

TODAY'S OBJECTIVES

- Respond to requests for additional information on tier definitions and allocation of tiers for NSWWTP Program
- Provide Board with additional scenarios and information to inform direction to staff for:
 - 2025 Budget
 - 2025-2029 Financial Plan



COST APPORTIONMENT BYLAW

Category	Expenditure	Costs Allocated to Host Sewerage Area	Costs Allocated Regionally
Operating	All Operating Costs	100%	N/A
Tier 1 Capital	Conveyance System and Primary Treatment (NSWWTP & Iona upgrades only)	100%	N/A
Tier 2 Capital	Secondary Treatment	30%	70%
Tier 3 Capital	Tertiary Treatment	N/A	100%

- In place since 1995
- Last amended 2019

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NSWWTP PROGRAM TIER BREAKDOWN FOR \$2.8B

Current apportionment

	Tier Allo	cation	VSA	NSSA	LIWSA	FSA
Tier 1	\$0.5B	19%	\$0.0B	\$0.5B	\$0.0B	\$0.0B
Tier 2	\$2.1B	76%	\$0.5B	\$0.8B	\$0.1B	\$0.7B
Tier 3	\$0.2B	5%	\$0.1B	\$0.0B	\$0.0B	\$0.1B
Total	\$2.8B	100%	\$0.6B (21%)	\$1.3B (46%)	\$0.1B (4%)	\$0.8B (29%)
Population	2.9M		0.8M (28%)	0.2M (7%)	0.2M (8%)	1.7M (57%)

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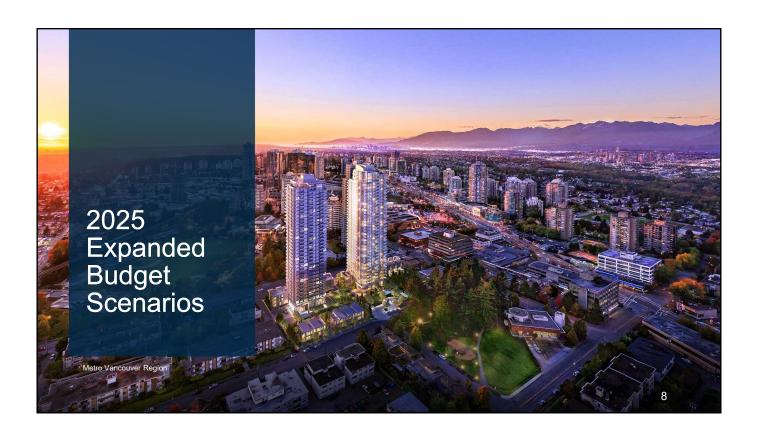
INCREMENTAL IMPACT OF NSWWTP PROGRAM BY SEWERAGE AREA; CURRENT APPORTIONMENT

	2024 Liquid Waste HHI	Incremental impact, current cost apportionment	
North Shore (NSSA)	\$464	+\$725	Per year for 30 years
Vancouver (VSA)	\$432	+\$140	
Lulu Island (LIWSA)	\$295	+\$70	Per year for 15 years
Fraser (FSA)	\$301	+\$80	

QUESTION

The federation has the ability to make changes to the allocation model to address the regional challenge that 7% of the region's population is responsible for 46% or \$1.3B of the \$2.8B cost increase for the NSWWTP Program.

North Shore residents will be paying on average, an additional \$725 / household per year for 30 years. The impact will also be borne by the rest of the region's residents; they will be paying on average an additional \$70-\$140 / year for 15 years depending on the sewerage area in which they reside.



5-YEAR FINANCIAL PLAN RESET

- Prior to NSWWTP Program budget reset, current 2024-2028 Financial Plan targets of 11%, 5%, 5%, 5% were attainable
- Staff have modelled various scenarios to support Board discussion (3 presented in April; additional for today)
- Two issues to discuss:
 - 1. Allocation of incremental NSWWTP Program (\$2.8B) costs
 - 2. Phase-In Approach to 5-Year Financial Plan to integrate \$2.8B

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COST ALLOCATION OPTIONS FOR ADDED COSTS FOR THE NSWWTP PROGRAM 1. Allocation

	Current Cost Allocation (\$B)		Equal Hi	H (\$B)		Assessed Value (\$B)		er 3 (\$B)	Water Consumption (\$B)	
VSA	\$0.6	21%	\$0.7	24%	\$0.9	32%	\$1.0	37%	\$0.8	29%
NSSA	\$1.3	46%	\$0.2	8%	\$0.2	8%	\$0.2	6%	\$0.2	9%
LIWSA	\$0.1	4%	\$0.3	9%	\$0.3	10%	\$0.2	7%	\$0.3	9%
FSA	\$0.8	29%	\$1.6	59%	\$1.4	50%	\$1.4	50%	\$1.5	53%
Total	\$2.8	100%	\$2.8	100%	\$2.8	100%	\$2.8	100%	\$2.8	100%

Household Impact	Current Cost Allocation	Equal HHI	Assessed Value	All Tier 3	Water Consumption
VSA	\$140	\$140	\$185	\$220	\$170
NSSA	\$725	\$140	\$140	\$95	\$135
LIWSA	\$70	\$140	\$150	\$105	\$140
FSA	\$80	\$140	\$125	\$125	\$135

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	Current Cost Allocation (\$B)		Equal Hi	H (\$B)		Assessed Value (\$B)		er 3 (\$B)	Water Consumption (\$B)	
VSA	\$0.6	21%	\$0.7	24%	\$0.9	32%	\$1.0	37%	\$0.8	29%
NSSA	\$1.3	46%	\$0.2	8%	\$0.2	8%	\$0.2	6%	\$0.2	9%
LIWSA	\$0.1	4%	\$0.3	9%	\$0.3	10%	\$0.2	7%	\$0.3	9%
FSA	\$0.8	29%	\$1.6	59%	\$1.4	50%	\$1.4	50%	\$1.5	53%
Total	\$2.8	100%	\$2.8	100%	\$2.8	100%	\$2.8	100%	\$2.8	100%
Household Impact		ent Cost cation	Equal	Equal HHI		ssed ue	All .	Tier 3	Water Cor	sumption
VSA	\$	140	\$140		\$1	85	\$220		\$170	
NSSA	\$	725	\$140		\$1	40	\$95 \$135		35	
LIWSA	\$70		\$140)	\$1	50	\$	105	\$1	40

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\$125

\$125

\$135

COST ALLOCATION OPTIONS FOR ADDED COSTS FOR THE NSWWTP PROGRAM 1. Allocation

\$140

FSA

\$80

	Current Cost Allocation (\$B)		Equal HI	Η (\$B)	Assessed Value (\$B)		All Tier 3 (\$B)		Water Consumption (\$B)	
VSA	\$0.6	21%	\$0.7	24%	\$0.9	32%	\$1.0	37%	\$0.8	29%
NSSA	\$1.3	46%	\$0.2	8%	\$0.2	8%	\$0.2	6%	\$0.2	9%
LIWSA	\$0.1	4%	\$0.3	9%	\$0.3	10%	\$0.2	7%	\$0.3	9%
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Household Impact		ent Cost cation	Equal I	Equal HHI		ssed ue	All 1	Γier 3	Water Con	sumption
VSA	\$	140	\$140	\$140		85	\$220		\$170	

\$140 NSSA \$140 \$95 \$135 \$725 \$140 \$150 \$105 LIWSA \$70 \$140 FSA \$80 \$140 \$125 \$125 \$135

	Current Cost Allocation (\$B)		Equal HI	H (\$B)		Assessed Value (\$B)		r 3 (\$B)	Water Consumption (\$B)	
VSA	\$0.6	21%	\$0.7	24%	\$0.9	32%	\$1.0	37%	\$0.8	29%
NSSA	\$1.3	46%	\$0.2	8%	\$0.2	8%	\$0.2	6%	\$0.2	9%
LIWSA	\$0.1	4%	\$0.3	9%	\$0.3	10%	\$0.2	7%	\$0.3	9%
FSA	\$0.8	29%	\$1.6	59%	\$1.4	50%	\$1.4	50%	\$1.5	53%
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Household Impact		nt Cost cation	Equal I	нні	Asse Val		All 1	ier 3	Water Con	sumption
VSA	\$	140	\$140)	\$1	\$185		220	\$1	70
NSSA	\$	725	\$140)	\$1	\$140		95	\$13	35
LIWSA	\$	570	\$140)	\$150		\$1	05	\$14	40
FSA	\$	80	\$140)	\$1	\$125		25	\$1	35

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COST ALLOCATION OPTIONS FOR ADDED COSTS FOR THE NSWWTP PROGRAM 1. Allocation

Current Cost Allocation (\$B)		Equal HF	II (\$B)			All Tier 3 (\$B)		Water Consumption (\$B)	
\$0.6	21%	\$0.7	24%	\$0.9	32%	\$1.0	37%	\$0.8	29%
\$1.3	46%	\$0.2	8%	\$0.2	8%	\$0.2	6%	\$0.2	9%
\$0.1	4%	\$0.3	9%	\$0.3	10%	\$0.2	7%	\$0.3	9%
\$0.8	29%	\$1.6	59%	\$1.4	50%	\$1.4	50%	\$1.5	53%
\$2.8	100%	\$2.8	100%	\$2.8	100%	\$2.8	100%	\$2.8	100%
		Equal I	нні		Assessed Value		ier 3	Water Con	sumption
\$1	140	\$140)	\$1	\$185		220	\$170	
\$7	725	\$140)	\$140		\$95		\$135	
\$	70	\$140)	\$150		\$1	05	\$14	10
\$	80	\$140)	\$125		\$1	25	\$13	35
0, 0, 0,	Alloo (\$ 50.6	Allocation (\$B) 50.6 21% 51.3 46% 50.1 4% 50.8 29%	Allocation (\$B) 50.6 21% \$0.7 51.3 46% \$0.2 50.1 4% \$0.3 50.8 29% \$1.6 52.8 100% \$2.8 Current Cost Allocation \$140 \$725 \$140 \$70 \$140	Allocation (\$B) 50.6 21% \$0.7 24% 51.3 46% \$0.2 8% 50.1 4% \$0.3 9% 50.8 29% \$1.6 59% 52.8 100% \$2.8 100% Current Cost Allocation \$140 \$725 \$140 \$70 \$140	Allocation (\$B) Equal HHI (\$B) Assertable Value \$0.6 21% \$0.7 24% \$0.9 \$1.3 46% \$0.2 8% \$0.2 \$0.1 4% \$0.3 9% \$0.3 \$0.8 29% \$1.6 59% \$1.4 \$2.8 100% \$2.8 100% \$2.8 Current Cost Allocation \$140 \$140 \$140 \$725 \$140 \$140 \$140 \$140 \$140 \$70 \$140 \$140	Allocation (\$B) Equal HHI (\$B) Assessed Value (\$B) 50.6 21% \$0.7 24% \$0.9 32% \$1.3 46% \$0.2 8% \$0.2 8% \$0.2 8% \$0.8 10% \$1.4 5	Allocation (\$B) Equal HHI (\$B) Assessed Value (\$B) All Tie 50.6 21% \$0.7 24% \$0.9 32% \$1.0 51.3 46% \$0.2 8% \$0.2 8% \$0.2 50.1 4% \$0.3 9% \$0.3 10% \$0.2 50.8 29% \$1.6 59% \$1.4 50% \$1.4 52.8 100% \$2.8 100% \$2.8 100% \$2.8 Current Cost Allocation Equal HHI Assessed Value All Ties All Ties \$2 \$140 \$140 \$140 \$140 \$140 \$150 \$1	Allocation (\$B) Equal HHI (\$B) Assessed Value (\$B) All Tier 3 (\$B) 50.6 21% \$0.7 24% \$0.9 32% \$1.0 37% 51.3 46% \$0.2 8% \$0.2 8% \$0.2 6% 50.1 4% \$0.3 9% \$0.3 10% \$0.2 7% 50.8 29% \$1.6 59% \$1.4 50% \$1.4 50% 52.8 100% \$2.8 100% \$2.8 100% Current Cost Allocation Equal HHI Assessed Value All Tier 3 \$140 \$140 \$185 \$220 \$725 \$140 \$140 \$150 \$105	Allocation (\$B) Equal HHI (\$B) Assessed Value (\$B) All Tier 3 (\$B) Water Con (\$E 50.6 21% \$0.7 24% \$0.9 32% \$1.0 37% \$0.8 51.3 46% \$0.2 8% \$0.2 6% \$0.2 50.1 4% \$0.3 9% \$0.3 10% \$0.2 7% \$0.3 50.8 29% \$1.6 59% \$1.4 50% \$1.4 50% \$1.5 52.8 100% \$2.8 100% \$2.8 100% \$2.8 100% \$2.8 Current Cost Allocation Equal HHI Assessed Value All Tier 3 Water Contact Water Contact Water Contact States Sta

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NSSA	\$	725	\$14	\$140		40	\$	95	\$13	35
LIWSA	\$	570	\$14	\$140		50	\$	105	\$14	40
FSA	\$80		\$14	0	\$1	25	\$	125	\$135	

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COST ALLOCATION OPTIONS FOR ADDED COSTS FOR THE NSWWTP PROGRAM 1. Allocation

	Allo	ent Cost cation \$B)	Equal Hi	-H (\$Β)		ssed e (\$B)	All Tie	er 3 (\$B)	Water Cor (\$	
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LIWSA	\$0.1	4%	\$0.3	9%	\$0.3	10%	\$0.2	7%	\$0.3	9%
FSA	\$0.8	29%	\$1.6	59%	\$1.4	50%	\$1.4	50%	\$1.5	53%
Total	\$2.8	100%	\$2.8	100%	\$2.8	100%	\$2.8	100%	\$2.8	100%

Household Impact	Current Cost Allocation	Equal HHI	Assessed Value	All Tier 3	Water Consumption
VSA	\$140	\$140	\$185	\$220	\$170
NSSA	\$725	\$140	\$140	\$95	\$135
LIWSA	\$70	\$140	\$150	\$105	\$140
FSA	\$80	\$140	\$125	\$125	\$135

Current Cost Apportionment

Scenario	Sewerage Area	Incremental HHI	Average Annual Levy Amount Over Amortization
	VSA	\$140	\$46M
	NSSA	\$725	\$71M
1	LIWSA	\$70	\$9M
	FSA	\$80	\$64M
	Total		\$190M

Adjusted Regional Spread (equal HHI)

,			
Scenario	Sewerage Area	Incremental HHI	Average Annual Levy Amount Over Amortization
	VSA	\$140	\$46M
	NSSA	\$140	\$15M
2	LIWSA	\$140	\$23M
	FSA	\$140	\$106M
	Total		\$190M

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COST ALLOCATION OPTIONS FOR ADDED COSTS FOR THE NSWWTP PROGRAM 1. Allocation

Adjusted Regional Spread (add \$10/HH for 3SAs)

Scenario	Sewerage Area	Incremental HHI	Average Annual Levy Amount Over Amortization
	VSA	\$150	\$50M
	NSSA	\$590	\$58M
3	LIWSA	\$80	\$11M
	FSA	\$90	\$71M
	Total		\$190M

Adjusted Regional Spread (add \$20/HH for 3SAs)

Scenario	Sewerage Area	Incremental HHI	Average Annual Levy Amount Over Amortization
	VSA	\$160	\$54M
	NSSA	\$455	\$45M
4	LIWSA	\$90	\$13M
	FSA	\$100	\$78M
	Total		\$190M

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Adjusted Regional Spread (add \$30/HH for 3SAs)

Scenario	Sewerage Area	Incremental HHI	Average Annual Levy Amount Over Amortization
	VSA	\$170	\$58M
	NSSA	\$320	\$32M
5	LIWSA	\$100	\$15M
	FSA	\$110	\$85M
	Total		\$190M

Adjusted Regional Spread (add \$40/HH for 3SAs)

Scenario	Sewerage Area	Incremental HHI	Average Annual Levy Amount Over Amortization
	VSA	\$180	\$62M
	NSSA	\$185	\$19M
6	LIWSA	\$110	\$17M
	FSA	\$120	\$92M
	Total		\$190M

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PHASE-IN OPTIONS FOR SEWERAGE LEVY

2. Phase in

	Phase-in period for levy	5 Year Debt Financing Impacts	Overall 5-Year HHI % Change
1	1 Year	~\$90M savings	31%, 5%, 5%, 5%, 5%
2	1 Year for 3 SAs, 3 years for NSSA	~\$75M savings	26%, 7%, 6%, 5%, 5%
3	2 Year	~\$70M savings	21%, 13%, 5%, 5%, 5%
4	1 Year for 3 SAs, 5 year for NSSA	~\$60M savings	25%, 6%, 6%, 6%, 6%
5	3 Year	~\$20M savings	18%, 10%, 10%, 5%, 5%
6	4 Year *	~ -\$25M cost	16%, 9%, 9%, 8%, 5%
7	5 Year *	~ -\$60M cost	15%, 8%, 8%, 8%, 8%

^{*} Will result in cash flow challenge and will need to increase rates post 5 years (not recommended)

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SCENARIOS FOR CONSIDERATION

Choose one phase-in period and one allocation option

5 Year Debt Financing Impacts	Phase-in Period for Levy
~\$90M avoid	1 Year
~\$75M avoid	1 Year for 3 sewerage areas, 3 years for NSSA
~\$70M avoid	2 Year
~\$60M avoid	1 Year for 3 sewerage areas, 5 year for NSSA
~\$20M avoid	3 Year
~ -\$25M cost	4 Year *
~ -\$60M cost	5 Year *

Allocation Options
Current (variable and \$725 for NSSA)
\$140 for each household in region
Adjusted (+\$10 and \$590 for NSSA)
Adjusted (+\$20 and \$455 for NSSA)
Adjusted (+\$30 and \$320 for NSSA)
Adjusted (+\$40 and \$185 for NSSA)

^{*}Would present cash flow challenge. Would need to increase rates after 5 years (not recommended)

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SCENARIOS FOR CONSIDERATION

Scenario Provided at April Board Budget Workshop

5 Year Debt Financing Impacts	Phase-in Period for Levy
~\$90M avoid	1 Year
~\$75M avoid	1 Year for 3 sewerage areas, 3 years for NSSA
~\$70M avoid	2 Year
~\$60M avoid	1 Year for 3 sewerage areas, 5 year for NSSA
~\$20M avoid	3 Year
~ -\$25M cost	4 Year *
~ -\$60M cost	5 Year *

Allocation Options
Current (variable and \$725 for NSSA)
\$140 for each household in region
Adjusted (+\$10 and \$590 for NSSA)
Adjusted (+\$20 and \$455 for NSSA)
Adjusted (+\$30 and \$320 for NSSA)
Adjusted (+\$40 and \$185 for NSSA)

^{*}Would present cash flow challenge. Would need to increase rates after 5 years (not recommended)

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SCENARIOS FOR CONSIDERATION

Scenario Provided at April Board Budget Workshop

5 Year Debt Financing Impacts	Phase-in Period for Levy
~\$90M avoid	1 Year
~\$75M avoid	1 Year for 3 sewerage areas, 3 years for NSSA
~\$70M avoid	2 Year
~\$60M avoid	1 Year for 3 sewerage areas, 5 year for NSSA
~\$20M avoid	3 Year
~ -\$25M cost	4 Year *
~ -\$60M cost	5 Year *

Allocation Options	
Current (variable and \$725 for NSSA)	
\$140 for each household in region	
Adjusted (+\$10 and \$590 for NSSA)	
Adjusted (+\$20 and \$455 for NSSA)	
Adjusted (+\$30 and \$320 for NSSA)	
Adjusted (+\$40 and \$185 for NSSA)	

^{*}Would present cash flow challenge. Would need to increase rates after 5 years (not recommended)

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SCENARIOS FOR CONSIDERATION

5 Year Debt Financing Impacts	Phase-in Period for Levy
~\$90M avoid	1 Year
~\$75M avoid	1 Year for 3 sewerage areas, 3 years for NSSA
~\$70M avoid	2 Year
~\$60M avoid	1 Year for 3 sewerage areas, 5 year for NSSA
~\$20M avoid	3 Year
~ -\$25M cost	4 Year *
~ -\$60M cost	5 Year *

Allocation Options		
Current (variable and \$725 for NSSA)		
\$140 for each household in region		
Adjusted (+\$10 and \$590 for NSSA)	\$775	
Adjusted (+\$20 and \$455 for NSSA)	\$605	
Adjusted (+\$30 and \$320 for NSSA)		
Adjusted (+\$40 and \$185 for NSSA)		

* If NSSA chooses 15-year amortization, debt service savings is \$297M to \$382M; but accrues to NSSA)

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DIRECTION TO STAFF

Recommendation in the report is to receive for information However, staff are seeking direction on how to prepare the 2025 Budget and 2025-2029 Financial Plan in terms of:

- 1. Allocation How to allocate the \$2.8B required to complete the NSWWTP Program (Table 6)
- 2. Phase in How to phase in the required levy (Table 7)

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BOARD RESOLUTION

"That the MVRD / MVHC / GVS&DD / GVWD Boards direct staff to prepare the 2025 Budget and 2025-2029 Financial Plan by allocating the \$2.8B required to complete the NSWWTP Program according to [insert Option 1,2,3,4,5, or 6 from Table 6] and phasing the levy in according to [insert Option 1,2,3,4,5,6, or 7 from Table 7]".

