:

- Sensitive environmental areas
- Climate resilience
- Private property impacts
- Excavation depths
- High water table
- Dwelling density
- Archaeology potential
- Other?

Committee Process – Phasing

Does the TAC/PAC support Phase 1A as proposed?

Would the TAC/PAC like to develop criteria to assist in determining timing of future phases?

- Partnership opportunities
- Grant funding potential
- Environmental need
- Property owner petition
- Others?

Committee Process - Project Costs

TAC/PAC comments regarding costs?

What considerations regarding funding support would the TAC/PAC like to see included in the plan?

- Desired level of support, timing, plan B?

Next meeting → future phases

- Can specify future consultation activities
- Plan update if costs change significantly

Next Meeting – February 6th

- Resident costs - future phases
- Additional information requested by committee
- Committee decision making

Round Table

Discussion / Questions

