REPORT TO THE CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, JULY 17, 2019

SUBJECT: Proposed Amendments to Bylaw No. 2312 (as Amended by Bylaws No. 3028 and 3319), Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995 – Capacity Allocations and Cost Apportionment

ISSUE

As a result of the Core Area Wastewater Treatment Project, bylaw amendments are required to update the bylaw to reflect new conveyance and treatment capacities and cost apportionment methods.

BACKGROUND

The original establishment Bylaw No. 2312 (Appendix A), which was approved by the Capital Regional District (CRD) Board in July 2002, converted the letters patent powers of the CRD for liquid waste management for the Core Area and West Shore to a local service. This bylaw also established boundaries and participating areas for the service and indicated how annual operating and annual debt costs were to be recovered. The bylaw was last amended in 2006 after amendments to the Core Area Liquid Waste Management Plan (CALWMP) were approved in March 2003 by the Ministry of Water, Land and Air Protection (now the Ministry of Environment).

Since 2006, a number of additional amendments have been made to the CALWMP, and the Core Area Wastewater Treatment Project is under full construction and will be completed by December 2020. Once complete, the entire Core Area wastewater system will be connected together, operating as a single, integrated system with tertiary treatment at McLoughlin Point Wastewater Treatment Plant (WWTP).

As a result of all the recent upgrades to the system, it is necessary to update Bylaw No. 2312 to reflect those changes and the proposed conveyance and treatment capacity allocations and operating and capital cost sharing methodologies. It is proposed to have the changes in effect January 2021.

Existing Bylaw Overview

The primary purpose of the bylaw is to set out the conveyance capacity allocations and the cost apportionment methods for operating and capital expenses.

Conveyance Capacity

Each section of the four existing trunk sewer systems; namely, East Coast Interceptor, Northeast Trunk–Clover Section, Northeast Trunk–Bowker Section, Northwest Trunk–West and North Sections, and the associated pump stations and outfalls, have allocated capacities for each participant, which correspond to the participants' upstream municipal collection system connection point locations. The conveyance capacity figures in the current bylaw were established in 2004 and were based on estimated 2045 peak flows using (August 2003) Regional Growth Strategy population projections, water demand rates and inflow and infiltration rates for a 5-year

or 100-year storm event where applicable (See Appendix A–Schedule A). A number of conveyance system upgrades were contemplated over the long term as set out in in the (2004) Core Area Liquid Waste Management Plan (Chapter 16) in order to convey the 2045 flows projected in 2004. Some upgrades have been completed and others remain to be completed.

Operating Cost Apportionment

Annual operating costs include all costs of operating and maintaining all of the system's infrastructure and administering the regulatory and marine environmental programs that support the service. To date, the annual operating cost for the service has been apportioned among participating areas connected to each of the four trunk sewer systems: East Coast Interceptor, Northeast Trunk–Clover Section, Northeast Trunk–Bowker Section, Northwest Trunk–West and North Sections. The apportionment is based on total annual flow into a facility or trunk from a participating area in proportion to the annual average flow of sewage from all participating areas connected to the facility or trunk.

Capital Cost Apportionment

Since 2002, the capital costs and net annual debt cost of participating area facilities have been apportioned on the basis of design capacity benefit. From the bylaw, design capacity benefit means a benefit to one or more participants that results from any new construction of, or capital additions or improvements to, sewage conveyance facilities or their ancillary facilities. To the extent that the benefit is the provision of, or the creation of conditions to allow, additional conveyance capacity, then the design capacity shall be calculated only on the extent to which each participant gains an increase in maximum allocated capacity. Where the benefit is not an increase in capacity, then the design capacity benefit shall be calculated on the existing maximum allocated capacity of each participant in the facility being altered, added to or affected by the change.

Conveyance and Treatment Capacity and Cost Apportionment – 2020 to 2045 and Beyond

Conveyance Capacity

As previously noted, with the completion of the McLoughlin WWTP and conveyance system projects, the Core Area Wastewater System will operate as a single, integrated system. The CRD recently retained KWL to complete a hydraulic model and capacity study of the entire conveyance system, utilizing the updated design criteria used in the recent Project scope refinement study conducted for the contemplated East Coast Interceptor and Currie Pumpstation upgrades.

The 108 ML/day design capacity of the McLoughlin WWTP was established in the initial project planning phase based on Average Dry Weather Flow (ADWF) projections of required capacity in 2030. The WWTP has been designed to provide tertiary treatment up to 2-times ADWF. ADWF is primarily domestic sewage (without the influence of rain water inflow and infiltration) and is determined by measuring the average flow from June 1 to August 31. Flows that exceed 2-times ADWF from the Macaulay Pumpstation (but less than 4-times ADWF) and 3-times ADWF from the Clover Pumpstation will receive primary treatment and be blended with tertiary treated effluent prior to discharge. Flows exceeding 4-times ADWF from the Macaulay Pumpstation and 3-times ADWF from the Clover Pumpstation (considered Peak Wet Weather Flows (PWWF)) are not

permitted at McLoughlin WWTP and will be discharged at the Clover and Macaulay Pumpstations after receiving preliminary treatment. There are commitments in the CALWMP to reduce inflow and infiltration sufficiently such that peak flows will be less than 4-times ADWF by 2030.

The recently completed hydraulic model and capacity study of the entire conveyance system has reconfirmed longer term conveyance system upgrades required to meet all of the above regulatory requirements and provide the capacity in the conveyance system to convey flows up to the allocated treatment capacity at McLoughlin WWTP. In summary, the study concluded that some Northeast Trunk / East Coast Interceptor conveyance upgrades are no longer required, and some Northwest Trunk conveyance upgrades will be required. The upgrades are required to convey average and peak flows from each participant to McLoughlin WWTP up to the ultimate design capacity of the WWTP. Without completing the conveyance upgrades, some pipe sections are at risk of overflowing into highly sensitive receiving environments during peak flow events.

Specifically, the conveyance upgrades no longer required are (as approved by the Committee in April 2019):

- Upgrades to the Currie Pumpstation (for additional capacity – in original Project scope)
- Twinning of the Currie Forcemain (in original Project scope)
- Twinning of the East Coast Interceptor (in original Project scope)

The conveyance upgrades required are:

- East Coast Interceptor – Bushby Street Bypass (in original Project scope – 2019/20 construction)
- Shoreline Trunk Sewer twinning/replacement (by 2025 – not in Project scope)
- Craigflower Forcemain twinning (by 2025 – not in Project scope)
- Parson's Siphon twinning (by 2030 – not in Project scope)

In summary, the proposed conveyance capacity figures, which include ADWF capacity allocations and PWWF Allocations, are set out in Appendix B, which would be referenced in the proposed bylaw.

<u>McLoughlin Point WWTP Treatment Plant Capacity</u>

As noted, the design capacity of the McLoughlin WWTP was established in the initial Project planning phase and the 2016 Project Board Terms of Reference based on projections of required capacity in 2030. The design capacity of 108 ML/day was established based on ADWF capacity and organic loading conditions, assuming a population equivalent for the service area of 436,000 people with a design per capita flow of 246 L/capita/day (196 L/capita/day of sanitary sewage and 50 L/capita/day of I&I).

The allocated treatment design capacities, summarized in Appendix C, were developed by the CRD, then presented to the municipalities and First Nations in 2010. Some of the participants requested slight amendments to their allocated capacity, and then the design and cost allocations proceeded based on the allocations noted in the October 10, 2012, staff report to the Core Area Liquid Waste Management Committee.

The ultimate capacity of the treatment plant is governed by organic load and hydraulic capacity. More recent capacity analysis, utilizing updated design criteria, now indicates that the McLoughlin WWTP will reach ultimate capacity by 2045. The extended available capacity has been identified as a result of the re-evaluation of:

- The longer term average dry weather flow reduction on a per capita basis due to lower water use as a result of ongoing replacement of older inefficient appliances and high flow plumbing fixtures.
- The longer term effects of inflow and infiltration (I&I) reduction based on municipal commitments
- Updated population estimates based on average annual growth of approximately 1.3% for the Core Area service area population as a whole (from the 2016 population census to 2045)

With this change in system configuration and processes, and the treatment capacity allocations that have been determined for the participants, there is a need to update the bylaw to reflect the current conveyance and treatment capacity allocations, and operating and capital cost sharing methodologies.

Once the conveyance upgrades are completed, the whole system will be able to convey and treat wastewater flows to the full capacity of McLoughlin WWTP (projected to be sometime between 2030 and 2045).

Development Cost Charge Program

Currently, the Core Area Liquid Waste Management Service does not have a Development Cost Charge (DCC) Program. Typically, local governments levy development cost charges on new development to pay for new or expanded infrastructure, such as sewer or water infrastructure, necessary to adequately service the growth related capacity requirements of new development. DCCs are established by bylaw with the approval of the Inspector of Municipalities.

The Core Area will continue to grow and the capacity of the system will eventually be reached sometime towards 2045. Therefore, to plan and prepare for the future growth, it is proposed that a service area-wide DCC program be implemented in 2021 to start collecting funds from development to fund future growth-related infrastructure and capacity requirements beyond 2045. This will likely include a new WWTP in the West Shore and the diversion of some flow from the Western Trunk sewer to the new plant. This would free up capacity at McLoughlin WWTP to accommodate growth in the rest of the Core Area. It is proposed to develop the program and DCC bylaw through 2020 and implement the program in 2021.

Operating Cost Apportionment

The October 10, 2012, Committee report, *Core Area Wastewater Treatment Program – Cost Allocation*, proposed methods for allocating operating and capital (debt servicing) costs. It was proposed that once the new conveyance and treatment projects were complete, the new operating costs be allocated based on using the following proportions of annual flow: 80% ADWF and 20% Average Annual Flow (AAF). For those participants with higher I&I flow, this approach does not provide a financial incentive to reduce I&I. Therefore, beginning in 2021, it is proposed

to apportion the system-wide annual operating cost (conveyance and treatment) based on total annual flow into the system from a participating area in proportion to the total annual flow from all participating areas connected to the system.

Capital Cost Apportionment – Long Term Conveyance and Treatment Infrastructure Capital Plan

Much of the conveyance system was constructed in the 1970's and 1980's. Some of the infrastructure has been upgraded as the equipment, such as mechanical and electrical components, have reached the end of their service life. For many years, the annual and short term capital program was relatively minor in scope and was funded primarily through operating surpluses held by each participant in reserve. Depending on the project, when there were insufficient funds in reserve, the projects were financed—some of the debt still exists for these projects and is due to retire over the next five years with the final payments in 2025. .

For over ten years, while the treatment and conveyance options were being considered and the project scope was being determined, the annual and short term capital plan has been largely deferred to ensure that investments were not being made in infrastructure that could become redundant. A long term capital plan has now been prepared for the 5, 10, 20 and 30 year time horizons for the major asset categories. The plan includes projects that will replace infrastructure at end of service life, to ensure the system continues to operate reliably without service interruptions or risk to property, public health or the environment. The plan also includes projects as previously noted, that add conveyance capacity 'just in time' in order to convey flows to 2045 and utilize the ultimate design capacity of existing conveyance facilities, such as pump stations, and the McLoughlin WWTP. The plan also includes budgetary cost estimates which will be refined as preliminary and detailed designs and higher class cost estimates are completed for the projects as they become active. The plan summary is attached as Appendix D.

It is proposed to amend the CALWMP infrastructure upgrading section to incorporate the long term capital plan and obtain approval of the Minister under the Environmental Management Act and the inspector of municipalities to allow financing of the projects. The existing reserve funds will be used (by participant) to offset the initial annual debt servicing costs until the reserves are drawn down. Some of the participants do not have any remaining funds in reserve. The past method of cost sharing on the basis of design capacity benefit to each participant in each trunk sewer service by each capital project has historically required debt be raised individually by participant. With the deferral of the annual and short term capital plans, there has also been a deferral of debt issuance. The total debt outstanding of $8.6M at the end of 2019 will be retired through routine principal and interest payments by 2025; a reduction in debt servicing levels by $2.5M overall.

Looking ahead, it is proposed to allocate all capital and debt servicing costs, on the basis of the design treatment capacity allocations at McLoughlin WWTP for each participant, calculated as follows: 70% of allocated design capacity as measured by ADWF and 30% of design capacity as measured by AAF (actual flows in prior year period October 1 to September 30). This method has been used to requisition the initial capital funding for the Core Area Wastewater Treatment Program.

ALTERNATIVES

Alternative 1

That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:

1. That staff be directed to prepare a new draft bylaw to replace Bylaw No. 2312, to set out operating and capital cost apportionment, conveyance and treatment capacity allocations, method for acquiring additional capacity, and dispute resolution processes for the new Core Area Wastewater System and bring back to the Committee for review; and,
2. That staff be directed to prepare a terms of reference for the establishment of a Core Area Liquid Waste Management Service Development Cost Charge Program and bring back to the Committee for review.

Alternative 2

That staff be directed to come back with more information.

IMPLICATIONS

Bylaw No. 2312 requires updating in order to formalize and regulate the new capacity and cost allocation figures and methodologies. Not updating the current bylaw will result in it being outdated in 2021 without addressing the capacity and cost allocations. If the recommendation is approved, staff will prepare a draft bylaw that will set out operating and capital cost apportionment, conveyance and treatment capacity allocations, method for acquiring additional capacity, and dispute resolution processes. Capital plan and financial implications will also be presented for each participant including Esquimalt and Songhees First Nations. Preparation of the new bylaw as proposed will allow staff to explain and seek concurrence from the First Nations on their capacity and cost apportionment which will lead to updated sewer service agreements.

CONCLUSION

As a result of the requirements to convey and treat wastewater and the Core Area Wastewater System improvements that will be operational in January 2021, it is necessary to update Bylaw No. 2312 to reflect the changes and the proposed conveyance and treatment capacity allocations and operating and capital cost sharing methodologies. It is proposed to have the bylaw changes in effect January 2021.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:

1. That staff be directed to prepare a new draft bylaw to replace Bylaw No. 2312, to set out operating and capital cost apportionment, conveyance and treatment capacity allocations, method for acquiring additional capacity, and dispute resolution processes for the new Core Area Wastewater System and bring back to the Committee for review; and,
2. That staff be directed to prepare a terms of reference for the establishment of a Core Area Liquid Waste Management Service Development Cost Charge Program and bring back to the Committee for review.

Submitted By:	Ted Robbins, B.Sc., C. Tech, General Manager, Integrated Water Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Kristen Morley, JD, General Manager, Corporate Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

TR:nm

Attachments

Appendix A: Bylaw No. 2312 (Consolidated)
Appendix B: Schedule A to Proposed Bylaw Amendment–Allocated Flow Capacities
Appendix C: McLoughlin WWTP Treatment Capacity by Participant
Appendix D: Long Term Capital Plan Budgetary Figures

CAPITAL REGIONAL DISTRICT (CRD)
BYLAW NO. 2312

(As amended by Bylaws No. 3028, 3319)

Consolidated version authorized in accordance with Bylaw No. 3014, CRD Consolidation Authorization Bylaw No. 1, 2002

LIQUID WASTE MANAGEMENT CORE AREA AND WESTERN COMMUNITIES SERVICE ESTABLISHMENT BYLAW NO. 1, 1995

A Bylaw to Convert the Authority for Liquid Waste Management to a Service for the Core Area and Western Communities

For reference to original bylaws and amendments
or for further details, please contact:

Malcolm Cowley, Manager, Engineering Design Services
at (250) 360-3066
Environmental Services Department
Engineering Services
Capital Regional District
P.O. Box 1000, 625 Fisgard Street
Victoria, BC V8W 2S6

CAPITAL REGIONAL DISTRICT

BYLAW NO. 2312

****

A BYLAW TO CONVERT THE AUTHORITY FOR LIQUID WASTE MANAGEMENT TO A SERVICE FOR THE CORE AREA AND WESTERN COMMUNITIES

****

WHEREAS:

A. By Supplementary Letters Patent, Division VII dated December 28, 1967, as amended by further Supplementary Letters Patent, the Capital Regional District was granted the function of the acquisition, design, construction, operation, maintenance, renewal and administration of trunk sewers and sewage disposal facilities within all member municipalities of the Regional District except the District of Sooke and the Southern Gulf Islands;

B. The Board of the Capital Regional District wishes to exercise the function granted to it by the Letters Patent in accordance with Part 24 of the *Local Government Act* subject to all the terms and conditions contained in the Letters Patent and including all the powers granted by the Letters Patent within all member municipalities except the District of Sooke and the Southern Gulf Islands;

C. The Board of the Capital Regional District wishes to proceed under section 774.2 of the *Local Government Act* and convert the service to a service exercised under the authority of a bylaw for a portion of the Regional District by bylaw under sections 774.2(3) and 796 of the *Local Government Act*;

D. The Board of the Capital Regional District has obtained the consent on behalf of the electors under section 801.4 of the *Local Government Act*;

NOW THEREFORE, the Regional Board of the Capital Regional District in open meeting assembled enacts as follows:

Service

1. The collection, conveyance, treatment and disposal of sewage is established as a service.

Boundaries

2. The boundaries of the service area shall be coterminous with the boundaries of the municipalities of Saanich, Victoria, Oak Bay, Esquimalt, View Royal, Colwood and Langford.

Participating Areas

3. The municipalities of Saanich, Victoria, Oak Bay, Esquimalt, View Royal, Colwood and Langford include the participating areas for this service.

Cost Recovery

4. (1) The annual operating costs and annual debt costs for the service shall be recovered by one or more of the following:

    (a) property value taxes imposed in accordance with Division 4.3 of Part 24 of the *Local Government Act;*

(b) fees and charges that may be imposed under section 797.2 of the *Local Government Act;*

(c) revenues raised by other means authorized by the *Local Government Act*; and

(d) revenue received by way of agreement, enterprise, gift, grant or otherwise.

(2) The amount of the requisition for any participating area shall not exceed the amount calculated under section 5 less any amount received from the participating area under section 4(1)(d) by way of agreement negotiated with that participant.

Apportionment *(Bylaw 3028)* *(Bylaw 3319)*

5. (1) In this Bylaw:

(a) "annual debt cost" means the principal and interest payable in each calendar year for the amortization of debenture and other debt;

(b) "annual operating cost" includes all costs of operating, maintaining and administering all participating area facilities and programs, excluding annual debt costs;

(c) "design capacity benefit" means a benefit to one or more participants that results from any new construction of, or capital additions or improvements to sewage conveyance facilities or their ancillary facilities. To the extent that the benefit is the provision of, or the creation of conditions to allow, additional conveyance capacity, then the design capacity shall be calculated only on the extent to which each participant gains an increase in maximum allocated capacity. Where the benefit is not an increase in capacity, then the design capacity benefit shall be calculated on the existing maximum allocated capacity of each participant in the facility being altered, added to or affected by the change;

(d) "East Coast Interceptor Trunk" means the sewer facilities and functions located in the municipalities of Saanich, Oak Bay and Victoria, comprising all Regionally operated facilities from the Finnerty Outfall diversion works to the Ross Bay trunk sewer at Dallas Road and Cemetery Road, as particularly set out in the East Coast Interceptor Operating Agreement, dated December 1993, and shown on Drawing No. 8-S184-2, including but not limited to:

(i) that portion of the original Northeast Trunk Sewer from Currie Pump Station to McMicking Outfall;
(ii) the McMicking Outfall;
(iii) the Finnerty Cove diversion works and Outfall;
(iv) the Humber Pump Station;
(v) the Rutland Pump Station; and
(vi) the Penrhyn and Currie Lift Station and Currie and Hood Pump stations;

(e) "participating area facilities" means all facilities that serve the participating areas, including but not limited to: trunk sewers, pumping stations, treatment plants, outfalls and other works required for the conveyance, measurement, treatment, control, handling and disposal of sewage as shown on the latest revision of master drawing(s) on file at the CRD Environmental Services office;

(f) "maximum allocated capacity" means that part of the maximum operating capacity of a trunk sewer, pump station, treatment plant or other system allocated to a participating area to accommodate peak sewage flows from that participating area as shown on Drawing Nos. 8-S184-1 and 8-S184-2 attached hereto as Schedule "A";

(g) "program" means investigations to assess the marine environment and shoreline discharges and contaminant sources and the coordination of these programs among all levels of government to enhance marine environmental quality;

(h) "Spill Regulation" includes the *Fisheries Act (Canada)* and regulations, the *Environmental Management Act (British Columbia)* and regulations, and any other enactment of a Federal or Provincial government governing the discharge of or report of a discharge of wastewater into the environment.

(2) (a) The capital cost and net annual debt cost of participating area facilities constructed prior to December 31, 2002 shall be apportioned on the basis of the proportion of the maximum allocated capacity of that part of the respective facilities within a participating area and downstream from the participating area allotted to the participating area.

(b) The capital cost and net annual debt cost of participating area facilities constructed after December 31, 2002 shall be apportioned on the basis of the design capacity benefit that each participating area derives from each particular facility.

(c) The capital cost and net annual debt cost of acquiring land for sewage treatment after December 31, 2002 shall be apportioned on the basis of long-term (50 to 100 years) annual flows expected from each participant, as determined at the time the land is acquired.

(3) (a) In the event that:

(i) a spill occurs from any of the participating area facilities;

(ii) the spill resulted from the capacity of the trunk sewer being exceeded, and by measurement it could be determined that flows from one or more participating areas exceeded maximum allocated capacity as set out in Schedule "A" attached hereto; and

(iii) a fine is imposed against the CRD following a conviction under a Spill Regulation or the CRD is liable for damages as a result of the spill;

then the amount of the fine, damages or other liability and associated legal costs directly attributable to the spill shall be allocated to that participating area determined to have caused the spill;

(b) If more than one participating area jointly caused the spill, then the amount of the fine, damages or liability and legal costs shall be apportioned on the average annual flow among those participating areas determined to have caused the spill or on the amount of overflow contributed by each participating area where flow records indicate the percentage of overflow contribution.

(4) Notwithstanding Section 5 (2), the net annual debt cost of the East Coast Interceptor, for portions constructed prior to December 31, 2002, shall be apportioned among the participating areas on the basis of the net taxable value of land and improvements for Regional Hospital District purposes within that part of each participating area that is within the

benefiting or sewer catchment area of the East Cost Interceptor trunk after calculating the conversion on an annual basis of 100% of the current year's property assessment values for Regional Hospital District tax purposes by a factor equivalent to the variable tax rates, established for various classes of assessment by each of the participating member municipalities, for the taxation year immediately preceding the date of the apportionment of the capital cost and annual debt charges.

(5) The annual operating cost for participating area facilities shall be apportioned among participating areas connected to each facility on the basis of the total annual flow into those facilities in proportion to the annual average flow from that participating area to the total annual average flow of sewage from all participating areas connected to those facilities.

Maximum Requisition

6. The maximum amount that may be requisitioned under section 800.1(1) of the *Local Government Act* for the service shall be the greater of:

(a) twenty million ($20,000,000) dollars; or

(b) an amount equal to the amount that could be raised by a property value tax of one dollar and six cents ($1.06) per one thousand ($1,000.00) dollars which when applied to the net taxable value of land and improvements within the service area will yield the maximum amount that may be requisitioned under sections 803(1)(a) and (b) for the service.

Powers

7. In providing the service established by this bylaw, the Regional District may, without limiting the generality of Section 1:

(a) acquire, design, construct, operate, maintain, renew and administer trunk sewers and sewage disposal and treatment facilities and buildings;

(b) enter into an agreement with a member municipality on such terms as are mutually agreed upon providing that the municipality may undertake on behalf of the Regional District the design, construction, operation and maintenance of any of the facilities of the Regional District within that municipality;

(c) make interim provision for sewage disposal;

(d) at any time enter upon any lands, streets, waters or water courses, without the consent of the owner, for the purpose of making surveys and other examinations to determine whether or not the lands, streets, waters or water courses are required in the carrying out of the service;

(e) carry any sewer or other works through, across or under any street in such manner as not unnecessarily to obstruct or impede travel and may enter upon and dig up any street for the purpose of laying sewers or other works and of maintaining, repairing and renewing the works in accordance with the following:

(i) in entering upon and digging up any street, the Regional District shall be subject to such reasonable terms and conditions as may be made by the authority having jurisdiction over such street;

(ii) before entering upon any street for the purpose of laying, maintaining, repairing or renewing a sewer or other works, the Regional District gives at least 30 days' notice of

its contemplated action to the authority having jurisdiction over the street, but the authority may waive the giving of such notice or shorten the notice period; and

(iii) whenever the Regional District digs up any street for any of the purposes set out above, it shall, so far as practicable, restore the street to as good a condition as the street was in before such digging began, and the Regional District shall at all times indemnify and save harmless the municipality within which such digging occurred against and from all damage which may be recovered against such municipality by reason of anything done or omitted by the Regional District, and shall reimburse the municipality for all expenses which the municipality may incur by reason of any defect or want of repair of any street caused by the construction, maintenance, repair or renewal of any of the sewers, drains or other works. No compensation other than as provided in this subsection shall be made by the Regional District in respect of anything done by the Regional District under this subsection;

(f) make regulations for the purpose of:

(i) minimizing the entry of surface and rainwater taking into account the condition of the sewers;

(ii) controlling the quantity and quality of sewage discharging into its facilities;

(g) carry out investigations to assess the marine environment and shoreline discharges and contaminant sources; and

(h) coordinate programs among all levels of government to enhance marine environmental quality.

Negotiation, Mediation and Arbitration

8. (1) The participating areas shall make all reasonable efforts to resolve by negotiation a dispute regarding the proportions in which the facilities or the several parts of a facility are allocated under subsections 5(2) or 5(5).

(2) In the event that negotiations under subsection (1) fail to resolve a matter in dispute, a Director representing a participating area affected or likely to be affected by the matter in dispute shall declare at a meeting of the Board at which it is intended to deal with any such question that he or she unwilling to accept the Board's determination with respect to the matter, and the Board shall not decide the question, but shall appoint a mediator under subsection (5) and refer the question to the mediator.

(3) In the event that a question has not been resolved by the mediator within 120 days of the appointment of a mediator under subsection (5), the mediator can terminate the negotiations by giving notice in writing to all affected participating areas. *(Bylaw 3319)*

(4) Following termination of the mediation under subsection (3), the matter in dispute shall be referred to an arbitrator appointed under subsection (5) by the Board as soon as reasonably practicable following the expiry of the time period referred to in subsection (3).

(5) A mediator appointed under subsection (2) and an arbitrator appointed under subsection (4) shall be:

(a) a Professional Engineer; and

(b) appointed by unanimous vote of all the Directors of the Board present at the meeting of the Board at which the selection is made and, failing such vote, by a Judge of the Supreme Court of the Province of British Columbia;

(6) The decision of the arbitrator shall be final and binding on the Board and on all participating areas affected by the arbitrator's decision.

Participating Area Facilities *(Bylaw 3028)* *(Bylaw 3319)*

9. (1) With respect to the participating area facilities, where a participating area:

(a) uses 95% or more of either the average annual flow or the maximum allocated capacity allocated to that participating area as set out in Schedule "A" to this Bylaw, based on either:

(i) measured flows, or;

(ii) where such flows are not available, as determined by the General Manager of the CRD Environmental Services department based on the best available information and sound engineering practice;

and;

(b) desires additional capacity;

then such participating area shall commence negotiations with the Regional District and with the other participating areas for the reallocation of capacity and the reapportionment of the annual debt cost of participating area facilities for providing increased capacity.

(2) In the event that the participating areas cannot agree on a reapportionment of the annual debt costs and/or on arrangements for increased capacity within six months of the date of notice to the General Manager and/or the General Manager's determination under subsection (1), then a Director on the Board of the Regional District representing a participating area may, at a meeting of the Board, require that the matter be settled by mediation and/or arbitration in accordance with Section 8 of this Bylaw and subject to Subsection (3).

(3) The decision of the arbitrator or mediator under Subsection (2) shall not increase the cost to any participating area which is not using 95% or more and which does not expect to use more than 100% of its allocated capacity, nor shall a participating area be forced to give up allocated capacity against its wishes.

(4) New participants may purchase excess capacity from existing participants, subject to the approval of the affected existing participants.

Sole Authority

10. (a) The Regional District is the sole authority with jurisdiction to construct the works referred to in paragraph 7(a), provided that a member municipality may proceed on its own initiative with any such work within its own boundaries that the Regional Board is unable or unwilling to construct at that time, the design of such work having been approved by the Regional Board;

(b) Despite paragraph (a), the Regional District and a municipality which includes a participating area may agree that the construction and operation of works referred to in paragraph 7(a) are within the powers of the municipality.

Continuing Authority

11. Nothing in this bylaw shall be interpreted as affecting or impairing in any way the rights and powers of the Regional District under the Supplementary Letters Patent, Division VII, dated December 28, 1967, as amended by further Supplementary Letters Patent, in relation to that part of the Regional District not contained within the service area created by this bylaw, or the District of Sooke or the Southern Gulf Islands.

Citation

12. This Bylaw may be cited for all purposes as the "Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995."

READ A FIRST TIME THIS	12th day of	July	1995
READ A SECOND TIME THIS	12th day of	July	1995
READ A THIRD TIME THIS	11th day of	July	2001
APPROVED BY THE INSPECTOR OF MUNICIPALITIES THIS	18th day of	July	2002
ADOPTED THIS	14th day of	August	2002

Christopher M. Causton
CHAIR

S. M. Norton
SECRETARY

FILED WITH THE INSPECTOR OF MUNICIPALITIES THIS	19th day of	August	2002

This Bylaw is a copy of *Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995*, consolidated under Section 139 of the *Community Charte*r and is printed on the authority of the Corporate Secretary of the CRD.

Carmen I. Thiel, Corporate Secretary

LANGFORD

VIEW

ROYAL

SAANICH

COLWOOD

ESQUIMALT

VICTORIA

PORTAGE INLET

ESQUIMALT I.R.

SONGHEES I.R.

ESQUIMALT HARBOUR

ESQUIMALT LAGOON

VICTORIA HARBOUR

D.N.D.

MARIGOLD PEAK FLOW STORAGE TANK

ABANDONED LYALL TRUNK

ABANDONED KINVER CONN.

NORTHWEST TRUNK - WESTERN

NORTHWEST TRUNK - NORTHERN

TRANS-CANADA HWY.

E & N RLWY.

GOLDSTREAM AVE.

SOOKE RD.

ADMIRALS RD.

CRAIGFLOWER RD.

GORGE RD.

MCKENZIE AVE.

CAREY RD.

DOUGLAS ST.

TILLICUM RD.

LYALL ST.

LAMPSON ST.

BAY ST.

COOK ST.

YATES ST.

FORT ST.

FAIRFIELD

CRAIGFLOWER PUMP STATION

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Langford	210	370
Colwood	192	347
View Royal	173	274
Songhees IR	22	45
Esquimalt IR	13	17
Esquimalt	7	8
Total (see note 4)	522	894

* EXISTING PUMP STATION IS SCHEDULED TO BE REPLACED TO MEET CAPACITY.

MARIGOLD PUMP STATION

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Saanich	568	806 *

* MARIGOLD TANK TO STORE FLOW IN EXCESS OF 568 L/s. BENEFIT TO DOWNSTREAM MUNICIPALITIES FROM FLOW STORAGE.

SHORELINE TRUNK SEWER

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
View Royal	10	25
Songhees IR	22	45
Esquimalt IR	13	17
Esquimalt	7	8
Total	52	95

ALDEANE (MEAFORD) WEIR

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Langford	370	370

PARSONS MAG METER

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Langford	370	370
Colwood	347	347
Total (see note 4)	651	651

HARRIET FLUME

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Saanich	210	226

CITY BOUNDARY FLUME

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Saanich	350	365

DEVONSHIRE FLUME

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Equimalt	54	247
Songhees IR	1	1
Total	55	248

CECELIA FLUME

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Victoria	105	633

SELKIRK CONNECTION

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Esquimalt	1	1
Victoria	8	31
Total	9	32

LANG COVE PUMP STATION

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Esquimalt	27	128
DND	46	76
Total	73	204

WILSON FLUME

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Esquimalt	7	116

HEREWARD / LANGFORD FLUMES

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Victoria	60	271

SEA TERRACE FLUME

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Victoria	28	64

HEAD STREET FLUME

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Esquimalt	49	262
DND	21	21
Total	70	283

CONSTANCE / LYALL MAG METER

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Esquimalt	20	87
DND	53	102
Total	73	189

KINVER MAG METER

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Esquimalt	0	100

NORTHWEST TRUNK NORTHERN AT LYALL

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Saanich	1128	1397*
Esquimalt	111	626
Esq. Credit for Lyall Diversion	65	
Victoria	201	1080
Victoria credit for Lyall Diversion	241	
Songhees IR	1	1
DND	21	21
Total	1768	2856

* SEE NOTE 6

NORTHWEST TRUNK WESTERN AT MACAULAY

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Langford	-	370
Colwood	-	347
View Royal	173	274
Esquimalt	109	323
DND	136	178
Songhees IR	22	45
Esquimalt IR	13	17
Total	453	1554

NORTHWEST TRUNK NORTHERN AT MACAULAY

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Saanich	1128	1397 *
Victoria	442	1080
Esquimalt	194	644
Songhees IR	1	1
DND	37	37
Total	1802	2890

* SEE NOTE 6

KINVER / ANSON FLUME

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Esquimalt	18	18
DND	16	16
Total	34	34

MACAULAY POINT PUMP STATION & OUTFALL

Participant	Current Allocation (L/s)	2045 Allocation (L/s)
Saanich	1128	1397 *
Victoria	442	1080
Esquimalt	427	967
Langford	-	370
Colwood	-	347
View Royal	173	274
DND	185	215
Songhees IR	23	46
Esquimalt IR	13	17
Total (see note 4)	1787	4452 *

* SEE NOTE 6

NOTES:

1. ALL FLOWS SHOWN ARE PEAK, IN LITRES PER SECOND (L/s).
2. CURRENT FLOW ALLOCATIONS ARE BASED ON 1973 PRIESTMAN REPORT AND 1994 WESTERN COMMUNITIES TRUNK SEWER COST SHARING REPORT.
3. 2045 FLOW ALLOCATIONS ARE BASED ON REGIONAL GROWTH STRATEGY AND 2004 INFLOW & INFILTRATION RATES. THESE ALLOCATIONS WILL BE AVAILABLE WHEN ALL LIQUID WASTE MANAGEMENT PLAN (LWMP – CHAPTER 16) UPGRADES ARE COMPLETED.
4. TOTAL PEAK FLOWS MAY NOT ADD CUMULATIVELY DUE TO POPULATION–BASED HARMON PEAKING FACTOR.
5. LOCATION AND EXTENT OF CRD SEWERS AND FACILITIES AS DEPICTED ARE PRELIMINARY AND MAY CHANGE IN ACCORDANCE WITH THE FINAL SYSTEM DESIGN. PROPOSED UPGRADES AS SHOWN ARE REQUIRED TO MEET 2045 FLOW ALLOCATIONS.
6. SAANICH'S ALLOCATED FLOW AT MACAULAY REMAINS AT 1128 L/s AS EXCESS IS STORED IN MARIGOLD TANK.

DESIGN FLOW LEGEND

	INFLOW ALLOTMENT AT INDICATED LOCATION
	DESIGN CAPACITY ALLOTMENT AT INDICATED LOCATION

EXIST.	DESCRIPTION	PROP.	EXIST.	DESCRIPTION	PROP.
	TRUNK SEWER			BYPASS OUTFALL	
	PUMP STA.			PEAK FLOW STORAGE TANK	
	PUMP STA. UPGRADE				

0 250 500 1000

SCALE IN METRES

CAPITAL REGIONAL DISTRICT

Environmental Services

CORE AREA TRUNK SEWERS

SCHEDULE 'A' TO BYLAW 2312 AS AMENDED BY BYLAW 3319. – MACAULAY POINT SERVICE AREA AND MAXIMUM ALLOCATED CAPACITIES

LAST REVISED	DESIGNED	DRAWN	SCALE	CHECKED	APPROVED	DATE	CONTRACT NO.	DWG. NO.	REV.	SHT
JAN. 16, 2006	M.C.	M.M.	AS SHOWN			02/06/05		8–S184–1	1	1 OF 2

NORTHEAST TRUNK BOWKER AT FINLAYSON	
Participant	2045 Allocation (L/s)
Saanich	14
Victoria	152
Total (see note 3)	158

ARBUTUS FLUME	
Participant	2045 Allocation (L/s)
Saanich	1040 *

* ARBUTUS TANK STORES FLOW IN EXCESS OF 1040 L/s

UNIVERSITY OF VICTORIA	
Participant	2045 Allocation (L/s)
Saanich *	134

* SAANICH HAS SEWER USE AGREEMENT WITH UVIC

PROPOSED ARBUTUS PEAK FLOW STORAGE TANK 17,900 m³

WILL STORE ALL FLOW IN EXCESS OF 1040 L/s FROM ARBUTUS OR 134 L/s FROM UVIC.
*BENEFIT TO OAK BAY & VICTORIA FROM FLOW STORAGE

FINNERTY COVE BYPASS OUTFALL (SEE NOTE 5)

SAANICH

SAANICH

OAK BAY

VICTORIA

INNER HARBOUR

NORTHEAST TRUNK - BOWKER

NORTHEAST TRUNK BOWKER UPSTREAM OF TRENT P.S.	
Participant	2045 Allocation (L/s)
Saanich	396
Victoria	1461
Total (see note 3)	1824

TRENT PUMP STATION	
Participant	2045 Allocation (L/s)
Saanich	365
Victoria	1155
Total	1520

BENEFIT TO OAK BAY FROM FLOW DIVERSION

NORTHEAST TRUNK BOWKER UPSTREAM OF CURRIE ROAD	
Participant	2045 Allocation (L/s)
Saanich	37
Victoria	320
Oak Bay	1155
Total (see note 3)	1450

SAANICH PANHANDLE 226 L/s

SAANICH PANHANDLE 46.5 L/s

NORTHEAST TRUNK BOWKER DOWNSTREAM OF TRENT P.S.	
Participant	2045 Allocation (L/s)
Saanich	37
Victoria	320
Oak Bay	237
Total (see note 3)	560

PENRHYN PUMP STATION	
Participant	2045 Allocation (L/s)
Saanich	552 *

* ARBUTUS TANK IS ACTIVATED DURING STORM EVENTS TO THROTTLE SAANICH'S FLOW TO 552 L/s MAX.

CLOSE VALVE WHEN STORM EXCEEDS 5 YEAR (PUMP TO FINNERTY OUTFALL)

CADBORO BAY

HUMBER

RIPON

HUMBER & RUTLAND PUMP STATIONS	
Participant	2045 Allocation (L/s)
Oak Bay	25 *

* WHEN COMBINED SEWERS ARE SEPARATED. (SEE NOTE 5)

RUTLAND

TEN MILE POINT

0 250 500

SCALE IN METRES

BEACON HILL PARK

CITY TRUNK (BUSHBY)	
Participant	2045 Allocation (L/s)
Victoria	2372

EAST COAST INTERCEPTOR

NORTHEAST TRUNK - CLOVER

ROSS BAY

CLOVER PT. BYPASS OUTFALL (SEE NOTE 5)

NORTHEAST TRUNK - BOWKER

OAK BAY

EAST COAST INTERCEPTOR UPSTREAM OF CURRIE ROAD	
Participant	2045 Allocation (L/s)
Saanich	552 *
Oak Bay	318
Total (see note 3)	856

* ARBUTUS TANK IS UTILIZED DURING STORM EVENTS TO THROTTLE SAANICH'S FLOW TO 552 L/s

CLOVER POINT PUMP STATION & OUTFALL	
Participant	2045 Allocation (L/s)
Saanich	552 *
Victoria	2420
Oak Bay	1223
Total (see note 3)	4100 **

* ARBUTUS TANK IS ACTIVATED DURING STORM EVENTS TO THROTTLE SAANICH'S FLOW TO 552 L/s MAX.

** CLOVER POINT P.S. IS ONLY REQUIRED TO CONVEY AND DISCHARGE 5 YEAR FLOWS (ALL FLOW IN EXCESS OF 4100 L/s CAN BE DIVERTED OUT THE EMERGENCY BYBASS OUTFALL.

CURRIE ROAD PUMP STATION	
Participant	2045 Allocation (L/s)
Saanich	552
Victoria	320 *
Oak Bay	1109
Total (see note 3)	1509 **

* VICTORIA & SAANICH'S FLOW FROM NETB IS ENTIRELY DIVERTED AT TRENT P.S. DURING A 5 YEAR STORM EVENT

** CURRIE ROAD P.S. IS ONLY REQUIRED TO CONVEY SAANICH'S 5 YEAR FLOW FROM ECI, & OAK BAY'S 5 YEAR FLOW FROM NETB AND ECI (ALL FLOW IN EXCESS OF 1509 L/s CAN BE DIVERTED OUT McMICKING BYPASS OUTFALL

HARLING POINT PUMP STATION	
Participant	2045 Allocation (L/s)
Oak Bay	61.5

(SEE NOTE 5)

HOOD PUMP STATION

McMICKING BYPASS OUTFALL (SEE NOTE 5)

GONZALES POINT

NOTES:

1. ALL FLOWS SHOWN ARE PEAK, IN LITRES PER SECOND (L/s).
2. 2045 FLOW ALLOCATIONS ARE BASED ON REGIONAL GROWTH STRATEGY AND INCLUDE INFLOW & INFILTRATION RATES FOR A 5 YEAR OR 100 YEAR STORM EVENT WHERE APPLICABLE MODELED IN 2004. THESE ALLOCATIONS WILL BE AVAILABLE WHEN ALL LIQUID WASTE MANAGEMENT PLAN (LWMP CH. 16) UPGRADES ARE COMPLETED
3. TOTAL PEAK FLOWS MAY NOT ADD CUMULATIVELY DUE TO POPULATION–BASED HARMON PEAKING FACTOR.
4. LOCATION AND EXTENT OF CRD SEWERS AND FACILITIES AS DEPICTED ARE PRELIMINARY AND MAY CHANGE IN ACCORDANCE WITH THE FINAL SYSTEM DESIGN. PROPOSED UPGRADES AS SHOWN ARE REQUIRED TO MEET 2045 FLOW ALLOCATIONS.
5. BYPASS OUTFALLS WILL ONLY BE ACTIVATED DURING A STORM EVENT THAT EXCEEDS A 5 YEAR RETURN PERIOD.

DESIGN FLOW LEGEND

	INFLOW ALLOTMENT AT INDICATED LOCATION
	DESIGN CAPACITY ALLOTMENT AT INDICATED LOCATION

EXIST.	DESCRIPTION	PROP.	EXIST.	DESCRIPTION	PROP.
	TRUNK SEWER			BYPASS OUTFALL	
	PUMP STA.			PEAK FLOW STORAGE TANK	
	PUMP STA. UPGRADE				

CAPITAL REGIONAL DISTRICT

Environmental Services

CORE AREA TRUNK SEWERS

SCHEDULE 'A' TO BYLAW 2312 AS AMENDED BY BYLAW 3319. – CLOVER POINT SERVICE AREA AND MAXIMUM ALLOCATED CAPACITIES

LAST REVISED	DESIGNED	DRAWN	SCALE	CHECKED	APPROVED	DATE	CONTRACT NO.	DWG. NO.	REV.	SHT OF
JAN. 16, 2006	M.C.	M.M.	AS SHOWN			02/06/05	————	8–S184–2	1	2 OF 2

DRAFT

CRD Core Area Wastewater Service Area Allocated Flow Capacities to Participants

Appendix B

Schedule A to Bylaw 2312 as Amended by Bylaw ____

July 2019

CRD
Making a difference...together

1:25,000 NAD 1983 UTM Zone 10N

July 2019 | CoreAreaTrunkSewersAndFlowMeters_v2.mxd | gis@crd.bc.ca

N W E S

- Municipal Boundary
- Urban Containment Boundary
- DND Areas
- 1 Wastewater Inflow Allotment at Indicated Location
- Existing Sewer Main
- Overflow/Outfall
- Proposed Sewer Main
- TP Treatment Plant
- PS Pump Station

Notes:

1. ADWF = Average Dry Weather Flow (June 1 to August 31). PWWF = Peak Wet Weather Flow. L/s = Litres per second. MLD = Mega Litres per day.

2. The ADWF Allocations are based the Core Area Wastewater Treatment Program where the total ADWF plant capacity of 108 MLD was allocated out to each participant based on their requested capacity.

3. PWWF is based on 4xADWF which the maximum flow allowed at McLoughlin WWTP as approved by the Ministry of Environment. These allocations will be available when the upgrades identified on the map are completed. Capacity upgrade at the Craigflower Pump Station can be achieved by forcemain twinning. Pump upgrades are not required to meet the PWWF allocation.

4. Total peak flows may not add cumulatively at downstream locations due to system attenuation (population-based on Harmon peaking factor).

5. Location and extent of future CRD sewers and facilities as depicted are preliminary and may change in accordance with the final system design.

6. Allocations are available up until the capacity at McLoughlin WWTP has been reached. New infrastructure and reallocation of flows will then be required.

7. Note some infrastructure is currently being constructed as part of the Core Area Wastewater Treatment Project but is shown as existing on this map.

8. Flow allocations for Humber and Rutland are based on those catchments being separated from the storm system.

District of Highlands
City of Langford
Town of View Royal
City of Colwood
District of Metchosin
District of Saanich
Township of Esquimalt
Songhees Nation
Esquimalt Nation
City of Victoria
District of Oak Bay

Residual Solids Conveyance Line
Leachate/Centrate Return Line
Northwest Trunk
Western Trunk
Northeast Trunk
Eastern Trunk
McLoughlin WWTP

PWWF allocation of 4xADWF only available when capacity upgrades are completed (shown as red dashed line). See Note 3.

Service area in Langford encompasses the whole municipality.

Participant	Allocation of Design Capacity as Measured by ADWF (MLD)
Colwood	4,70
Esquimalt	7,10
Esquimalt Nation	0,01
Songhees Nation	0,66
Langford	14,12
Oak Bay	6,62
Saanich	32,89
Victoria	37,30
View Royal	3,54
Total	108,00

14	Centrate Line	
	ADWF Allocation (L/s)	PWWF Allocation (L/s)
	39,2	51,8

15	Leachate Line	
	ADWF Allocation (L/s)	PWWF Allocation (L/s)
	10,2	45,0

**See Note 3

Town of View Royal

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation (L/s)
3	Craigflower PS	41,0	164,0
4	Shoreline Trunk**	5,7	9,9
28	Macaulay Point PS	41,0	164,0
	Total	41.0	164.0

City of Langford

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation** (L/s)
1	Meaford	163,4	653,6
2	Parsons	163,4	653,6
3	Craigflower PS	163,4	653,6
28	Macaulay Point PS	163,4	653,6
	Total	163.4	653.6

City of Colwood

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation** (L/s)
2	Parsons	54,4	217,6
3	Craigflower PS	54,4	217,6
28	Macaulay Point PS	54,4	217,6
	Total	54,4	217.6

Songhees Nation

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation (L/s)
6	Songhees Nation	12,6	22,4
4	Shoreline Trunk**	12,6	22,4
3	Craigflower PS	12,6	22,4
8	Maplebank	0,1	0,5
28	Macaulay Point PS	7,64	30,56
	Total	7.64	30.56

Esquimalt Nation

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation (L/s)
7	Esquimalt Nation	6,8	11,9
4	Shoreline Trunk**	6,8	11,9
3	Craigflower PS	6,8	11,9
28	Macaulay Point PS	1,2	4,7
	Total	1.2	4.7

Township of Esquimalt

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation (L/s)
5	Esquimalt Panhandle	4,2	7,4
4	Shoreline Trunk	4,2	7,4
3	Craigflower PS	4,2	7,4
9	Lang Cove PS - DND	5,8	23,1
9	Lang Cove PS - Esquimalt	9,0	35,9
10	Dockyard - DND	6,8	27,2
10	Dockyard - Esquimalt	4,9	19,6
11	Kinver	5,1	20,4
12	Podley Place	0,7	2,8
21	Devonshire	21,4	85,4
24	Wilson	4,3	17,0
26	Head - DND	2,9	11,4
26	Head - Esquimalt	16,5	66,1
27	Anson - DND	2,8	11,2
28	Macaulay Point PS	82,1	328,4
	Total	82.1	328.4

District of Saanich

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation (L/s)
13	Marigold PS	152,7	610,9
16	City Boundary	73,2	292,7
19	Harriet	37,8	151,1
28	Macaulay Point PS	266,7	1066,8
29	Townley	8,2	32,8
30	Haultain	6,6	26,3
33	Arbutus	81,9	327,7
34	Haro (Uvic)	9,2	36,7
35	Penrhyn LS	10,8	43,1
44	Clover Point PS	113,9	455,7
	Total	380,6	1522,4

City of Victoria

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation (L/s)
17	Cecelia	36,3	144,9
18	Chapman and Gorge	4,1	16,6
20	Selkirk	3,2	12,8
22	Langford (Vic West)	2,2	8,8
23	Hereward	22,1	88,2
25	Sea Terrace	3,8	15,3
28	Macaulay Point PS	67,7	270,6
31	Trent Net (Jubilee/Oaklands)	84,4	337,4
41	Hollywood	6,3	25,2
42	Clive	266,0	1064,1
43	Clover Net (Gonzales/Fairfield)	22,2	88,9
44	Clover Point PS	375,6	1502,4
	Total	443,3	1773,2

District of Oak Bay

Inflow ID	Inflow Name	ADWF Allocation (L/s)	PWWF Allocation (L/s)
32	Windsor	5,0	19,9
36	Humber	7,1	28,4
37	Rutland	4,4	17,8
38	Currie Net (Central Oak Bay)	39,1	156,6
39	Currie Lift Station	19,2	76,7
40	Harling Point PS	2,3	9,3
44	Clover Point PS	76,6	306,4
	Total	76.6	306,4

APPENDIX C
McLoughlin WWTP Treatment Capacity
by Participant

PARTICIPANT	TREATMENT CAPACITY BY PARTICIPANT			
	Actual Average Dry Weather Flow for 2018 (ML/day)	Requested Capacity (ML/day)	Allocated Design Capacity (ML/day)	% of Total
COLWOOD	2.70	4.10	4.70	4.35%
ESQUIMALT (DND INCLUDED)	4.20	6.20	7.10	6.57%
LANGFORD	6.00	12.40	14.12	13.08%
OAK BAY	5.20	5.80	6.62	6.13%
SAANICH	21.80	28.80	32.89	30.45%
VICTORIA	29.00	33.50	38.30	35.46%
VIEW ROYAL	2.20	3.10	3.54	3.28%
ESQUIMALT NATION	0.06	-	0.08	0.07%
SONGHEES NATION	0.39	-	0.65	0.61%
TOTAL	**71.55**	**93.90**	**108.00**	**100.00%**

APPENDIX D
Long Term Capital Plan
Budgetary Figures

PRIMARY LEVEL	LONG TERM CAPITAL PLAN BUDGETARY FIGURES				
	WITHIN 5 years (by 2025)	WITHIN 10 years (by 2030)	WITHIN 20 years (by 2040)	WITHIN 30 years (by 2050)	CUMULATIVE Total (2020-2050)
AIR & DRAIN VALVES	$0	$115,000	$0	$0	$115,000
ATTENUATION TANKS	$0	$690,000	$1,400,000	$1,700,000	$3,790,000
FLOW METERING	$940,000	$500,000	$600,000	$600,000	$2,640,000
GENERAL ENGINEERING, PLANNING, POLICY	$5,725,000	$2,000,000	$4,000,000		$11,725,000
MANHOLES	$2,500,000	$3,140,000	$0	$0	$5,640,000
MCLOUGHLIN	$0	$0	$0		$0
ODOUR and CORROSION PROTECTION	$2,200,000	$1,800,000	$0	$0	$4,000,000
OUTFALLS	$1,250,000	$2,750,000	$10,000,000	$0	$14,000,000
PRESSURE PIPE (Forcemains/Siphons)	$17,900,000	$9,230,000	$0	$0	$27,130,000
PUMP STATIONS	$8,085,000	$2,378,000	$2,800,000	$6,072,000	$19,335,000
RESIDUAL SOLIDS AND CENTRATE RETURN SYSTEM	$0	$80,000	$600,000	$1,200,000	$1,880,000
TRUNK SEWERS	$14,630,000	$7,420,000	$4,100,000	$0	$26,150,000
TOTAL	**$53,230,000**	**$30,103,000**	**$23,500,000**	**$9,572,000**	**$116,405,000**