
TO: Randy Alexander
General Manager, Regional and Community Utilities

DATE: November 5, 2013

FROM: Mike Donnelly
Manager of Water & Utility Services

FILE: 5500-22-NBP-01

SUBJECT: Nanoose Bay Peninsula Water Service Area and Nanoose Bay Bulk Water Development Cost Charge Process

PURPOSE

To bring forward the implementation process for a combined Development Cost Charge Bylaw for both the Nanoose Bay Peninsula Water Service Area and the Nanoose Bay Bulk Water Service Area.

BACKGROUND

The Nanoose Bay Peninsula Water Service Area (NBPWS) currently includes 2,497 properties with a population of approximately 4,900. The anticipated population on the peninsula with full development of all properties is estimated to reach 10,000 by 2031. To ensure the orderly and long term financial stability of this water system it will be important to establish the level of financial support that future growth will provide towards the water supply and distribution system.

The NBPWS was established in 2005 after an amalgamation of 7 separate Regional District of Nanaimo (RDN) operated water systems on the peninsula. The amalgamation allowed for the streamlining of the operation of the overall water supply and prepared the way for the eventual inclusions of the future Englishman River Water Service (ERWS) supply.

The future water supply to the peninsula will continue to access groundwater with the primary supply moving to surface water from the ERWS system. As the two systems become integrated there will be a need to align operational and administrative components of the systems in order to provide seamless integration and long term financial viability as it relates to growth.

Development Cost Charges (DCC) ensure growth supports those costs relative to their impact on existing infrastructure and on costs associated with expanded supporting infrastructure. For the NBPWSA, that would relate to costs for upgrades to the existing infrastructure. For the ERWS, it would reflect costs associated with the Arrowsmith dam, river intake and treatment process.

The Nanoose Bay Bulk Water Development Cost Charge bylaw was established in 1997. That DCC was established on estimated costs at that time and requires updating to include the recently determined costs for the ERWS project including river intake and treatment portion of the project. Preliminary work on a DCC for the NBPWSA was carried out in 2012 but has yet to be finalized.

Given both the planned ERWS and the existing NBPWSA infrastructure will be in place to service residents within the same area it is recommended that a common DCC bylaw be established.

A draft summary of the projects that would be considered for inclusion in a combined DCC has been included in this report for the Board's information (see attached). This preliminary assessment lists the upgrades required along with estimated costs. This is only a preliminary assessment but has been provided to illustrate the scope of the required works.

The development of DCCs is guided by the province's "Development Cost Charges Best Practices Guide". The guide provides the process and structure by which a DCC bylaw is established which must be followed closely as the province must approve the bylaw. The following steps outlined in the Best Practices Guide reflect a typical process for developing a DCC program.

- The regional district board passes a motion to consider a DCC program and the development of a DCC bylaw based on the *DCC Best Practices Guide*.
- Local government staff, or a consultant, develop a bylaw and calculate the DCC rates.
- During the bylaw development phase, input is obtained from the public and interested parties.
- A proposed bylaw is presented to the regional district board for first reading.
- Elected officials may request additional public input or revisions prior to second and third reading.
- Following third reading the DCC bylaw and supporting documentation will be forwarded to the Inspector of Municipalities for review and approval.
- If no revisions are required, the bylaw will be returned to the local government for adoption. At this point the DCC bylaw takes effect.

ALTERNATIVES

1. That the report be received for information and that the Board approves the development of a combined Nanoose Bay Peninsula Water Service Area and Nanoose Bay Bulk Water Development Cost Charge.
2. That the Board provide alternate direction.

FINANCIAL IMPLICATIONS

Financial implications, once they are fully determined as part of the DCC bylaw development process will be brought before the Board for their consideration.

SUSTAINABILITY IMPLICATIONS

The financial sustainability of the NBPWSA system will be linked to the effective distribution of costs between existing and future users of the system as growth occurs.

SUMMARY/CONCLUSIONS

The Nanoose Bay Peninsula Water Service Area will see significant growth over the coming years which will result in a need for updated and improved water supply and distribution infrastructure. To meet that challenge it will be important to adopt strategies that recognize how the associated cost burden will be shared amongst both existing and future users. Development Cost Charges are the tool available to local government to meet that challenge.

RECOMMENDATIONS

1. That the Board receive the report for information.
2. That the Board direct staff to develop a combined Development Cost Charge bylaw for both the Nanoose Bay Peninsula Water Service Area and the Nanoose Bay Bulk Water service.
3. That the Board approve the development of a Development Cost Charge program and the development of a Development Cost Charge bylaw based on the *DCC Best Practices Guide*.

Report Writer

General Manager Concurrence

CAO Concurrence

DRAFT Table 4 - Water Projects and DCC Calculations

PROJECT COST ESTIMATE ALLOCATION

No.	Project Description (for Replacements, Year reaching end of life is shown in brackets)	A Project Cost Estimate (2013)	B Government Grant	C % Benefit to Existing Users	D Net Expenditure (A - B)	E Benefit to Existing Users (D x C)	F Benefit to New Develop. (D - E)	G 1% Municipal Assist (F x 1%)	H User Fees (Regional District) (E + G)	I DCC Recoverable (D - H)	
N2014-1	Change Controls to Eagle Heights	59,200	0	100%	59,200	59,200	0	0	59,200	0	
N2014-2	Arbutus Reservoir Predesign Study	13,800	0	100%	13,800	13,800	0	0	13,800	0	
N2014-3	Garry Oak Drive PRV	52,300	0	100%	52,300	52,300	0	0	52,300	0	
N2014-4	Harlequin/Sea Lion Loop & Footbridge (System Improvements)	237,500	0	75%	237,500	178,125	59,375	594	178,719	58,781	
TOTAL 2014		362,800							364,019	58,781	
N2015-1	Arbutus Crescent Main (System Improvements)	167,100	0	90%	167,100	150,390	16,710	167	150,557	16,543	
N2015-2	Water Treatment Expansion for Claudet Wells (225 igpm of 425 igpm benefits development)	2,088,000	0	47%	2,088,000	982,588	1,105,412	11,054	993,642	1,094,358	
N2015-3	Hemlock Drive Main (System Improvements)	78,000	0	90%	78,000	70,200	7,800	78	70,278	7,722	
N2015-4	Collingwood Drive Loop Main (Potential DCC Rebate)	201,200	0	25%	201,200	50,300	150,900	1,509	51,809	149,391	
N2015-5	Wallbrook Wells No. 2, 3 & 4 Upgrades (Potential DCC Credit)	750,000	0	0%	750,000	0	750,000	7,500	7,500	742,500	
TOTAL 2015		3,284,300							1,273,786	2,010,514	
N2016-1	Armstrong / McD Witt Loop (System Improvements)	200,600	0	90%	200,600	180,540	20,060	201	180,741	19,859	
N2016-2	Arbutus Pump Station Improvements	126,400	0	75%	126,400	94,800	31,600	318	95,118	31,284	
N2016-3	West Bay PRV Building Upgrade	12,700	0	25%	12,700	3,175	9,525	95	3,270	9,430	
TOTAL 2016		339,700							279,127	60,573	
N2017-1	Marine Drive Watermain Replacement (2018)	155,100	0	90%	155,100	139,590	15,510	155	139,745	15,355	
N2017-2	Garry Oak Drive Main (System Improvements)	239,500	0	90%	239,500	215,550	23,950	240	215,790	23,711	
N2017-3	Anchor Way Watermain Replacement (2016)	229,700	0	50%	229,700	114,850	114,850	1,149	115,999	113,702	
N2017-4	Bonnington Drive Loop Main, Phase 1 (Potential DCC Rebate)	261,200	0	25%	261,200	65,300	195,900	1,959	67,259	193,941	
N2017-5	Englishman River Water Service (RDN's 28% Contribution)	9,750,000	0	34%	9,750,000	3,315,000	6,435,000	64,350	3,379,350	6,370,650	
TOTAL 2017		10,635,500							3,918,142	6,717,358	
N2018-1	West Bay Pumpouse Upgrade	114,900	0	25%	114,900	28,725	86,175	862	29,587	85,313	
N2018-2	Dolohin Drive Main	33,600	0	90%	33,600	30,240	3,360	34	30,274	3,326	
N2018-3	Outrigger Road Main (System Improvements)	122,600	0	10%	122,600	12,260	110,340	1,103	13,363	109,237	
N2018-4	DCC Major Update Study	11,500	0	50%	11,500	5,750	5,750	58	5,808	5,650	
N2018-5	Bonnington Drive Loop Main, Phase 2 (Potential DCC Rebate)	313,200	0	25%	313,200	78,300	234,900	2,349	80,649	232,551	
TOTAL 2018		595,800							159,680	436,120	
N2019-1	Dorcas Point Rd Main (System Improvements)	812,671	0	90%	812,671	551,404	261,267	2,613	554,017	260,654	
N2019-2	Schooner Cove Drive Loop Main, Phase 1 (Potential DCC Rebate)	159,800	0	25%	159,800	39,200	111,600	1,116	40,376	119,424	
TOTAL 2019		769,471							392,393	177,078	
N2020-1	SCADA - Initial System	229,700	0	50%	229,700	114,850	114,850	1,149	115,999	113,702	
N2020-2	Beaver Creek Wharf Rd Northwest Bay to Madrona Drive (2012)	73,300	0	95%	73,300	69,635	3,665	37	69,672	3,628	
TOTAL 2020		303,000							185,670	117,330	
N2021-1	SCADA - Continue Expanding/Programming	57,500	0	50%	57,500	28,750	28,750	288	29,038	28,463	
N2021-2	Northwest Bay Rd #1665 to Ballenas (2012)	342,600	0	95%	342,600	325,470	17,130	171	325,641	16,959	
N2021-3	Jenkins Crescent Watermain Replacement (2012)	73,300	0	95%	73,300	69,635	3,665	37	69,672	3,628	
N2021-4	Schooner Cove Drive Loop Main, Phase 2 (Potential DCC Rebate)	877,200	0	25%	877,200	219,300	657,900	6,579	225,979	651,321	
TOTAL 2021		1,855,500							650,299	1,105,201	
N2022-1	SCADA - Continue Expanding/Programming	57,500	0	50%	57,500	28,750	28,750	288	29,038	28,463	
N2022-2	Sangster Crescent Watermain Replacement (2012)	80,300	0	95%	80,300	76,285	4,015	40	76,325	3,975	
TOTAL 2022		137,800							165,363	32,437	
N2023-1	SCADA - Continue Expanding/Programming	57,500	0	50%	57,500	28,750	28,750	288	29,038	28,463	
N2023-2	Strouther Rd Watermain Replacement (2012)	73,300	0	95%	73,300	69,635	3,665	37	69,672	3,628	
N2023-3	DCC Major Update Study	11,500	0	50%	11,500	5,750	5,750	58	5,808	5,650	
N2023-4	Arbutus Reservoir Replace/Enlarge	574,300	0	50%	574,300	287,150	287,150	2,872	290,022	284,279	
TOTAL 2023		716,600							354,338	322,062	
N2024-1	SCADA - Continue Expanding/Programming	57,500	0	50%	57,500	28,750	28,750	288	29,038	28,463	
TOTAL 2024		57,500							29,038	28,463	
N2025-1	Yeo Street Watermain Replacemnt (2012)	85,500	0	95%	85,500	81,225	4,275	43	81,268	4,232	
N2025-2	Madrona Drive W/main Replacement (2012)	393,000	0	95%	393,000	373,920	19,080	197	374,117	19,483	
TOTAL 2025		478,500							455,385	23,115	
N2026-1	Ballenas Road Watermain Replacement (2012)	162,000	0	95%	162,000	153,900	8,100	81	153,981	8,019	
N2026-2	Gerald Street Watermain Replacement (2012)	131,800	0	95%	131,800	125,210	6,590	66	125,276	6,524	
TOTAL 2026		293,800							279,257	14,543	
N2027-1	Radio Read Water Meters - Initial System	344,600	0	90%	344,600	310,140	34,460	345	310,485	34,115	
N2027-2	Douglas Crescent Watermain Replacement (2012)	48,300	0	95%	48,300	45,885	2,415	24	45,909	2,391	
TOTAL 2027		392,900							356,394	36,506	
N2028-1	Ida Lane Watermain Replacement (2014)	56,200	0	95%	56,200	53,390	2,810	28	53,418	2,782	
N2028-2	Radio Read Water Meters - Continue System Conversion	114,900	0	90%	114,900	103,410	11,490	115	103,525	11,375	
N2028-3	DCC Major Update Study	11,500	0	50%	11,500	5,750	5,750	58	5,808	5,650	
N2028-4	Acacia Road Watermain Replacement (2012)	131,800	0	95%	131,800	125,210	6,590	66	125,276	6,524	
TOTAL 2028		314,400							288,026	26,374	
N2029-1	Leisure Way Watermain Replacement (2014)	112,300	0	95%	112,300	106,685	5,615	56	106,741	5,559	
N2029-2	Schirra Drive Watermain Replacement (2014)	146,500	0	95%	146,500	139,175	7,325	73	139,248	7,252	
N2029-3	Radio Read Water Meters - Continue System Conversion	114,900	0	90%	114,900	103,410	11,490	115	103,525	11,375	
TOTAL 2029		373,700							349,514	24,186	
N2030-1	Sheppard Road Watermain Replacement (2014)	34,200	0	95%	34,200	32,460	1,740	17	32,507	1,693	
N2030-2	Armstrong Crescent Watermain Replacement	300,200	0	95%	300,200	285,190	15,010	150	285,340	14,860	
N2030-3	Radio Read Water Meters - Continue System Conversion	114,900	0	90%	114,900	103,410	11,490	115	103,525	11,375	
TOTAL 2030		449,300							421,372	27,928	
N2031-1	White Avenue Watermain Replacement (2014)	34,200	0	95%	34,200	32,460	1,740	17	32,507	1,693	
N2031-2	Collins Crescent Watermain Replacement	336,800	0	95%	336,800	319,960	16,840	168	320,128	16,672	
N2031-3	Radio Read Water Meters - Continue System Conversion	114,900	0	90%	114,900	103,410	11,490	115	103,525	11,375	
N2031-4	Apollo Drive Watermain Replacement (2014)	16,600	0	95%	16,600	15,770	830	8	16,800	970	
N2031-5	Glenn Place Watermain Replacement (2014)	46,200	0	95%	46,200	43,890	2,310	23	43,913	2,287	
N2031-6	Radio Read Water Meters - Complete System Conversion	29,900	0	90%	29,900	26,920	2,980	29	25,949	2,951	
TOTAL 2031		580,500							544,652	35,848	
TOTALS		\$21,436,771	\$0			\$21,436,771	\$10,476,987	\$10,959,784	\$109,598	\$10,586,585	\$10,850,186

GROWTH PROJECT & TOTAL DCC REVENUE PER LAND USE

Land Use Category	Projected Growth		Service Population Factor	Resulting Service Population		Portion of Total Cost (\$)
	(#)	(Unit)		(#)	(%)	
Single Family	775	Dwelling Unit	2.20	1,705	65.1%	\$7,060,903.50
Multi-Family	390	Dwelling Unit	1.90	741	28.3%	\$3,068,068
Congregate Care Facility	25	Unit	1.00	25	1.0%	\$103,532
Commercial	9,125	m ² , gross floor area	0.0100	91	3.5%	\$376,858
Institutional	11,520	m ² , gross floor area	0.0050	58	2.2%	\$240,195
Industrial	0	ha	0	0	0.0%	\$0
Totals				2,620	100%	\$10,850,186

DCC CALCULATION PER LAND USE

Land Use Category	Projected Growth (#)	Portion of Total Cost (\$)	Resulting DCC (\$ per unit)	(Unit)
Multi-Family	390	\$3,068,068	\$7,868.46	Dwelling Unit
Cong. Care Fac.	25	\$103,532	\$4,141.29	Unit
Commercial	9,125	\$376,858	\$41.30	per m ² of gross floor area
Institutional	11,520	\$240,195	\$20.85	per m ² of gross floor area
Industrial	0	\$0	\$0.00	per ha of site area
TOTALS		\$10,850,186		