

CVSS LWMP – conveyance shortlist

Comox Valley sewage commission

March 10, 2020

LWMP Components and Objectives

Conveyance (Pump Station & Pipes)

- Identify optimum long term conveyance solution

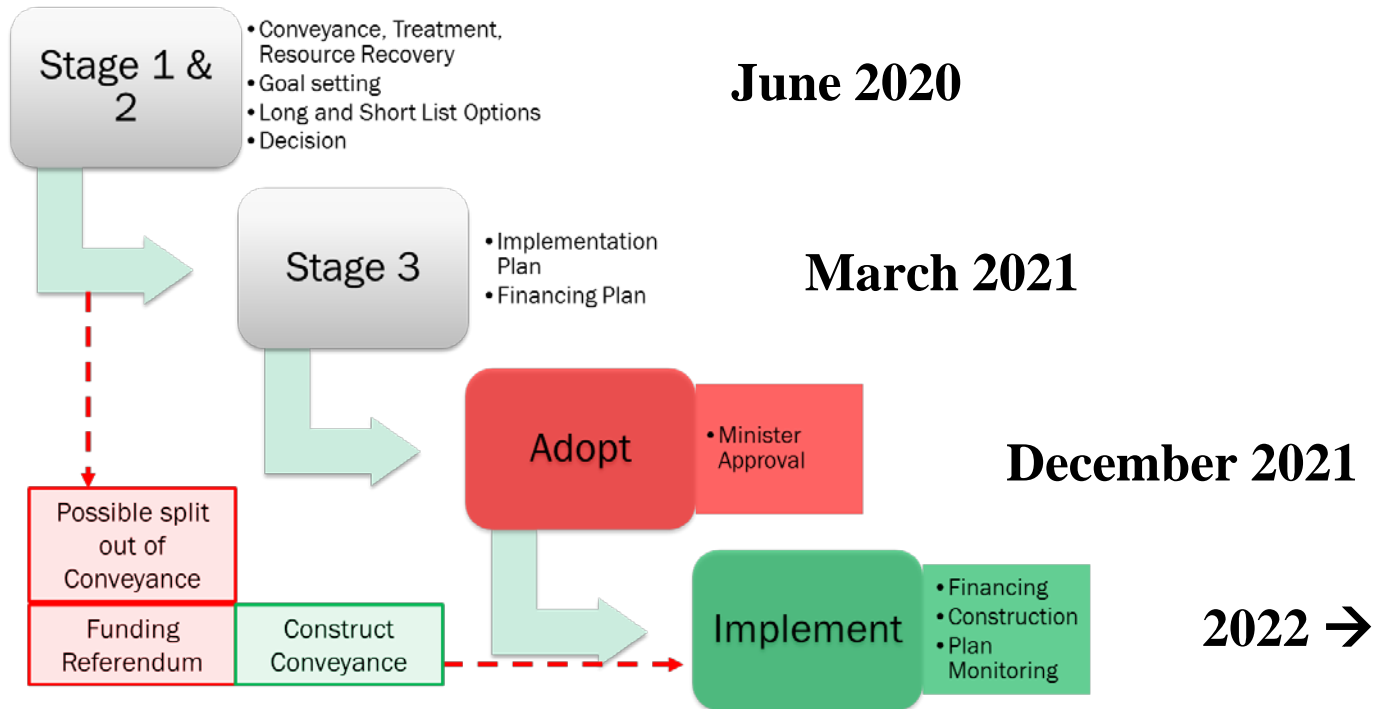
Treatment

- Identify level of treatment for upgraded CVWPCC

Resource Recovery

- Identify other potential opportunities to extract beneficial resources from treatment process

LWMP Process Timeline



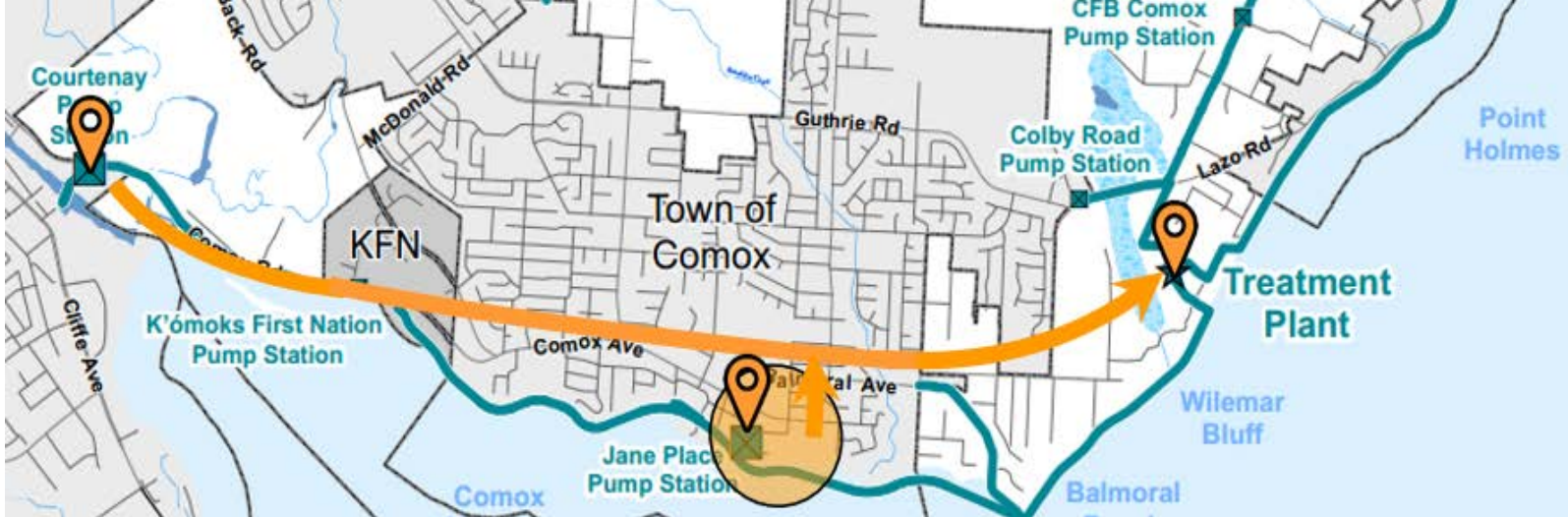
KFN consultation

- KFN concern:
 - Current forcemain SRW expropriated w.o. consultation
 - New forcemain will further disturb archeological sites
- Discussions with KFN benefited from strong relationship, and MBA process established for CVWTP
- In February CVRD and KFN approved a MOU
 - Compensation to KFN for past and future impacts
 - Green light for CVRD to approve shortlist with IR 1 crossing
 - Commitment not to select pref. conveyance until CBA approved
 - CBA drafting negotiation underway, expected May/June

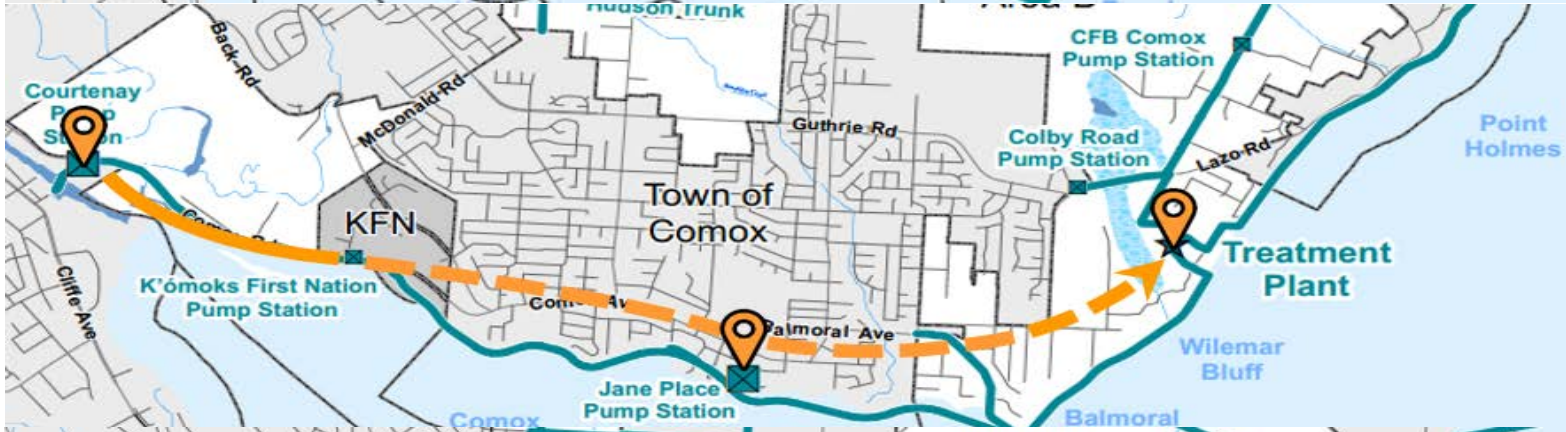
Evaluation of long list

Criteria	Weighting
Technical	45%
Affordability	18%
Local economy	2%
Environmental	18%
Social	17%
Grant total	100%

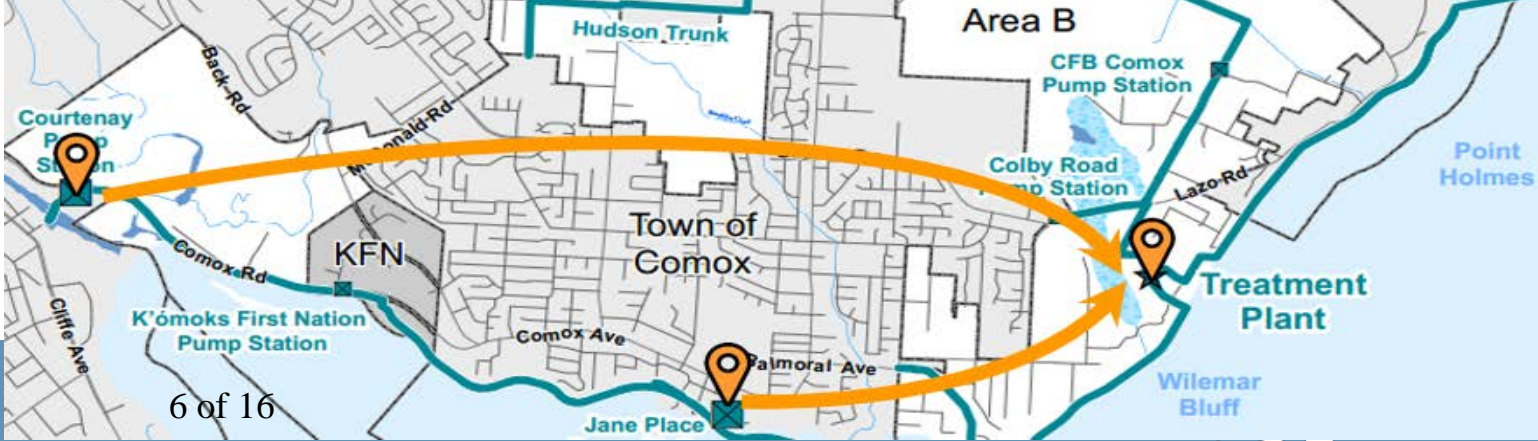
Category	Weight	2A	3A	3B	3C	4A
Total	100	63	63	64	71	47



2A



3



4A

Conveyance Shortlist

- March 2019 TACPAC shortlist
 - 2A – overland forcemain
 - 3 A,B,C → optimal tunneling
 - 4A – Northside forcemain
- KFN MOU allows us to remove 4A
 - Lowest scored option carried forward in shortlist (by far)
 - 40% higher capital costs
 - Higher lifecycle costs
 - No possibility of project phasing

Technical analysis

Three key advancements:

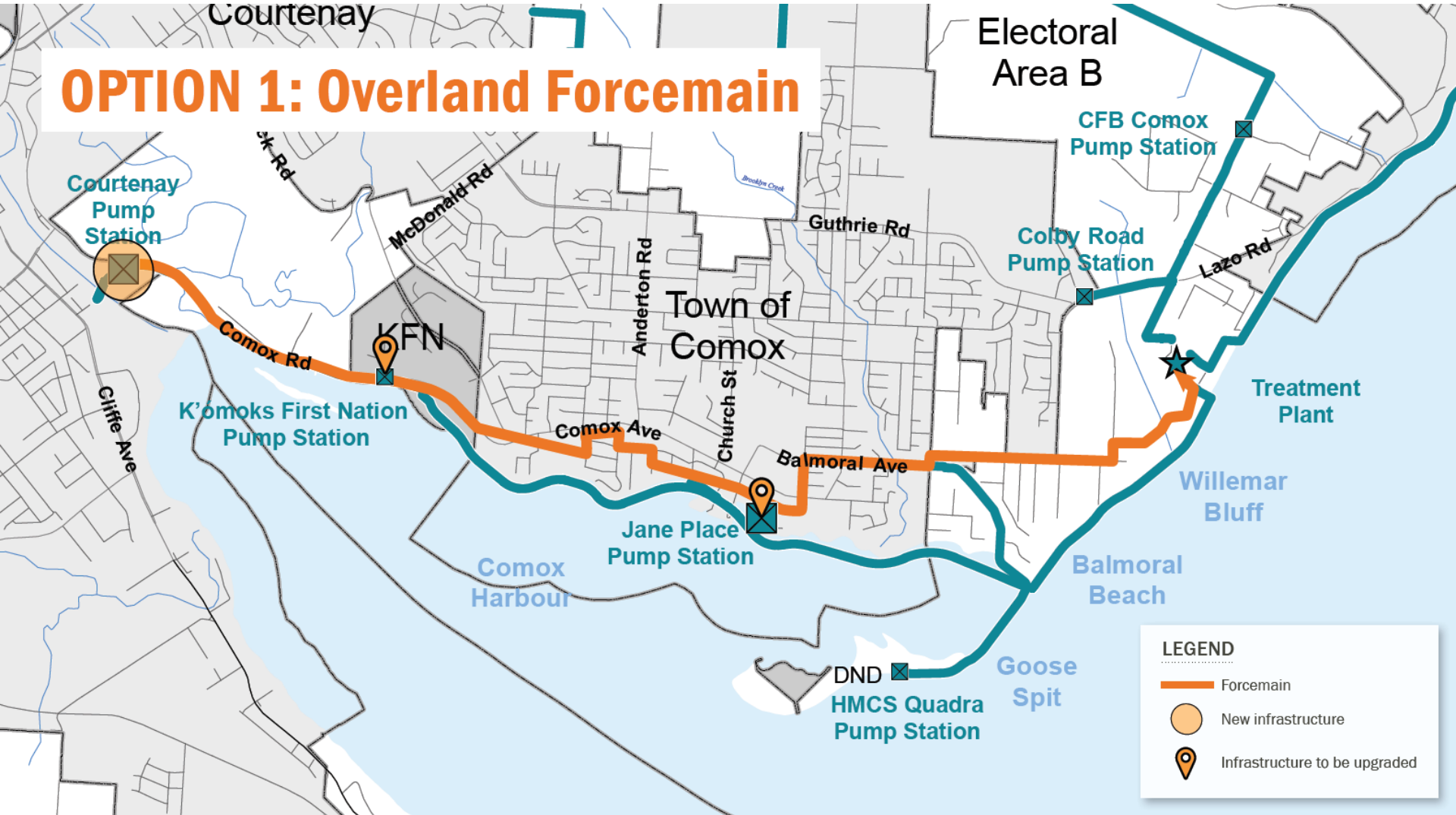
1. Horizontal directional drilling
 - Significantly reduce capital cost of tunneling
2. Confirmed existing forcemain can comfortably handle increase in working pressure
 - Opens up the possibility of continued use of a portion of the existing forcemain still in good condition
3. No scenario requires a new pump station in Comox

Technical analysis

Two key conclusions from analysis:

1. Optimal tunnelling concept can be completed in two phases:
 - Phase 1- Central Comox to CVWPCC
 - Phase 2- Courtenay pump station to central Comox
2. A phased approach could be optimal:
 - Earliest decommissioning of Willemar Bluffs section
 - Use 15-20 years of remaining service life of estuary section
 - Spreads out capital costs over longer timeframe

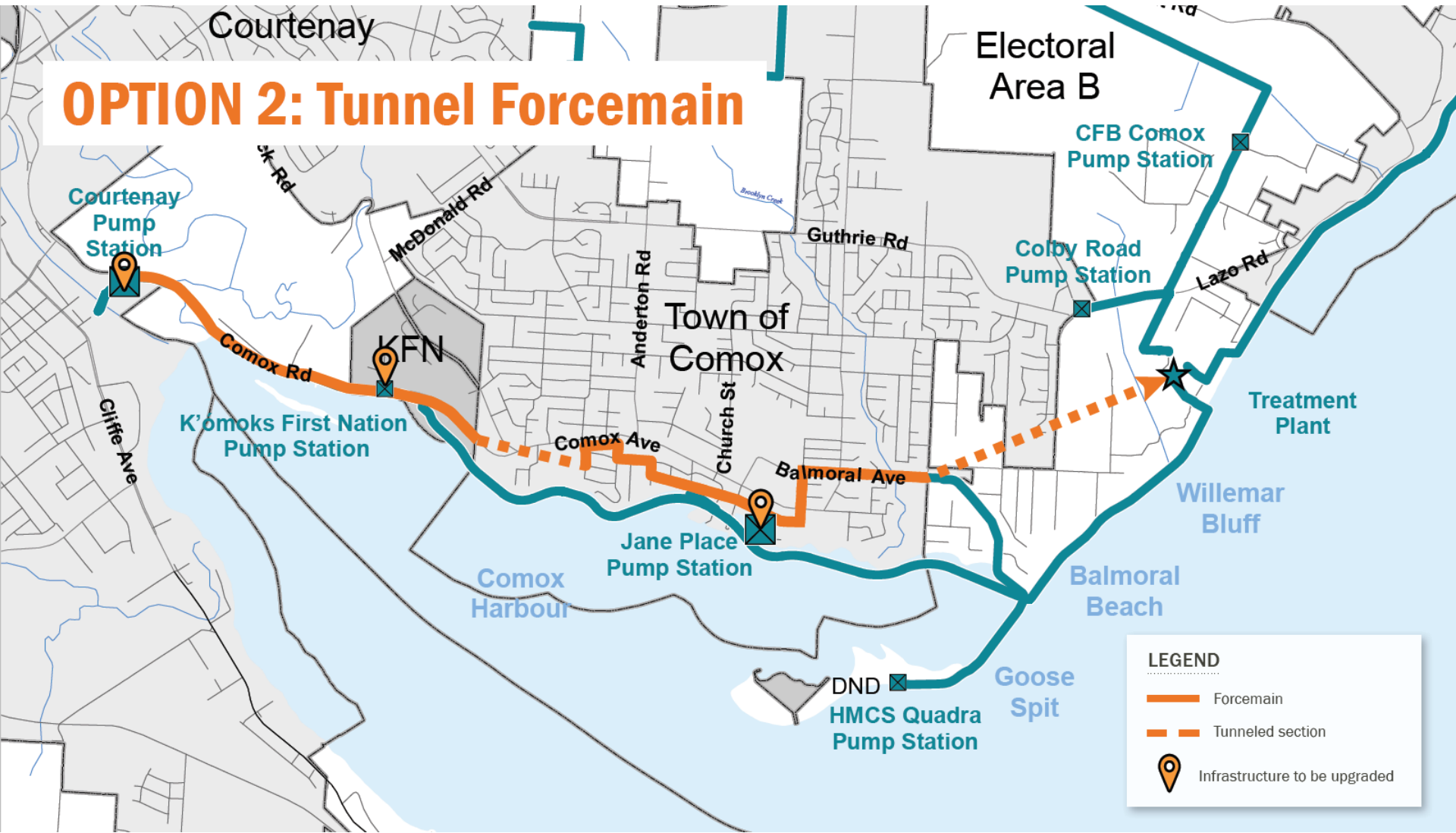
OPTION 1: Overland Forcemain



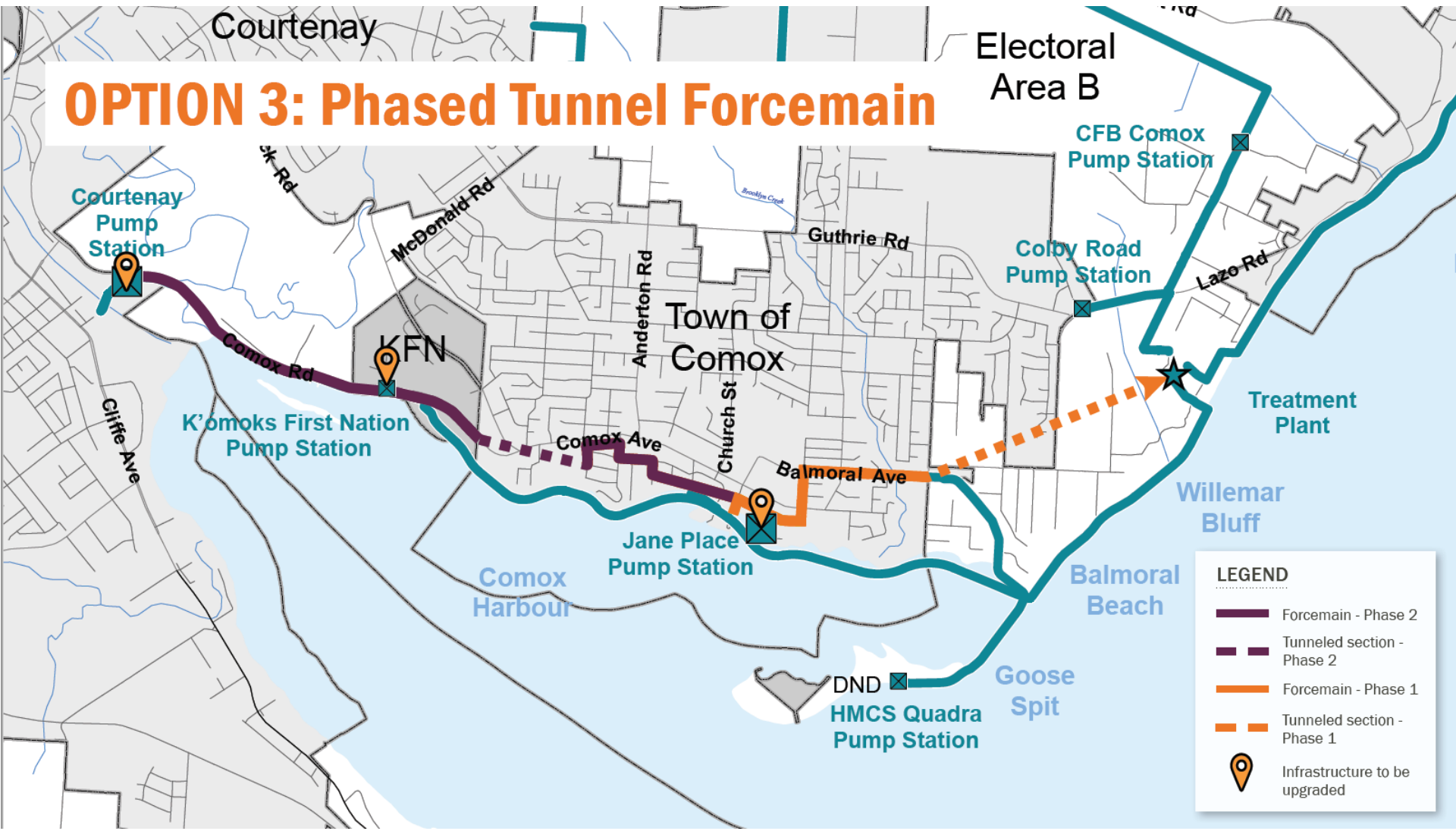
LEGEND

- Forcemain
- New infrastructure
- Infrastructure to be upgraded

OPTION 2: Tunnel Forcemain



OPTION 3: Phased Tunnel Forcemain



LEGEND

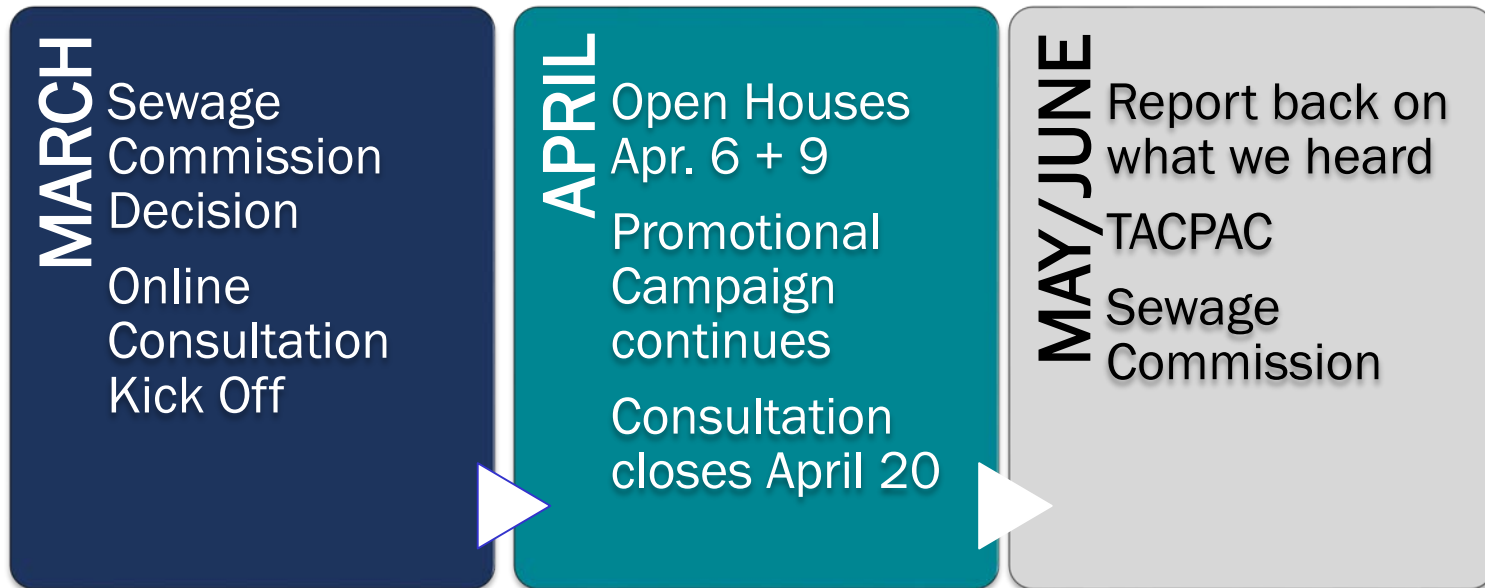
- Forcemain - Phase 2
- Tunnled section - Phase 2
- Forcemain - Phase 1
- Tunnled section - Phase 1
- Infrastructure to be upgraded

Options snapshot



	Capital	Operating	Year 1-20	Year 20-40
Option 1	\$52 M	\$150 k	\$120	\$5
Option 2	\$54 M	\$20 k	\$117	\$3
Option 3	\$32 M	\$20 k	\$70	\$50





Shortlist Consultation: Timeline





Shortlist Assessment: The Message

 **Comox Valley Regional District**
Written by Trapeze [?] · Just now · 


Construction footprint, community impact, cost to taxpayers: Learn how sewer plans will affect you. 





CONNECTCVRD.CA
Let's Talk Sewer [Learn More](#)

 **Comox Valley Regional District**
Sponsored · 


This plan will impact how much you pay for sewer service. Share input on options now.



CONNECTCVRD.CA
Let's Talk Sewer [Learn More](#)

 **Comox Valley Regional District**
Sponsored · 

We need to make some tough decisions to protect our beaches and waters. Weigh in now.



CONNECTCVRD.CA
Let's Talk Sewer [Learn More](#)

2020 schedule

MARCH	SC approval of shortlist/Completion of detailed studies/Initiate online consultation
EARLY APRIL	TACPAC Meeting No. 10, conveyance evaluation and ranking
MID-APRIL	Facilitated public session No. 4 to review conveyance options/End public consultation
MAY	TACPAC Meeting No. 11, final evaluation and recommendation of preferred option. Finalize discussions for Comox construction synergies
JUNE	Finalize CBA with KFN/Recommend preferred conveyance option and assent process to CVSC.
FALL	Completion of Stage 2 LWMP report, for approval by CVSC and submission to BC Ministry of Environment.

Comox phasing detail

