	Summer Discharge Category - Ocean			
Location	**South Sewer Project**	**Connect to CVRD collection system, send untreated water**	**Connect to CVRD collection system, send fully treated water**	**Puntledge Estuary at Royston or CVRD Storm sewer**
Description	Treatment at new Oceanside plant. June voted out	Treatment at CVRD Brent Road	Treatment at Cumberland, discharge fully treated effluent to CVRD collection system	Treatment at Cumberland Dedicated line to Royston
Notes	Upgrades to existing lagoon system required to treat winter storm flows.	Upgrades to existing lagoon system required to treat winter storm flows.	Could be pulsed to be only at night time, and, in dry weather.	Potential issues with pipeline ROW
Pipeline length	n/a	3 km	3km	6 km
EIS required?	N	N	N	Y
Effluent BOD-TSS	25-25	No Treatment	25-25	25-25
Phosphorus Removal?	N	N	N	N
Decision Gates				
MoE regulations/ effluent quality	Y	Y	Y	Y
Technical feasibility	Y	Y	Y?	Y
Constructability	Y	Y	Y?	Y
2021 deadline?	?	?	Y?	Y
Community acceptance to Cumberland	N	N	Y?	Y?
Politically Acceptable Externally	N	N	CVRD - ? Others - Y	N
Capital cost	?	CVRD price unknown	?? CVRD price unknown	Y
Grant probability	?	Y	Y?	Y
Overall Pass/Fail	FAIL	FAIL	PASS	FAIL
Comments	Rejected by Cumberland Council 2015	Not acceptable to Cumberland as any possibility for reclaimed water is lost. Rejected by CVRD since 2001, other external stakeholders	Not contemplated before., especially as a backup disposal to reuse Addresses all environmental issues as as per S. Sewer.	Rejected as a South Sewer Option by SS committee, and likely would be by estuary communities

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	Summer Discharge Category -Ground		
Location	**Conventional Ground Disposal**	**Cooperative with the Landfill**	**Deep Ground Disposal**
Description	Recharge Basins	Recharge basins to be built as part of landfill leachate management	Inject into old coal mines beneath Cumberland
Notes	Location not determined at this stage and not preferred by MoE	Concept is to enlarge ground disposal system for Cumberland effluent	Seldom been done for municipal effluent and regulatory path uncertain.
Pipeline length	at least 3km	3km	Less than 2km
Alternative disposal required?	N	N	N
EIS required?	Y	?	Y
Effluent BOD-TSS	25-25	25-25	10-10?
Phosphorus Removal?	N	N	N
Decision Gates			
MoE regulations/ effluent quality	Y	Y	Y?
Technical feasibility	Y	Y	Y
Constructability	Y	Y	Y
2021 deadline?	Y	Y	?
Community acceptance to Cumberland	Y	N	Y
Politically Acceptable Externally	Y	Not to CVRD Possibly yes for other communiities	Y
Capital cost	Y?	Y?	?
Grant probability	Y	Y	Y, not very replicable
Overall Pass/Fail	PASS	FAIL	PASS
Comments	Technical feasibility dependent on finding a suitable site, and acquiring ownership	CVRD have already said no to any changes to landfill project	Potentially easy to implement, commonly done for mine waters. This is not high pressure injection like fracking. Could also be considered a storage option?

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	Summer Discharge Category - Surface Water		
Location	**Maple Lake Creek, Summer**	**Morrison Creek**	**Puntledge River**
Description	From May to September	Alternate conveyance to Puntledge Estuary	Location to be downstream of BC hydro CVRD intake
Notes	Not preferred by MoE, fisheries, nor Komoks First Nations. Phosphorus is the challenge	Potential fishery enhancement	Large dilution flows. long pipeline to get to discharge source. Minor fishery flow benefit in Puntledge
Pipeline length	none	4 kms	7 kms
EIS required?	Y	Y	Y
Effluent BOD-TSS	10-10	10-10	25-25
Phosphorus Removal?	Y, <0.005	Y <0.005	Y , probably <0.5
Decision Gates			
MoE regulations/ effluent quality	N (for P<0.005)	N (for P<0.005)	Y
Technical feasibility	N/Y	Y	Y
Constructability	Y	Y	Y
2021 deadline?	Y	Y	Y
Community acceptance to Cumberland	Y?	Y?	Y?
Politically Acceptable Externally	Y	N	N?
Capital cost	Y	Y	Y
Overall Pass/Fail	PASS (conditional)	FAIL	FAIL
Comments	An effluent P of 0.005 is considered not technically feasible. Conditional “pass” assumes that the P criteria is changed to <0.5 or similar.	Assume MoE treats similar to MLC. Even if P criteria raised, why not just go to MLC?	Assumes that the P criteria for receiving water can be met because of dilution.

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Discharge Category	Summer Discharge Category - Storage and Fall Discharge	
Location	**Reservoir**	**Storage Wetland**
Description	Manmade lake to store treated summer flows for discharge in fall winter	Manmade wetland with controllable volume to act as storage for discharge in fall/winter
Notes	Ideal location north of Teal Lake where natural depressions exist and minimal earthwork required. Concept used in Vernon, Cranbrook and Oliver. Integrates with re-use water. Reservoir can be used as bird and fish habitat, also recreational waters and integrated into park like setting.	Construct a storage (not treatment) wetland adjacent to existing lagoons. Was extensively studied 2002-2010. Good bird and even fish habitat potential, can be integrated into natural setting
Pipeline length	2 km	minimal /none
EIS required?	?	?
Effluent BOD-TSS	25-25	25-25
Phosphorus Removal?	N	N
Decision Gates		
MoE regulations/ effluent quality	y	y
Technical feasibility	Y	Y
Constructability	Y?	Y?
2021 deadline?	Y	YY
Community acceptable to Cumberland	Y	Y
Politically Acceptable Externally	Y?	Y?
Capital cost	Y	Y
Overall Pass/Fail	PASS	PASS
Comments	Availability/acquiring of the land is the key issue. Area has potential for expansion to a larger reservoir for storage of total annual flow	Area next to existing lagoon is already owned by VoC, and this should meet the Eco-gift requirements