

NANOOSE BAY PENINSULA WATER SYSTEM DEVELOPMENT COST CHARGE BYLAW TECHNICAL REPORT

- FINAL DRAFT -

DECEMBER 2013



Parksville, BC



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December 17th, 2013 File: 1059-02 Rev. 4

Regional District of Nanaimo 6300 Hammond Bay Rd. Nanaimo, B.C. V9T 6N2

Attention: Mr. Mike Donnelly, AScT Manager of Water Services

Dear Sirs:

Re: Nanoose Bay Peninsula Water System Development Cost Charges Study Draft Report, November 2013

We are pleased to submit three copies of our draft report entitled "**Regional District of Nanaimo, Nanoose Bay Peninsula Water System Development Cost Charges Study Draft Report, November 2013**".

The report details DCC bylaw development and implementation, including growth projections, project cost estimates, and the Development Cost Charge calculation method. It has been prepared in accordance with the Development Cost Charge - Best Practices Guide, published by the Ministry of Community Services. The Draft DCC Report and calculations are based on statistics provided by Regional District staff, and includes current available project planning information and costs up to the year 2031, with no allowance for government grants.

This revision has been modified from earlier drafts to include the costs associated with the Nanoose Bay Peninsula's portion of the Englishman River Water Service (ERWS) water supply project. The Regional District of Nanaimo has provided preliminary cost estimates which have been added to the DCC Function Table and are included in the DCC calculations.

A number of "out of sequence projects", which may be constructed by a developer have been identified on the DCC function table as having potential for DCC Credits or Rebates. For further details on Credits, Rebates and Latecomer Agreements, please refer to section 2.10.

Only minor adjustments have been made to the estimated population and growth projections and remain essentially the same as originally presented in 2011. The RDN may want to revisit growth projections during the next major bylaw amendment.







December 17th, 2013 File: 1059-02

Regional District of Nanaimo Mr. Mike Donnelly, A.Sc.T.

Following the Regional District's review of the draft with the development community and board members, please feel free to contact Koers & Associates Engineering Ltd. to discuss any final required adjustments. We will then proceed with final edits and issuing of the report.

Yours truly,

KOERS & ASSOCIATES ENGINEERING LTD.

Tony Koers, P.Eng. Project Manager Ken Doll, P.Eng. Project Engineer

Chris Holmes, P.Eng. Review Engineer

Enclosures

2

REGIONAL DISTRICT OF NANAIMO

NANOOSE BAY PENINSULA WATER SYSTEM DEVELOPMENT COST CHARGES STUDY DECEMBER 2013

TABLE OF CONTENTS

Page

1 INTRODUCTION

1.1	Background					1
-----	------------	--	--	--	--	---

2 BYLAW DEVELOPMENT & IMPLEMENTATION OVERVIEW

2.1	Purpose of DCCs	2
2.2	Exemptions	3
2.3	Bylaw Approval Process & Stakeholder Input	3
2.4	Service Area & Time Frame	4
2.5	Recoverable Costs	4
2.6	Bylaw Administration	5
2.7	Grace Period	7
2.8	In-Stream Protection	7
2.9	Credits, Rebates & Latecomers Agreements	8
2.10	Amendment Process (Minor vs Major)	9

3 GROWTH PROJECTIONS

3.1	Methodology	11
3.2	Population	11
3.3	Residential, Single & Multi-Family Assumptions	13
3.4	Congregate Care Facility Assumptions	14
3.5	Commercial & Institutional Assumptions	14
3.6	Industrial & Public Utility Assumptions	16

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TABLE OF CONTENTS (Cont'd)

4 PROJECT COST ALLOCATION

4.1	Introduction	17
4.2	Project Cost	17
4.3	Government Grants	18
4.4	Benefit to Existing Users	19
4.5	Municipal Assist Factor	19
4.6	DCC Reserve Funds	19

5 CALCULATION METHOD

	5.1	Common Unit Calculation Method	
--	-----	--------------------------------	--

6 DEVELOPMENT COST CHARGES

6.1	Proposed Waterworks	
6.2	Common Unit Calculations	
6.3	Cost Charge Calculations	

7 SUMMARY

7.1	Summary.				
-----	----------	--	--	--	--

TABLES

1	Population Projections, Current, Year 2031 and OCP Build-Out.	12
2	Projected New Residential Development to OCP Build-Out	14
3	Land Use Growth Projections, Year 2031 and OCP Build-Out	16
4	Equivalent New Population Calculation to Year 2031	23
5	Water Projects and DCC Calculations	after 23)
6	DCC Summary	25
7	Existing Users & DCC Recoverable Annual Costs Comparison	26

APPENDICES

- A Water System Improvements Schematic
- B Ministry Submission Summary Checklist

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1 INTRODUCTION

1.1 BACKGROUND

The Regional District of Nanaimo (RDN) does not presently have in place a waterworks distribution system development cost charge (DCC) bylaw for the Nanoose Bay Peninsula. A separate bulk water DCC bylaw does currently exist for the Arrowsmith Water Service (AWS), and will no longer be required following the implementation of a new and comprehensive waterworks distribution system DCC bylaw. The new DCC bylaw will include the Englishman River Water Service (ERWS) which replaces the existing bulk water (AWS) DCC bylaw.

With more development comes the need for upgrading and expansion of all waterworks servicing functions throughout the Nanoose Bay Peninsula Water System service area. It is the Board's intention to equitably fund this servicing between existing and new users, by implementing a new DCC bylaw.

Findings detailed in this report result from the Regional District's need to implement DCCs for the various water system components and development categories. It reviews current applicable waterworks projects to the year 2031 in accordance with existing study requirements to estimated build-out in year 2046, with up-to-date cost estimates in anticipated year 2013 dollars, provides estimates of growth in each of the various development types over the year 2013 to 2031 period, and calculates required charges in each category.

1

2 BYLAW DEVELOPMENT & IMPLEMENTATION OVERVIEW

2.1 PURPOSE OF DCCS

DCCs are imposed to pay that portion of the capital cost of providing, altering, or expanding municipal services to serve new developments. The DCCs collected only represent part of the funding required to construct the capital projects. The balance of the funds will come from the Regional District (taxpayers), possibly with some assistance from the Province of B.C. and Federal Government (i.e. grants). The Regional District's contribution takes into account the benefit of the water distribution system to the existing users, and also includes an assist factor to the development's share of the various project costs.

DCCs are monies collected from land developers by a local government to offset some of the infrastructure expenditures incurred, to service the needs of new development while not adversely affecting existing users. Imposed by bylaw pursuant to the Local Government Act (1996), the charges are intended to facilitate development by providing a method to finance capital projects related to highway facilities, drainage, sewerage systems, waterworks and parks. This report relates only to the waterworks function.

DCCs allow monies to be pooled from many developers, so that funds can be raised to construct necessary services in an equitable manner. Those who will use and benefit from the installation of the capital projects should pay infrastructure costs. Recognizing that costs should be shared amongst all benefiting parties, a breakdown between benefits for existing users and new development should be provided.

The 'Development Cost Charge - Best Practices Guide' (BPG) is a publication by the B.C Ministry of Community Services, dated 2005. It is the objective of the BPG to standardize general practices in the formation and administration of DCC bylaws, while allowing flexibility to meet specific needs as allowed by the Local Government Act.

The BPG contains two parts, Part 1 is a guidebook for board members and administration staff responsible for developing and adopting policies, and Part II is a technical manual detailing procedures and calculations to be used by technical personnel for preparation of the actual bylaw and calculation of DCC rates.

2.2 EXEMPTIONS

Section 933 (4) of the Local Government Act describes circumstances when development is exempt from paying DCCs and as amended in year 2004. These are:

- i) where a building permit authorizes the construction, alteration, or extension of a building, or part of a building which is solely for public worship such as a church;
- ii) where a building permit is issued for the construction, alteration, or extension of a building that contains less than four dwelling units (See paragraph below on 2004 amendment), and the building is exclusively for residential use; and
- iii) where the value of the work covered by the building permit does not exceed \$50,000 (See paragraph below on 2004 amendment).

In 2004, the exemptions for less than four dwelling units and the maximum \$50,000 building permit value were amended, to provide more flexibility for the local government. Local governments are able to amend their DCC bylaw to charge DCCs on developments of fewer than four dwelling units, and can raise the \$50,000 threshold.

The Regional District will need to incorporate language into the bylaw to allow for any or all of these exemptions.

2.3 BYLAW APPROVAL PROCESS & STAKEHOLDER INPUT

DCC bylaws must be approved by the Ministry. The Ministry has indicated that expedient approval of DCC bylaws will be received when prepared in accordance with the BPG. To assist the Ministry staff in the review of the proposed DCC bylaw, a Ministry Submission Summary Checklist is included in the BPG as Appendix B.

When a DCC bylaw is implemented or amended, developers or those parties paying DCCs will be affected by the new charges. The BPG recommends a suitable period of notification before the new or amended DCC bylaw is in effect. This is known as a "Grace Period" (see Section 2.8 for further discussion). Newspaper articles and notices, information circulars, and verbal communications should be provided to the residents, taxpayers, and land developers, so they are aware of the proposed update, the anticipated charges, and the approximate timing of the new/amended bylaw's implementation.

The BPG recommends opportunities for stakeholder input be provided at two points during DCC bylaw development:

- i) before first reading by the Council, and
- ii) before third reading by the Council.

In addition, a public information meeting is recommended between the second and third readings of the bylaw, such that stakeholders can be involved in any revision(s) of the bylaw, and concerns arising from the public meeting can be considered in any revision(s).

2.4 SERVICE AREA & TIME FRAME

Deciding whether the proposed DCC will be a 'municipal wide' or 'area specific' charge will influence the composition of the program and the actual calculation of charges. These two options can be summarised as follows:

- A municipal wide DCC applies the same rate for a particular type of land use regardless of the location of any specific development.
- An area specific DCC divides the regional district into separate areas based on specific features such as geographic boundaries or a municipal service boundary.

For this study, DCCs have been applied on an area specific basis, the Nanoose Bay Water Service Area.

When developing the bylaw, an appropriate time frame for the DCC program has to be considered. The DCC can be established on either a "build out" or "revolving" basis. These are defined as:

- Build out applies to the construction of all necessary infrastructure to accommodate development to the full extent of the Official Community Plan, which generally has a long-term time horizon of more than 25 years.
- Revolving applies to construction of the necessary infrastructure to accommodate development for a defined period of time, such as 5, 10 or 15 years. A number of revolving time windows would be required to reach the OCP build-out.

For this study a revolving time frame to year 2031 has been used.

2.5 **RECOVERABLE COSTS**

The BPG states that DCC recoverable costs should be clearly identified in the DCC documentation and must be consistent with Ministry provisions. According to the Local Government Act, the recoverable capital costs associated with DCC projects include planning, engineering, and legal costs (Section 935(4)). In practice, this section has been interpreted by the Ministry of Community Services to include the following activities:

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- planning, public consultation, and engineering design
- right-of-way or parkland acquisition
- legal costs
- interim financing
- contract administration and site inspection services
- construction costs
- contingencies
- appropriate net sales tax in full

Ministry policy does not consider inflation eligible for DCC recovery.

2.5.1 Long Term Financing

Costs generated from long term financing (interest charges) may be considered by the province's Inspector of Municipalities under "exceptional circumstances." These "exceptional circumstances" include the construction of large "fixed capacity infrastructure," such as a water treatment plant, which needs to be constructed before growth can occur and before adequate DCCs can be collected.

Specific financial resolutions/conditions must be provided/demonstrated in order for interest charges to be approved by the Inspector of Municipalities as listed in the BPG. In addition, the following information will need to be provided to the Inspector of Municipalities to review and assess the request:

- i) clear indication the DCC reserve fund for the works in question is in a negative cash flow position and that borrowing is required;
- ii) demonstration that this is an exceptional circumstance;
- iii) details of the interest rate and amortization period; and,
- iv) evidence the amendment has been disclosed to the public in the government's Financial Plan, financial statements, and the DCC Report.

Section 935(3) (c) of the Local Government Act does allow funds in DCC reserve accounts to be used to pay for the interest and principal on a debt resulting from DCC project costs.

2.6 BYLAW ADMINISTRATION

Once the Inspector of Municipalities has granted statutory approval of the DCC bylaw and the Council has adopted it, ongoing administration will be required. This will involve collection of charges, monitoring and accounting, credits and rebates, and the process for bylaw amendment.

2.6.1 Time of Collection

Section 933 (5) of the Local Government Act states DCCs are payable at either the time of subdivision approval or at issuance of building permit. The BPG recommends charges be applied as follows:

- i) Single Family At the subdivision approval stage, per building parcel being created.
- ii) Multi-Family At the subdivision approval stage for each dwelling unit permitted to be constructed pursuant to zoning or upon issue of building permit per dwelling being built.
- iii) Commercial/Institutional Upon issue of building permit based on square metre of gross building area.
- iv) Industrial and Public Utility Upon issue of building permit based on hectares of lot area under development.

Upon adoption of the new bylaw, the proposed DCCs will immediately apply to subdivision applications under the following conditions:

- Where an application has been denied.
- Where 'Conditional Approval' has lapsed during the one year in-stream protection period.
- Where final approval of subdivision has not been received prior to the first anniversary date of the new bylaw.

Note that developers of multi-phased subdivisions should be especially aware of significant dates. This includes dates such as that of the DCC bylaw adoption, the new bylaw's anniversary, and the expiry date attached to the Letter of Conditional Approval.

2.6.2 Separate Accounts

Section 935 (1) of the Act stipulates DCCs shall be deposited in a separate special DCC reserve fund. The monies collected (together with reserve fund interest) shall then be used to pay for the capital projects within the DCC program. DCC accounts should be set up in a manner that allows easy reporting of:

- how much money has been collected from DCCs,
- the amount of government grants, if any, received towards the capital DCC projects,
- amounts designated as DCC "credits" or "rebates",
- the amount of funds representing the District's share of project costs in the DCC program,

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- interest earned,
- under/overages, and
- identification of completed projects.

2.7 GRACE PERIOD

When a DCC bylaw is implemented, developers or those parties paying DCCs will be affected by the new charges. The BPG recommends a suitable period of notification before a DCC bylaw is in effect, known as a "Grace Period".

Newspaper articles and notices, information circulars and verbal communications should be provided to the Regional District residents, taxpayers and land developers to provide the opportunity to become aware of the proposed bylaw, the anticipated charge rates required and the approximate timing of the new bylaw's implementation.

The DCC bylaw may state the effective date, or time period (of up to a year) from the date of DCC bylaw adoption, as confirmation of the Grace Period. This would apply to both initial bylaw implementation, and at the time of future updates with rate changes.

As stated in the BPG: "The Grace Period is granted by a municipality as an acknowledgement of the impact DCCs may have on the development industry." The Grace Period serves to allow time for people to be notified of the new DCC rates as related to building permit applications.

2.8 IN-STREAM PROTECTION

"In-Stream Protection" seeks to provide stability for developers with an application in process during the introduction or amendment of DCCs provided the application meets certain time criteria as noted below.

2.8.1 Subdivision Applications

Section 943 of the Local Government Act provides "In-Stream Protection" for subdivision applications, provided the application fees have been paid. A complete application usually means the developer has received a Letter of Conditional Approval of subdivision, or equivalent such as 'Preliminary Layout Approval/Review'.

2.8.2 Building Permit Applications

There are no Local Government Act provisions governing building permit applications similar to the "In-Stream Protection" offered to subdivision applications. Unless specified differently in the District's Building Permit Bylaws, the amount payable is determined in accordance with the rates applicable

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at the time of building permit application. As noted in the BPG: "However, the ruling of Acamar v. City of Surrey (1997) confirms the view that Section 943 only applies to subdivision applications."

Courts have concluded the date when the appropriate DCCs should be calculated is the date sufficient information has been submitted to the municipality for issuance of the permit and not necessarily the actual date of building permit issuance.

2.9 CREDITS, REBATES & LATECOMERS AGREEMENTS

There are no specific references to "DCC credits" or "DCC rebates" in the Local Government Act. The intent of Clause (8) of Section 933 is that developers providing trunk services beyond the local servicing needs of the development shall have those costs deducted from the applicable DCCs payable. This applies provided it is an identified DCC project in the capital plan. To implement the provisions of the legislation, the concepts of a "DCC credit" and a "DCC rebate" are introduced. Policies regarding when the Regional District should offer a credit versus a rebate should be carefully considered. In either case, the DCC accounting system should allow credits and rebates to be monitored and tracked.

2.9.1 Credits

The DCC program is compiled to service new development in an orderly manner. A situation is likely to arise where a developer desires to proceed with a land development before the required trunk services are installed in that area. This type of development can be considered to be "out of sequence". If the Regional District cannot afford the financial burden of additional infrastructure requirements, the Approving Officer would decline the development for the present time. Alternatively, the developer can construct the necessary trunk services, in advance of the proposed timing.

In this case, the out-of-sequence development could be offered a DCC Credit, where the cost of constructing the required trunk works is deducted from the amount of DCCs that would have otherwise been payable. The DCC credit cannot exceed the amount of DCC payable. For phased developments in the same site vicinity, it is assumed that the Regional District would execute a separate agreement with the land developer allowing any applicable excess credits to be carried forward to apply against future development DCCs. Similar agreements should be implemented to allow transfers of credits on property sale prior to building construction for categories where DCCs are collected at the building permit stage. Such credits should be allowed on a proportional basis against subdivided parcels, on a land area basis or anticipated building area basis, as deemed applicable by the Regional District.

2.9.2 Rebates

The DCC program covers trunk main requirements and other facilities beyond the services required for local development areas. Should a developer wish to proceed with a development before the trunk services fronting his property are installed, the Regional District may allow the developer to construct the necessary portion of the works to a trunk standard. The Regional District would then offer a DCC rebate for the incremental portion of the costs beyond the local requirement, following acceptance of the completed trunk works and registration of the development lands. In such cases, the rebate amount could exceed the DCCs payable.

2.9.3 Latecomers Agreement

Where a development constructs non-DCC project trunk works, which benefit adjacent developments, those servicing function costs, or over-sizing costs, may be considered for inclusion in a Latecomers Agreement. The agreement would be in accordance with the provisions of the Local Government Act.

For this particular DCC, the development would be responsible for setting up and costs of the agreement, which would then be administered by the Regional District. Similarly, "out of sequence" DCC projects that cannot be accommodated by the Regional District as detailed in the BPG, where a developer's costs are not recoverable through a DCC credit or rebate, may also be considered for inclusion in a Latecomers Agreement.

2.10 AMENDMENT PROCESS (Minor vs Major)

The average cost of a typical unit of development should not change significantly over time except for the effects of inflation or changes in standards, provided development projections are accurate. However, due to the periodic revision of the OCP, the Regional District's financial situation, changing infrastructure needs, and other factors affecting new development that are beyond the Regional District's control, the DCC bylaw will require future amendment.

In general there are two levels of amendment: a minor adjustment to DCC rates to reflect inflation, and a major review of the DCC for updating of capital project requirements, development projections, and the DCC accounting.

2.10.1 Minor Amendments

A Minor Amendment to the DCC bylaw is an updating based on changes in construction costs and inflationary effects. This type of bylaw amendment requires statutory approval, but due to its nature is anticipated to receive expeditious Ministry approval. This type of amendment should be carried out when necessary, likely once every two to three years.

2.10.2 Major Amendments

A Major Amendment involves a full review of the DCC methodology, including:

- Underlying DCC assumptions
- Broad policy considerations
- Updated development projections
- DCC program costs
- Study and project review updates and timing of proposed capital projects
- Addition of new projects to the DCC program, and deletion of completed capital projects

In accordance with the BPG recommendation, the major amendment to the DCC bylaws should be completed once every five years.

3 GROWTH PROJECTIONS

3.1 METHODOLOGY

Non-residential land uses are categorized separately from residential land use for DCC bylaws. In order to keep the number of designated land uses at a practical level, it is normal practise to consider the groupings under residential, commercial, industrial, institutional and public utility categories.

Data on existing housing units, recent growth statistics and future development, has been obtained from the Regional District which included planning studies for the Fairwinds Development. This information was used to estimate existing and future population service populations, number of dwelling units and the projected growth of commercial, institutional, industrial, and public utility development.

A discussion on projected population and land-use growth to Year 2031 and Build-Out is presented below.

3.2 POPULATION

3.2.1 Current (Year 2011)

The current (Year 2011) residential population was estimated at 5,095 people and is derived from multiplying the number of residential units by the average number of persons per dwelling unit.

The number of residential, multi-family, commercial, and institutional properties serviced was extrapolated from the RDN 2010 water records which showed the following:

- ▶ 1,975 Single-Family services (462 within Fairwinds and 1,493 in the remainder of the service area).
- 238 Multi-Family units (118 townhomes within Fairwinds, 100 mobile home units on Apollo Drive, and 20 condominiums on Brynmarl Road)
- ➤ 22 Commercial services, and
- ➤ 5 Institutional services.

The number of residential units serviced in 2011 was calculated by applying the projected annual growth rate of 2%, resulting in an estimated 2,014 Single-Family and 243 Multi-Family units.

For calculating the population increase from 2010 to 2011, it was deemed appropriate to assume a median average density of 2.3 and 1.9 persons per dwelling unit for Single-Family and Multi-Family, resulting in total service population of 5,095. Current population densities is considered to be slightly lower, therefore, a lower density of 2.2 and 1.9 persons per unit were used to estimate population from 2011 to year 2031 and build-out.

3.2.2 Future (Year 2031 and Build-Out)

Future population estimates are based on growth within the existing boundaries of the Nanoose Bay Peninsula Water System service area. No allowance has been made for future expansion of the service area.

In the February 2007 Nanoose Bay Peninsula Water System Study, the RDN provided an estimate of the total number of residential units to Build-Out in accordance with the OCP. The split of Single-Family to Multi-Family units was calculated based on the same proportion as existed in 2005, resulting in a future total Build-Out of 4,709 residential units, made up of 4,026 Single-Family and 683 Multi-Family. Based on historic average densities of 2.4 and 2.0 persons per Single-Family and Multi-Family unit, respectively, the ultimate Build-Out residential service population was previously calculated at 11,028 (2007 study).

Census Canada and RDN planning data reveals average population per singlefamily residence has steadily dropped during the past 25 years. For the 2011 Census, the average density per occupied dwelling unit was 2.27.

For this study (Year 2011), a lower density of 2.2 and 1.9 persons per unit were applied to Single-Family and Multi-Family, respectively. Applying these lower densities to the residential Build-Out projections from the 2007 Nanoose Bay Peninsula Water System Study, results in a project service population of 10,155, slightly lower than the 2007 study due to the lower capita per dwelling unit.

RDN planning staff indicated the population is expected to increase at an average compounded rate of 2% per year for the foreseeable future. Applying this annual growth rate to the 2011 population estimate, results in a Year 2046 population of 10,189, which is very close to the OCP Build-Out calculation of 10,155. Table 1 presents the current and future population estimates for Year 2031 (the revolving time frame for this DCC study and OCP Build-Out.

Voor	Population	Increase		
lear	Estimate	#	%	
2011	5,095	-	-	
2031	7,570	2,475	49 %	
OCP Build-Out (2046)	10,155	5,060	99 %	

Table 1 – Population Projections, Current, Year 2031 and OCP Build-Out

A discussion of the growth projections for each DCC land-use category follows below.

3.3 **RESIDENTIAL, SINGLE & MULTI-FAMILY ASSUMPTIONS**

Residential growth is separated by density into two categories:

- Single Family, and
- Multi-Family (such as duplex, townhouses, apartments, condominiums)

Current available data (Year 2011) indicates there are 2,010 Single Family and 243 Multi-Family units serviced by the Nanoose Bay Peninsula Water System.

Much of the future development lands are contained within the Fairwinds development mainly the Lakes District Neighbourhood Plan, and the proposed redevelopment of the existing Schooner Cove area designated as the Schooner Cove Neighbourhood Plan.

For the Lakes District, an approximate breakdown between single-family and multi family-development units is made for the total 1,675 allowable units, based on the objectives of the neighbourhood plan.

There are three developments in-stream (Fairwinds Phase 7D, 8, and 11B). In addition, there is a potential 57 unit multi-family development on Andover Road, a 10 lot single family development on Schooner Cove Dr at Dolphin Dr and a multi-family development for the fully serviced Lot 1 on Redden Rd at Dolphin Drive.

Other development within the overall Nanoose Bay Peninsula Water System service area includes the Red Gap area, where the OCP allows 211 more units beyond the existing 289, and small scattered subdivisions, as well as potential redevelopment on existing developed parcels, some with possible rezoning.

For the remainder of Nanoose, allowance has been made for some infill single-family housing.

Table 2 presents the projected residential growth development to OCP Build-Out, which is reached in Year 2046 based on the projected population annual growth of 2% per year. It is noted that the projected OCP Build-Out contains a higher percentage of multi-family units compared to that estimated during the year 2007 Water Study. This is due to changing demographics, the desires and objectives of the Lakes District Neighbourhood Plan, and particularly as a result of proposed Schooner Cove redevelopment as detailed in the Schooner Cove Neighbourhood Plan.

The breakdown estimate between Single Family and Multi-Family should be reviewed and adjusted if necessary in future DCC update studies. Should a higher percentage of single-family development actually occur, it is not anticipated additional infrastructure works would be needed, due to the relatively small difference in design population per unit for the housing types. DCC funding

13

would also not be adversely affected, as the higher DCC charge for single-family residential development would generate additional funds due to its greater burden.

Description	Single Family	Multi Family	Congregate Care
Lakes District Neighbourhood Plan	1,000	674	155
Schooner Cove Neighbourhood Plan	-	360	-
Goodrich Rd (Fairwinds Phase 7D)	25	-	-
Collingwood Dr (Fairwinds Phase 8)	-	18	-
Schooner Ridge (Fairwinds Phase 11)	-	32	-
Andover Road	-	57	-
Schooner Cove Drive	10	-	-
Lot 1, Redden Road	-	3	-
Red Gap Area	100	86	
Remainder of Nanoose	33	-	-
Total Additional to Build-out Projection (Year 2046)	1,167	1,230	155

Table 2 - Projected	l New Residential	Development to	OCP Build-out
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The number of residential units to be constructed by year 2031 was estimated based on the projected population increase of 2,475 as noted in Table 1. This growth is assumed to be accommodated with the construction of 775 Single family units (1,705 people) and 350 Multi-Family units (665 people), plus an allowance for 105 Congregate Care units (105 people).

3.4 CONGREGATE CARE FACILITY ASSUMPTIONS

The RDN's Nanoose Bay Peninsula Official Community Plan (OCP) does not reference the development of Congregate Care Facility units within the Nanoose Bay Peninsula. However, this report considers the potential construction of 155 new Congregate Care Facility units to build-out (Year 2046), with an allowance for 105 units to be constructed by Year 2031.

Congregate care units are expected to average 100 m^2 per unit (100 units per ha) with one person per unit. Site coverage is estimated at approximately 40%.

3.5 COMMERCIAL AND INSTITUTIONAL ASSUMPTIONS

Commercial use includes service commercial, office commercial, and commercial portion of mixed commercial/residential development.

Institutional use includes government offices, recreational facilities, churches, community halls, fire halls, municipal halls and buildings, public and private schools, colleges, and universities, hospitals including private care facilities, and

senior or low-cost housing (depending on the provisions of the Zoning Bylaw).

The BPG recommends commercial and institutional development be charged on the basis of building floor space expressed in square metres. The Regional District has selected to charge on the basis of gross building area expressed in square metres.

It is recommended, and assumed in this report, both Commercial and Institutional DCCs be charged for the construction, or alteration, or extension of a building that results in an increase of the original building area and where the value of the work covered by the building permit is greater than \$100,000. The Bylaw should be worded such that DCCs would only apply to the increased building size, beyond the pre-existing area, or number of housing units for mixed-use developments.

For Institutional DCCs, it is possible an existing school may be closed and demolished after a new school has been built on a different site, resulting in a transfer of the servicing burden. The Bylaw should be worded to allow credit for DCCs payable is such instances, to ensure they are only charged where an increased burden results from redevelopment or new development. DCCs would only apply to any upsized building area, and for new development when it occurs at the old site. If the building use is retained at the old site, for alternative additional use or sale, an increased burden will result, and this DCC credit would not be applicable. Similar provisions should be worded for all Commercial and Institutional buildings, where DCCs would only be charged on the increased building floor area beyond the existing total floor area, to equitably charge for the increased burden.

The Nanoose Bay Peninsula commercial zones currently consist of the Schooner Cove Neighbourhood Centre and the much larger Red Gap Village Centre.

Significant commercial and mixed-use development is planned for the Schooner Cove Neighbourhood Centre and in Lakes District Neighbourhood Plan. It is anticipated at build-out, approximately 12,725 m² of new commercial gross floor space will have been constructed as follows:

- 5,600 m² of commercial at the Red Gap Village Centre,
- 2,325 m² of commercial in the Schooner Cove Neighbourhood Centre, and
- 4,800 m² of mixed-use buildings in the Lakes District.

By 2031, it is estimated the Red Gap expansion and Schooner Cove will be fully developed, and one-third of the Lakes District commercial, for a total of 9,125 m².

For Institutional, it is anticipated $11,520 \text{ m}^2$ of new gross floor space will be developed by Build-Out as follows:

• redevelopment of Nanoose Bay Elementary School, with a 50% size

increase totalling 2,320 m².

• $9,200 \text{ m}^2$ for the Lakehouse Centre in the Lakes District.

It is anticipated Institutional development will be fully built by 2031.

3.6 INDUSTRIAL & PUBLIC UTILITY ASSUMPTIONS

Industrial use includes light, medium or heavy industrial uses, warehouses, ministorage, minor repair, fabrication and storage facilities or space, and fuel storage areas.

Public utility use includes BC Hydro, Telus, FortisBC Gas, Shaw Cablesystems, and similar utility storage, distribution and plant facilities.

As determined and agreed upon through discussions with RDN staff, Industrial development is not applicable to this report at this time, as there are no industrial designated lands in the OCP. Similarly, no Public Utility use facilities that burden the water system are anticipated. Therefore, the Bylaw should be worded to ensure Industrial & Public Utility DCCs are charged on a case by case basis.

Should the situation change in the future for Industrial or Public Utility land uses, the anticipated burden would be established, and the appropriate DCC charges would apply and be included in a Minor update to the DCC Bylaw.

A summary of the land-use growth projections presented above (Sections 3.3 through 3.6) for Year 2031 and OCP Build-Out is presented below in Table 3.

Land-Use	Additional By Year 2031	Total At OCP Build-Out (Year 2046)
Residential		
- Single Family	775 units	1,167 units
- Multi-Family	350 units	1,230 units
Congregate Care	105 units	155 units
Commercial	9,125 m ²	$12,725 \text{ m}^2$
Institutional	$11,520 \text{ m}^2$	$11,520 \text{ m}^2$
Industrial	-	-
Public Utility	-	-

PROJECT COST ALLOCATION

4.1 INTRODUCTION

4

With the establishment of a list of capital projects and their estimated construction costs, the portion of the project cost attributed to development is calculated using the equation:

	DCP	=	PC – GG – BEU – AF – RF
Where	:		
	DCP	=	Development Cost Portion
	PC	=	Project Cost
	GG	=	Government Grants
	BEU	=	Benefit to Existing Users
	AF	=	Assist Factor
	RF	=	Reserve Funds

A discussion on each category and the amounts used in this study is presented the following sections.

The total Regional District's contribution to the DCC projects consists of:

- i) total capital cost attributed to existing users (BEU),
- ii) assist factor (AF), and
- iii) portion of costs associated with developments exempt from DCCs (see previous discussion under Section 2.2).

4.2 PROJECT COST

Project cost estimates in this report are preliminary, order of magnitude. No preliminary or detail engineering work has been completed, and as such, the costs are considered Class D estimates. They are suitable for project control budgets, for program planning, and to obtain approval in principle.

Construction cost estimates were prepared and updated from earlier studies as appropriate, together with consideration of recent project unit costs provided by the RDN.

The estimates include a nominal 15% allowance for engineering design, tendering, contract administration, inspection; and record drawing production. The estimates includes a 30% contingency allowance to cover RDN administration, legal and interim financing costs, as well as additional or unexpected engineering and construction expenditures which may arise as the projects proceed to detailed design and construction completion.

17

No allowance has been made for inflation as this is not permitted under the Local Government Act. The impact of inflation should be reviewed regularly as time and projects proceed, and project costs adjusted accordingly as part of a minor amendment to DCCs.

No allowance has been made for long-term financing. As noted previously in Section 2.5, inclusion of long-term financing costs require Ministry approval and are only granted under special circumstances for "fixed capacity infrastructure". Also, for the purpose of this study it is assumed that amortisation periods for long-term financing will not extend past 2032.

Construction costs are in 2013 dollars and are exclusive of GST (The October 2013 construction cost index (ENR CCI) value was 9,689).

4.3 GOVERNMENT GRANTS

Government grants, including Federal/Provincial infrastructure funding programs and Provincial revenue sharing programs may be available for projects, particularly those that contribute towards regional water supply and addressing water quality issues. If awarded, these can provide:

- A significant portion of study cost recovery.
- 25%, 33.3% or 75 to 80% Provincial Government funding, through various provincial programs.
- A total of 66.7% combined assistance under Infrastructure Funding Programs supported through joint Federal / Provincial agreements.

Given the extremely limited potential for availability, successful application, and award of grants under the ongoing anticipated economic climate, the calculations have assumed that no grants will be available for listed projects. An assumption of 0% has therefore been made and shown under the government grant column of the spreadsheet.

The Regional District should still continue to make every effort to obtain financial assistance towards all key eligible projects, particularly the larger scale and environmental type of system expansions. Small studies, reviews, and major DCC updates may prove to be eligible for receipt of some funding, such as a 50% study grant.

4.4 **BENEFIT TO EXISTING USERS**

Capital costs for DCC calculations must be net costs. It is recognized that most improvements within the Regional District provide a partial benefit to the existing residents and users.

The cost for each project applicable to existing users is deducted from the total project expenditure, after subtracting the government grant contribution, to calculate the allowable DCC recoverable portion of the project. Assumptions on the allocation are shown on the table detailing the DCC calculation.

4.5 MUNICIPAL ASSIST FACTOR

Section 933 (2) of the Local Government Act states that the purpose of DCCs is to provide funds to "assist" local government in paying costs of infrastructure. By not allowing 100% of the growth related costs to be charged to new developments, the legislation implicitly requires an "assist factor", with a minimum of 1%. It is important to note that this assist factor is separate from the allocation of project costs between new development and existing users, which is considered on a project specific basis.

The chosen assist factor will reflect the Regional District's desire to encourage development, and is largely a political decision. Most DCC bylaws use assist factors in the 1% to 10% range. Under certain conditions, the assist factor is adjusted to maintain DCC rates within a perceived affordable level. When the economy is slow, a higher assist factor, such as 10% can be used to encourage new development. With a healthy development climate, a low assist factor, such as 1% is considered appropriate.

With the above considerations in mind, the Regional District has chosen a 1% assist factor.

4.6 DCC RESERVE FUNDS

The reserve funds are the total amounts that have been collected from developers, and not yet been spent on DCC projects. Consideration of reserve funds in the DCC calculation would only be required at the time of a DCC update review, not for a new bylaw.

19

5 CALCULATION METHOD

5.1 COMMON UNIT CALCULATION METHOD

DCCs are calculated in accordance with the recommendation of the BPG using a common unit basis for each function (roads, storm drainage, sanitary sewer, waterworks and parks) to provide an equitable basis for the calculations.

For water supply and distribution, costs are related using an equivalent population demand, which is based on average densities and demand/usage, for each of the land-use categories.

6 DEVELOPMENT COST CHARGES

6.1 **PROPOSED WATERWORKS**

The proposed waterworks projects are derived from information contained in the followings studies as well as current knowledge of future projects, the RDN Capital Works Plan, and input from RDN staff:

- Nanoose Peninsula Water Audit Study, January 2006,
- Nanoose Peninsula Water Distribution Study, February 2007, and
- Nanoose Peninsula Water System Capital Planning Study, September 2008.

The waterwork DCCS are to be imposed on the Nanoose Bay Peninsula Water System, in keeping with the BPG.

A brief discussion of the various types of waterworks projects from supply and treatment to distribution and metering, are presented below. The location and proposed construction year for each project, excluding overall system instrumentation, such as Supervisory Control and Data Acquisition (SCADA) and metering, is shown on the Water System Improvements Schematic located in Appendix A.

6.1.1 Water Supply and Treatment

Englishman River Water Service

In the 1990s, the Arrowsmith Water Service (AWS) was formed and tasked with developing the Englishman River water supply. The goal was to ensure an abundant source of high quality water would be available to the Nanoose, Parksville, French Creek, and Qualicum Beach areas for the foreseeable future. However for works beyond the Arrowsmith Dam, the joint venture was recently reformed to include Nanoose and Parksville only, with Nanoose's portion equalling 26%. This reformed joint venture is referred to as the Englishman River Water Service (ERWS).

The capital cost of the ERWS projects, including the river intake, water treatment plant, supply and transmission mains, aquifer storage and recovery, and land acquisition has been estimated to be \$41,660,987, with RDN's 26% portion equalling \$10,831,856 on October 2013 dollars.

Groundwater Wells

If significant development occurs prior to the implementation of the ERWS, additional well capacity will be required. It is anticipated the capacity increase will need to be in service prior to sufficient DCC funds being generated. It is anticipated therefore, the RDN would have the works installed by a developer and on land secured by the same developer. Under this scenario, the developer would receive a DCC credit for cost of the works and approved "fair market" value for

the land. The credit would be paid following acceptance of the completed works.

6.1.2 Watermains

Trunk Mains

Several trunk watermains are required by 2031 to meet the Fairwinds requirements for servicing adjacent lands in the Lakes District and Schooner Cove neighbourhoods. It is anticipated these trunk mains will be required prior to sufficient DCC funds being generated. Therefore, the RDN would have the works installed by the developer. Under this scenario, the developer may receive a DCC rebate for the incremental portion of the costs beyond the local requirement. The rebate would occur following acceptance of the completed trunk works and registration of the applicable portion of subdivision lands. In such cases, the rebate amount could exceed the DCCs payable during the initial subdivision phases.

Distribution Watermains

Local projects, mostly involving replacement of aged distribution system and service connection piping, some with upsizing to meet current design flow needs, have most of the costs allocated to existing users. The small benefit to new development allows for some infill subdivision and potential redevelopment/small rezonings on such local streets.

6.1.3 Studies, SCADA and Radio-read Water Meters

Allowance has been made for an Fairwinds Reservoir Pre-design Study, major updates to the DCC Bylaw once every five years, implementation and updates to a system wide Supervisory Control and Data Acquisition (SCADA) system and conversion of water meters to radio read to improve system capacity through leak detection and water use tracking and resulting targeted water conservation programs.

6.2 COMMON UNIT CALCULATIONS

Development cost charges were calculated based on the common unit of equivalent population served for each of the six land use categories.

For Single-Family and Multi-Family development, the equivalent population factor is assumed to be equal to the average population per unit as anticipated by RDN staff.

For Congregate Care, a population factor of 1 person per unit was assumed.

Equivalent population factors for the Commercial and Institutional categories were reviewed initially by comparing the 2010 water consumption data provided by RDN staff and dividing it by the per-capita average daily consumption and approximate building footprint areas. These calculations assist in producing an estimated equivalent population factor. For the commercial category, a value of

0.005 persons per square metre equivalent was obtained. For new development it is anticipated that smaller floor-space commercial units will be built compared to existing, where an approximate doubling of the load is likely. As this would closely match the 0.009 p/m^2 of the City of Nanaimo sanitary sewer standards, an equivalent population demand for commercial of 0.01 p/m^2 has been used in the calculations.

For Institutional, the City of Nanaimo standard of 0.005 p/m^2 is considered to be appropriate for use in the projections.

These equivalent population demand factors should be monitored against actual demand experienced as new development occurs and appropriate adjustments made in future major amendments of the DCC Bylaw.

Table 4 shows the equivalent population calculation to Year 2031 (the revolving time frame for this study) for each land-use category.

Land Use Category	Estimate Develop To Year	d New oment 2031	Equivalent Population Factor	Equivalent New Population
Single Family Res.	775	units	2.2	1,705
Multi-Family Res.	350	units	1.9	665
Congregate Care Facility	105	units	1.0	105
Commercial	9,125	m^2	0.01	91
Institutional	11,520	m^2	0.005	58
Industrial & Public Utility	n/a		n/a	n/a
	To	tal Equiv	valent Population	2,624

Table 4 - Equivalent New Population, Year 2031

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	E Benefit to Existing Users	F Benefit to New Develop. (D - E)	G 1% Munipal Assist (E 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%	(A - B) 59,200	59,200	(D - <u>E</u>) 0	(F X 176) 0	59,200	0 (D - H)
N2014-2 N2014-3	Fairwinds Reservoir Predesign Study Garry Oak Drive PRV	13,800 52 300	0	100%	13,800 52 300	13,800 52 300	0	0	13,800 52 300	0
N2014-3	Harlequin/Sea Lion Loop & Footbridge (System Improvements)	237,500	0	75%	237,500	178,125	59,375	0 594	178,719	58,781
N2015-1	4 Arbutus Crescent Main (System Improvements)	362,800 167 100	0	90%	167 100	150 390	16 710	167	304,019 150,557	58,781
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% 25%	78,000	70,200	7,800	78	70,278	7,722
N2015-5	Wallbrook Wells No. 2, 3 & 4 Upgrades (Potential DCC Credit)	750,000	0	0%	750,000	50,500 0	750,000	7,500	7,500	742,500
TOTAL 201: N2016-1	5 Armetrong / McDivitt Loon (System Improvements)	3,284,300	0	00%	200 600	180 540	20.060	201	1,273,786	2,010,514
N2016-2	Arbutus Pump Station Improvements	126,400	0	75%	126,400	94,800	31,600	316	95,116	31,284
N2016-3	West Bay PRV Building Upgrade	12,700	0	25%	12,700	3,175	9,525	95	3,270 279 127	9,430
N2017-1	Marine Drive Watermain Replacement (2016)	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% 50%	239,500	215,550	23,950	240	215,790	23,711
N2017-3	Bonnington Drive Loop Main, Phase 1 (Potential DCC Rebate)	261,200	0	25%	223,700 261,200	65,300	195,900	1,959	67,259	193,941
N2017-5	Englishman River Water Service (RDN's 26% Contribution)	10,831,856 11 717 356	0	34%	10,831,856	3,682,831	7,149,025	71,490	3,754,321 4 293 113	7,077,535
N2018-1	West Bay Pumphouse Upgrade	114,900	0	25%	114,900	28,725	86,175	862	29,587	85,313
N2018-2 N2018-3	Dolphin Drive Main Outrigger Road Main (System Improvements)	33,600 122,600	0	90% 10%	33,600	30,240	3,360 110 340	34 1 103	30,274 13,363	3,326 109 237
N2018-4	DCC Major Update Study	11,500	Ő	50%	11,500	5,750	5,750	58	5,808	5,693
N2018-5	Bonnington Drive Loop Main, Phase 2 (Potential DCC Rebate)	313,200 595 800	0	25%	313,200	78,300	234,900	2,349	80,649 159,680	<u>232,551</u> 436 120
N2019-1	Dorcas Point Rd Main (System Improvements)	612,671	0	90%	612,671	551,404	61,267	613	552,017	60,654
N2019-2 TOTAL 201	Schooner Cove Drive Loop Main, Phase 1 (Potential DCC Rebate)	156,800 769.471	0	25%	156,800	39,200	117,600	1,176	40,376 592,393	<u>116,424</u> 177.078
N2020-1	SCADA - Initial System (0010)	229,700	0	50%	229,700	114,850	114,850	1,149	115,999	113,702
TOTAL 202	Beaver Creek wharf Rd Northwest Bay to Madrona Drive (2012)	303,000	0	95%	73,300	69,635	3,665	37	185,670	<u>3,628</u> 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 N2021-3	Jenkins Crescent Watermain Replacement (2012) (2012)	342,600 73,300	0	95% 95%	342,600 73,300	325,470 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	225,879	651,321 700 371
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	76,325 105 363	3,975
N2023-1	SCADA - Continue Expanding/Programming	57,500	0	50%	57,500	28,750	28,750	288	29,038	28,463
N2023-2 N2023-3	Strougler Rd Watermain Replacement (2012) DCC Major Update Study	73,300	0	95% 50%	73,300	69,635 5,750	3,665 5,750	37 58	69,672 5,808	3,628 5,693
N2023-4	New Fairwinds Reservoir	775,000	Ő	50%	775,000	387,500	387,500	3,875	391,375	383,625
TOTAL 202 N2024-1	3 SCADA - Continue Expanding/Programming	917,300 57,500	0	50%	57,500	28,750	28,750	288	495,892 29.038	<u>421,408</u> 28,463
TOTAL 202		57,500		050/	05,500	24,005	4.075		29,038	28,463
N2025-1 N2025-2	Yeo Street Watermain Replacement(2012)Madrona Drive W/main Replacement(2012)	85,500 393,600	0	95% 95%	85,500 393,600	81,225 373,920	4,275 19,680	43 197	374,117	4,232 19,483
TOTAL 202	5 Ballance Bood Watermain Deplecement (2012)	479,100	0	05%	162.000	152,000	9,100	01	455,385	23,715
N2026-1 N2026-2	Gerald Street Watermain Replacement (2012)	131,800	0	95% 95%	131,800	125,210	6, <u>5</u> 90	66	125,276	8,019 <u>6,5</u> 24
TOTAL 202 N2027-1	6 Radio Read Water Meters - Initial System	293,800	0	Q00/2	344 600	310 1 40	34 460	215	279,257 310 /95	14,543
N2027-2	Douglas Crescent Watermain Replacement (2012)	48,300	0	95%	48,300	45,885	2,415	24	45,909	2,391
TOTAL 202 N2028-1	7 Ida Lane Watermain Replacement (2014)	392,900	0	95%	56 200	53 300	2 810	28	356,394 53,418	36,506 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 N2028-4	DCC Major Update Study Acacia Road Watermain Replacement (2012)	11,500 131,800	0	50% 95%	11,500 131,800	5,750 125 210	5,750	58 66	5,808 125,276	5,693 6 524
TOTAL 202		314,400	•	0070	101,000	120,210	5,000		288,026	26,374
N2029-1 N2029-2	Leisure Way Watermain Replacement (2014) Schirra Drive Watermain Replacement (2014)	112,300 146,500	0	95% 95%	112,300 146,500	106,685 139,175	5,615 7,325	56 73	106,741 139,248	5,559 7,252
N2029-3	Radio Read Water Meters - Continue System Conversion	114,900	Ō	90%	114,900	103,410	11,490	115	103,525	11,375
N2030-1	Sheppard Road Watermain Replacement (2014)	3/3,/00 34,200	0	95%	34,200	32,490	1,710	17	349,514 32,507	24,186 1.693
N2030-2	Armstrong Crescent Watermain Replacement (2014)	300,200	0	95%	300,200	285,190	15,010	150	285,340	14,860
TOTAL 203		449,300	0	90%	114,900	103,410	11,490	115	421,372	<u> </u>
N2031-1	White Avenue Watermain Replacement (2014)	34,200	0	95%	34,200	32,490	1,710	17	32,507	1,693
N2031-2 N2031-3	Radio Read Water Meters - Continue System Conversion (2014)	114,900	0	90%	336,800 114,900	103,410	11,490	115	103,525	11,375
N2031-4	Apollo Drive Watermain Replacement (2014)	19,600	0	95% 05%	19,600	18,620	980	10	18,630	970
N2031-5 N2031-6	Radio Read Water Meters - Complete System Conversion (2014)	46,200 28,800	0	90%	46,200 <u>28,8</u> 00	43,890 25,920	2,310 2,880	29	43,913 25,949	2,287 2,851
TOTAL 203		580,500							544,652	35,848
	TOTALS	\$22,719,327	\$0		\$22,719,327	\$10,945,168	\$11,774,159	\$117,742	\$11,062,910	\$11,656,417

GROWTH PROJECT & TOTAL DCC REVENUE PER LAND USE

Land Use Category	Pro	jected Growth	Service Population	Re: Service	sulting Population	Portion of Total Cost
	(#)	(Unit)	Factor	(#)	. (%)	(\$)
Single Family	775	Dwelling Unit	2.20	1,705	65.1%	\$7,585,569.23
Multi-Family	390	Dwelling Unit	1.90	741	28.3%	\$3,296,720
Congregate Care Facility	25	Unit	1.00	25	1.0%	\$111,225
Commercial	9,125	m ² , gross floor area	0.0100	91	3.5%	\$404,860
Institutional	11,520	m ² , gross floor area	0.0050	58	2.2%	\$258,043
Industrial	0	ha	0	0	0.0%	\$0
			Totals	2,620	100%	\$11,656,417

Land Use Category	Projected Growth (#)	Portion of Total Cost (\$)	Resulting DCC (\$ per unit)	(Unit)
Single Family	775	\$7,585,569	\$9,787.83	Dwelling Unit
Multi-Family	390	\$3,296,720	\$8,453.13	Dwelling Unit
Cong. Care Fac.	25	\$111,225	\$4,449.01	Unit
Commercial	9,125	\$404,860	\$44.37	per m ² of gross floor area
Institutional	11,520	\$258,043	\$22.40	per m ² of gross floor area
Industrial	0	\$0	\$0.00	per ha of site area
		\$11,656,417		

6.3 COST CHARGE CALCULATIONS

Table 5 presents a list of the water projects by name and description along with a numbering system containing a notation of anticipated construction year and project number.

For each project, an assessment of the benefit to existing users is made. Examples are presented below:

- N2017-5 Englishman River Water Service. An allocation of 34% benefit to existing users has been used. This was calculated taking the estimated "build-out" Max Day demand (10,344 m³/day), subtracting the estimated "new-development" Max Day demand (6,816 m³/day), then dividing the difference (3,528 m³/day) by 10,344 m³/day (the estimated "build-out" Max Day demand). For the purpose of this calculation the estimated demands are ERWS surface water supply demands only and do not include any available groundwater supplies. These ERWS demands were estimated and from projections made by the Associated Engineering predesign team, which included Koers & Associates and Kerr Wood Leidel.
- N2015-5, Wallbrook Well improvements are considered to be 100% benefit to new development. The cost estimate of \$750,000 does not include an allowance for land acquisition.
- Trunk watermain projects N2015-4, Collingwood Drive Loop Main, N2017-4 and N2018-5 Bonnington Drive Loop Main, and N2019-2 and N2021-4 Schooner Cove Drive Loop Main are required to service new development. The benefit to existing users is estimated at 25%, based on the mains servicing an additional 1,800 new units compared to the approximately 600 existing units.
- N2014-4, Harlequin/Sea Lion Loop and Footbridge, is assessed at 75% to existing users as it is a system improvement, leaving 25% benefitting new development through improved flow capability for the relatively small potential additional development or redevelopment it serves.
- N2016-3 and N2018-1 West Bay PRV and Building Upgrade, provide some improvement to existing users and a much larger design capacity to suit growth, and are therefore assessed at 25% benefit to existing users.
- N2023-4, Fairwinds Reservoir, is assessed at 50% benefit to existing users. This involves the construction of a new water reservoir at the existing Fairwinds reservoir site, providing additional storage required to service the future Nanoose Bay Peninsula demands.
- Studies (N2014-2, N2018-4, N2023-3, and N2028-3) and SCADA projects (N2020-1, N2021-1, N2022,-1, N2023-1, and N2024-1) and are

assessed at 50% benefit to existing users. This considers new development equivalent population approximately doubling, plus additional commercial and institutional building loading.

• Radio-read meters (N2027-1, N2028-2, N2029-3, N2030-3, and N3031-3) are estimated to have a 90% benefit to existing users, with 10% benefit to new development through anticipated improved system capacity. It is expected that this will be achieved through the anticipated leak detection and water conservation monitoring and improvements available with radio-read metering by improved water-use tracking.

The resulting total annual net DCC Recoverable and cost to Existing Users is shown in the last two columns (H & I). The cumulative total for each is also shown. The portion of the total cumulative cost attributed to each land-use categories is calculated based on its percentage of the equivalent service population.

The unit DCC for each land use is calculated by dividing the calculated total DCC cost for each land-use by the land-use projected total growth. A summary of the DCC per land-use is shown in Table 6.

DCC Category	Charge	Unit
Single Family	\$9,787.83	Dwelling Unit
Multi Family	\$8,453.13	Dwelling Unit
Congregate Care Facility	\$4,449.01	Unit
Commercial	\$44.37	per m ² of gross floor area
Institutional	\$22.40	per m ² of gross floor area
Industrial	\$0.00	per ha of site area

Table 6 – DCC Summary

DCCs for Single Family residential development would be collected at the subdivision stage. Cost charges for residential units are expected to be applied to all forms of single-family development, including bare-land strata developments.

DCCs for Multi-Family land uses, including mobile and modular homes, would be collected at the time of building permit issuance, when the exact number of units in the development is known.

DCCs for Commercial and Institutional land uses would be collected at the time of building permit issuance, when charges related to floor space are easily calculated.

DCC for Industrial and Public Utility land uses would be collected at the time of building permit issuance.

A summary of the existing users and DCC recoverable annual costs are summarized in Table 7.

Existing	g User Fees	DCC R	ecoverable
Year	Cost	Year	Cost
2014	\$304,019	2014	\$58,781
2015	\$1,273,786	2015	\$2,010,514
2016	\$279,127	2016	\$60,573
2017	\$3,918,142	2017	\$6,717,358
2018	\$159,680	2018	\$436,120
2019	\$592,393	2019	\$177,078
2020	\$185,670	2020	\$117,330
2021	\$650,229	2021	\$711,371
2022	\$105,363	2022	\$32,437
2023	\$394,538	2023	\$322,062
2024	\$29,038	2024	\$28,463
2025	\$455,385	2025	\$23,715
2026	\$279,257	2026	\$14,543
2027	\$356,394	2027	\$36,506
2028	\$288,026	2028	\$26,374
2029	\$349,514	2029	\$24,186
2030	\$421,372	2030	\$27,928
2031	\$544,652	2031	\$35,848
Total	\$10,586,585	Total	\$10,850,186

 Table 7 – Existing Users & DCC Recoverable Annual Costs Comparison

7

7.1 SUMMARY

To receive expedient approval of the amended DCC bylaw, the Ministry of Community Services publication *Development Cost Charge - Best Practices Guide* should be followed in amending the bylaw preparation, including stakeholder consultation and public notifications.

The completed 'Ministry Submission Summary Checklist' a copy of which is presented in Appendix B, should be completed and forwarded with the amended bylaw for the Ministry's review and approval.

The DCCs are established to Year 2031 and are on a revolving time basis.

If development occurs prior to the implementation of the ERWS, additional well capacity will be required. This capacity expansion may be required before sufficient DCC funds are available. In accordance with the BPG, the works could be installed by the developer. A DCC rebate would then be paid to the developer for the incremental portion of the costs beyond the local requirement. This would occur following acceptance of the completed well works.

Several trunk watermains are required to accommodate Fairwinds requirements for servicing adjacent lands in the Lakes District and Schooner Cove neighbourhoods. It is anticipated that these trunk mains will require being in service prior to sufficient DCC funds being generated. If installed by the developer, a DCC rebate would be paid to the developer for the incremental portion of the costs beyond the local requirement. This would occur following acceptance of the completed trunk works and registration of the applicable portion of subdivision lands.

In-stream protection is to be provided to any complete subdivision application, provided application fees have been paid, as per the Local Government Act Section 943.

When a DCC bylaw is implemented or amended, those parties paying DCCs will be affected by the new or amended charges. As project funding is generally arranged in the early stages of a development, sometimes even in advance of obtaining rezoning, cost increases can have a significant impact on a project's viability. As such a "grace period" is recommended before new or amended DCCs are brought in. The "grace period" is a length of time providing notification before the new or amended DCCs are adopted. The "grace period" is provided by the municipality as an acknowledgement to the development industry the impact DCCs may have on their business.

Table 6 provides a summary of the proposed DCC for each function by development (land-use) category.

27

Table 7 provides a comparison of the annual cost of the DCC program to existing system users and DCC recoverable costs. The existing user's column includes the capital works projects' percentage benefit to existing plus the 1% municipal assist factor applied against the developers' portion of the costs. These are the total funds the District needs to provide in order to carry out the DCC projects listed in the tables.

APPENDIX A

Water System Improvements Schematic

<u>LEGEND</u>



WATERMAIN CONSTRUCTION OR REPLACEMENT

STRUCTURE OR COMPONENT CONSTRUCTION OR MODIFICATION

PROJECT YEAR & NUMBER, AND DECRIPTION. (TYP.)







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APPENDIX B

Ministry Submission Summary Checklist

MUNICIPALITY/REGIONAL DISTRICT MINISTRY OF COMMUNITY SERVICES SUBMISSION SUMMARY CHECKLIST

(to be completed by local government) DCC BYLAW(S) NO.(S)

Is this bylaw a ⊠ New DCC Bylaw □ Major DCC Bylaw Amendment □ Minor DCC Bylaw Amendment

Please complete checklist by marking the appropriate boxes, and providing references to background material and other requested information. If DCCs are established on a basis <u>other than</u> the DCC Best Practices Guide, provide a brief explanation for the approach used. If space is insufficient, reference pages in submission where this is covered or append additional pages.

	DCC RECOMMENDED BEST PRACTICE	Submission Page reference
1.	 Did the development of this DCC bylaw include: ☑ a full public process? Yes □ input from stakeholders? □ Council input only? 	3
	Why? Local developers and the general public have been kept advised of the proposed DCC bylaw implementation. The RDN intends to follow the Stakeholder Participation Strategy identified in the best practices guide.	3
2.	Are the Road DCCs established: on a municipal-wide basis? No on an area specific basis?	
	Why? Waterworks DCCs only	
3.	Are the Storm drainage DCCs established: on a municipal-wide basis? No on an area specific basis?	
	Why? Waterworks DCCs only	
4.	Are the Sanitary sewer DCCs established: on a municipal-wide basis? on an area specific basis?	
	Why? Waterworks DCCs only	

	DCC RECOMMENDED BEST PRACTICE	Submission Page reference
5.	Are Water DCCs established: ⊠ on a municipal-wide basis? Yes □ on an area specific basis?	21
	Why? Waterworks only	21
6.	Are Parkland and parkland improvement DCCs established: on a municipal-wide basis? No on an area specific basis?	
	Why? Waterworks only	
7.	Is the DCC time frame:	1
	Why? DCC program is tied into the same 20-year capital expenditure plan developed in 2011, to year 2031	1
8.	 Are residential DCC categories established on the basis of: ☐ density gradient? ⊠ building form? ☐ other? 	13
	Why? This is the traditional approach, with established records of average population per unit available to assist in the projection estimates.	13
9.(a)	 Are residential DCCs imposed on the basis of: ☑ development units? Yes □ floor space? □ other? 	13
	If single-family residential DCCs are imposed on the basis of floor space, does the local government have a bylaw in place allowing DCCs to be levied at the building permit stage on fewer than 4 self-contained dwelling units?	
	Why? Unit projection information is available.	13

	DCC RECOMMENDED BEST PRACTICE	Submission Page reference
9.(b)	 Are commercial and institutional DCCs imposed on the basis of: ☑ floor space? Yes, per square metre of gross building floor space. □ other? 	14
	Why? Reliable, as records of equivalent to residential impacts are available.	14
9.(c)	 Are industrial DCCs imposed on the basis of: ⊠ gross site area? Yes, per square meter of gross site area. □ other? 	16
	Why? Reliable, as historical record of equivalent to residential impacts are available.	16
10.	Is the DCC program consistent with: ☑ the Local Government Act? Yes ☑ Regional Growth Strategy? Yes ☑ Official Community Plan? Yes ☐ Master Transportation Plan? ☐ Master Parks Plan? ☐ Liquid Waste Management Plan?	1, 2, 3, 4 11, 16 11
	 ☐ Affordable Housing Policy? ☑ Five Year Financial Plan Yes 	21
	Why not? Other plans are not applicable to this DCC bylaw.	
11.	Are DCC recoverable costs, consistent with Ministry policy, clearly identified in the DCC documentation:☑ Cost allocation between new and existing? Yes	19
	 ☑ Grant Assistance? Yes ☑ Developer Contribution? Yes ☑ Municipal assist Factor? Yes ☑ Interim Financing? Yes ☑ Other: 	18 22 19 5
	Why? To conform to the BPG.	
*	Is capital cost information provided for: □ Roads? □ Storm Drainage? □ Sanitary Sewer? ⊠ Water? Yes □ Parkland? □ Parkland improvements?	After 23

	DCC RECOMMENDED BEST PRAC	CTICE	Submission Page reference
12.	Are DCC recoverable costs which include interest clearly identified in the DCC documentation as follows:		
	 ☑ Interest on long-term debt is <i>excluded</i>? Yes □ For specific projects, interest on long-term debt is <i>in</i> □ Other? 	cluded?	5
	If interest on long-term debt in included for specific projects, does the DCC submission include:		
	☐ A council/board resolution authorizing the use of interest?		
	Confirmation that the interest applied does not exceed the MFA		
	rate <u>or</u> if borrowing has already been undertaken, the actual rate		
	providing it does not exceed the MFA rate?		
	DCC program time frame?		
	Evidence that the current DCC reserve fund balance is insufficient for the work in question?		
	 Demonstration that the project is an exceptional circumstance 		
	(fixed capacity, out-of-sequence, or Greenfield)?		
	Evidence of public consultation and disclosure in the and DCC report regarding inclusion of interest?	e financial plan	
13.	Does the municipal assist factor reflect:		10
	☑ the community's' financial support towards the financing of services for development? Yes		19
	□ other?		
	Why? Low assist factor is considered appropriate at this time, with the very healthy development climate on Vancouver Island.		19
	Has a municipal assist factor been provided for:	0/	
		%	
	Sanitary Sewer? Assist factor	%	10
	\boxtimes Water? Yes Assist factor \boxtimes Park land? Assist factor	<u> </u>	19
	\square Park land improvements? Assist factor	%	
14.	Are DCCs for single family developments to be collect ⊠ at the time of subdivision approval? Yes □ other?	ed:	7
	Why? Recommended by the BPG. Subdivision approval collection creates an orderly flow of funds to allow for completion of the required works in a timely schedule, to achieve the necessary level of service.		7

	DCC RECOMMENDED BEST PRACTICE	Submission Page reference
15.	 Are DCCs for multi-family land uses to be collected: □ at the time of subdivision? ⊠ at the time of building permit issuance? Yes 	7
	Why? As the BPG. Charges related to floorspace and the exact number of units are easily calculated at the building permit stage.	7
16.	Is a DCC monitoring and accounting system to provide a clear basis for the tracking of projects and the financial status of DCC accounts: ☐ in place? ⊠ to be set up? Yes	8
	Why? This is a new DCC bylaw. System will be set up once bylaw is implemented.	
17.	Is a suitable period of notification before a new DCC bylaw is in effect, known as a grace period:	7
	Why not?	
18.(a)	Does the DCC bylaw set out the situations in which a DCC credit or rebate are to be given?	8
18.(b)	If no, has Council adopted a policy statement that clearly identifies situations in which a DCC credit or rebate should be given or would be considered by Council? Yes No If yes, a copy of the policy statement is included with this submission.	Ref
	If no, why not?	

	DCC RECOMMENDED BEST PRACTICE	Submission Page reference
19.	 Has a process to provide for minor routine amendments to the DCC bylaw to reflect changes in construction and other capital costs: ⊠ been established? Yes not considered necessary? other? 	9
	Why? To reflect changes in inflation, or changes in construction costs.	9
20.	 Has a process to provide for major amendments to the DCC bylaw, involving a full review of DCC issues and methodology, to be completed not more than once every five years: ☑ been established? Yes ☐ not considered necessary? ☐ other? 	9
	Why? To review DCC assumptions, updated development projections, program costs, reserve funds, system update studies, project timing, new projects, costs.	9
	Contact Position Phone *Signed by Position (*Signature of the Head of engineering, finance or planning for the local government.) Signed by (second signature optional) Deliver	

MUNICIPALITY

SUMMARY OF DCCs - BYLAW NO(S).

	Residential (per single family dwelling)	Commercial (per square metre)	Industrial (per square metre) [per hectare]	Institutional (per square metre)
Roads				
Storm Drainage				
Sanitary Sewer				
Water	\$9,787.83	\$44.37		\$22.40
Park Land				
Park Land Improvements – Included in Park Land				
Total	\$9,787.83	\$44.37		\$22.40

Note: If not on a municipal-wide basis, please indicate minimum and maximum charges.

For amendment bylaw, please indicate nature of change	Existing	Proposed
New DCC service added		
• Time horizon		
Capital costs		
• Weighting of types of development (residential, commercial, industrial, etc.)		
Potential development		
• Allocation of benefit between existing and potential units of development		
• Assist factor		
Inclusion of Specific Interest Charges		
• Provide that a charge is payable where there is fewer than 4 self-contained dwelling units		
• Establish an amount higher than the \$50,000 minimum provided for in the <i>Local Government Act</i> .		
• Is a suitable period of notification before a new DCC bylaw in effect, known as a grace period?		
Other: (please list)		