

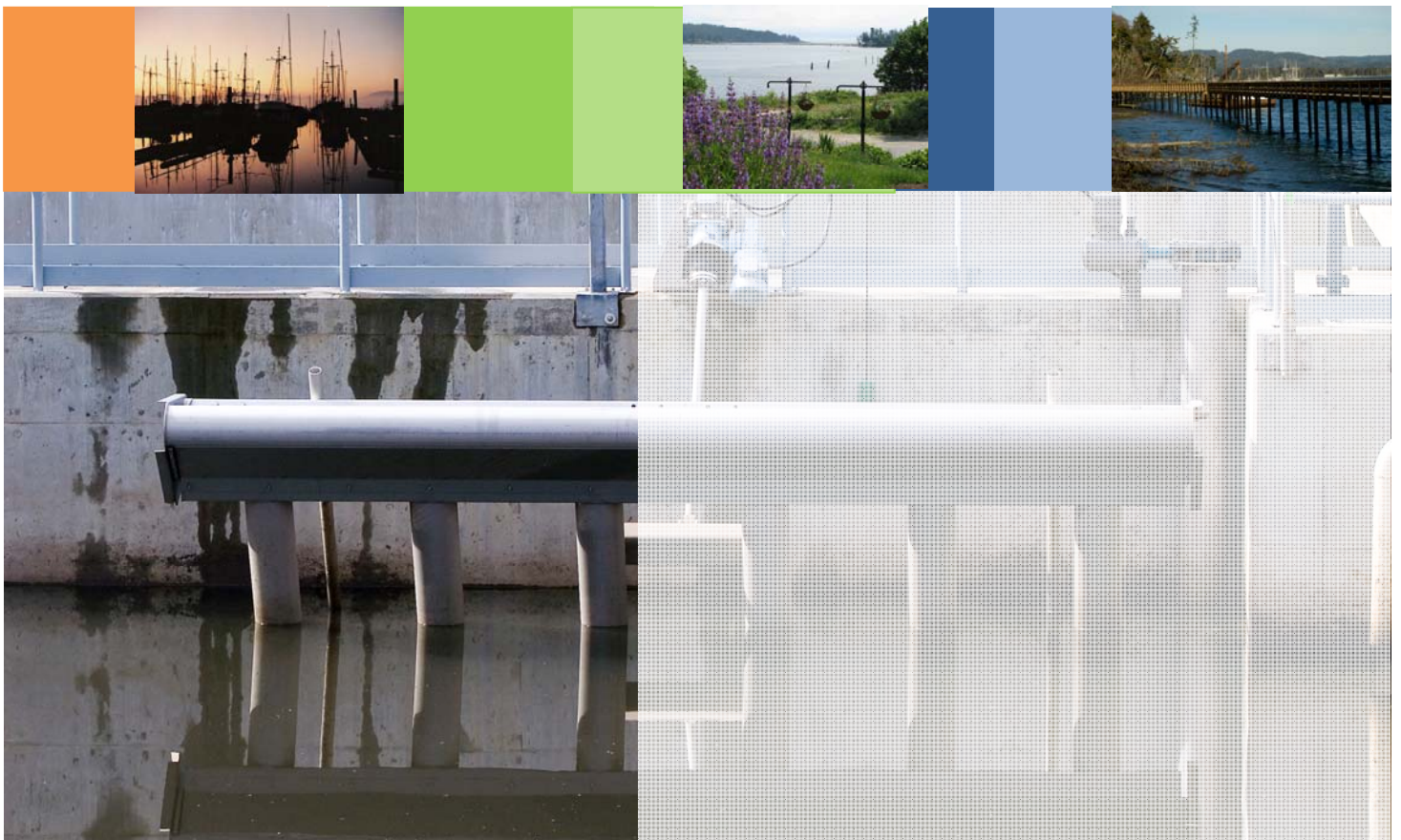
Liquid Waste Management Plan



District of Sooke

Stage 3 Sanitary
Stage 2 & 3 Rainwater

March 2010





Contents

1.0 Plan Background.....	1
2.0 Stage 3 LWMP (Sanitary)	3
2.1 Background	3
2.2 Results	4
2.3 Implementation Plan – LWMP (Sanitary)	7
3.0 Stage 2 & 3 LWMP (Rainwater)	8
3.1 Background	8
3.2 Results	9
4.0 Approval and Adoption.....	17
5.0 Monitoring Committee	17
Part A: Stage 3 Sanitary	19
Part B: Stage 2 & 3 Rainwater	209



1.0 Plan Background

The District of Sooke (the District) is situated on the southern coast of Vancouver Island along the shores of Sooke Harbour and Sooke Basin. Among a backdrop of forests, mountains, and rugged shorelines, the District is located approximately 38 km southwest of downtown Victoria. The climate of the region is typical of the west coast with warm, dry summer months and wet, mild winter months when most of the annual precipitation for the District occurs. The Sooke River flows to Sooke Harbour north of Whiffin Spit, an expanse of land that extends into the ocean providing a division between the Harbour and the Strait of Juan de Fuca. The T'Sou-ke Nation also make their home along the shoreline of Sooke River and Sooke Bay. The community of Sooke has an area of approximately 10,227 hectares classified as rural to semi-rural. An aerial view of the District is presented in Figure 1.

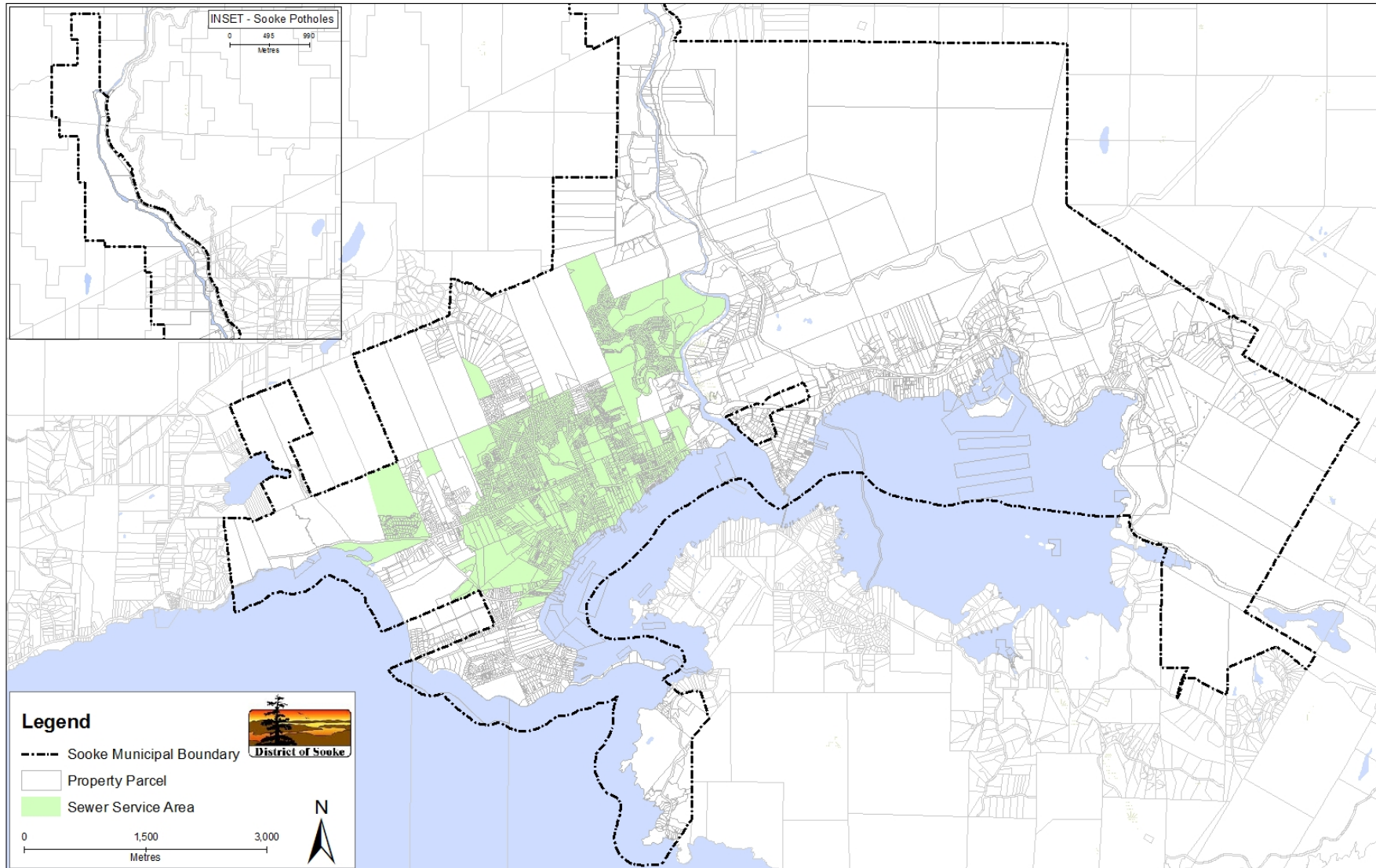
Industries of the District were traditionally based on natural resources, including logging and fishing. Today, tourism is emerging as an important sector of the economy for the District. Businesses in the community include restaurants, grocery stores, pharmacies, hardware store, a variety of accommodation venues, banks, automotive repair, medical and veterinary services. The community of Sooke was incorporated as the District of Sooke in December, 1999. The District amenities to residents and visitors include a golf course, Whiffin Spit Park, Sooke Potholes Provincial Park, skateboard park, arena and aquatic centre, museum, and visitor information centre, as well as senior and family resource facilities. The population of Sooke is about 9,705, with 3,855 private dwellings in the community, according to Statistics Canada 2006 census data. The population is increasing since the implementation of the sewer system.

Recognizing the significance of environmental protection of the region, the District of Sooke has taken a proactive approach to wastewater and rainwater management. As outlined in the District's Official Community Plan, this approach supports the District's goals of environmental remediation and protection of the aquatic habitats of Sooke Harbour and Basin from leaking septic systems and rainwater-related pollution. These changes will improve water quality and help to revitalize shellfish harvesting in Sooke Harbour and Basin. Actions that either have been, or will be implemented include sewerage of the District core area and providing secondary wastewater treatment, putting into action a source control bylaw, performing activities that will minimize infiltration and inflow (I&I) into the sewer system, and the completion of the sanitary and rainwater liquid waste management plans (LWMPs). These actions demonstrate the District's commitment to sustainable management of its liquid waste.

The District of Sooke has completed construction of sewage collection and treatment facilities to service the core area of the community. As a condition of the Provincial grant to assist in the construction of the new collection and treatment system, the District of Sooke was required to develop a Liquid Waste Management Plan (LWMP) (the Plan).



Figure 1: Aerial view of the District of Sooke showing the boundary of the Sewer Specified Area.



A typical LWMP is undertaken in three stages. The District previously completed Stages 1 and 2 of the Sanitary (wastewater) portion of the LWMP and Stage 1 of the Rainwater portion of the LWMP. This document is the culmination of completing the Stage 3 (Sanitary) portion of the LWMP and Stages 2 and 3 (Rainwater) portion of the LWMP.

First Nations and public consultation were integral components of the LWMP development and designed and carried out to foster acceptance and ownership amongst members of the community. The consultation process for each component of the Plan were conducted separately and included open exchange of information between the public, First Nations, local government and the Advisory Committee.

The following sections summarize the results for the Stage 3 (Sanitary) and Stage 2 and 3 (Rainwater) portions of the LWMP, respectively. The complete Stage 3 (Sanitary) LWMP, including documentation of the combined Sanitary and Rainwater public open houses, is attached under "Part A". The complete LWMP (Rainwater) Stage 2 and 3 is attached as "Part B".

2.0 Stage 3 LWMP (Sanitary)

2.1 Background

The Stage 1 (Sanitary) LWMP involved a series of studies concerning solutions to the District's wastewater issues, primarily related to problems and limitations resulting from reliance on septic tank systems as well as the District's higher density "Urban Containment Area" and the Downtown "Core Area". These studies resulted in a \$22 million project to provide sewers and secondary wastewater treatment to the Core Area. The Stage 2 (Sanitary) LWMP evaluated questions related to wastewater management options for the District for the areas that are currently outside of the Sewer Specified Area (SSA). The Stage 3 (Sanitary) LWMP used the information developed in both Stage 1 and Stage 2 to help refine sanitary wastewater management options and costs and to develop an implementation plan for the sanitary wastewater portion of the LWMP.

The District completed its Stage 2 LWMP (Sanitary) in October 2005, and it was approved by the British Columbia Ministry of Environment (MoE) in December 2007. Tasks for the current Stage 3 LWMP (Sanitary) work were based on recommendations made by the MoE upon approval of the District's Stage 2 LWMP (Sanitary). Based on the MoE's recommendation, the Stage 3 tasks for this sanitary wastewater-related work include the following:

1. Assist with the re-establishment of the Public and Technical Advisory Committees (PAC and TAC), and facilitate meetings to review documents and tasks related to the LWMP (Sanitary);
2. Confirm the LWMP area boundaries and planning horizon;
3. Investigate the remaining treatment plant capacity and the possibility of expansion of the SSA;



4. Reconsider the effluent standard requirements for cluster and/or satellite treatment developments;
5. Investigate how future development adjacent to Sooke Basin and Harbour will be serviced;
6. Develop a time table and budget to complete the on-going Stormwater/Rainwater Management plan;
7. Consider a management system for on-site treatment systems, including septic systems;
8. Investigate beneficial reuse opportunities for septage solids and wastewater treatment sludges;
9. Develop terms of reference and a commitment to establish a permanent Plan monitoring committee;
10. Develop draft Operational Certificates for existing treatment plant(s) and/or setting registration standards;
11. Identify the cost per user for users in both the sewered and non-sewered areas;
12. Develop an implementation plan for the intended commitments in the Plan;
13. Develop draft bylaws needed to implement the Plan;
14. Develop the draft of the Stage 3 (Sanitary) LWMP report;
15. Present the Stage 3 (Sanitary) LMWP to the District Council;
16. Host Stage 3 (Sanitary) LMWP public information meeting(s); and
17. Finalize the Stage 3 LMWP (combined Sanitary and Rainwater) for submission to the Ministry of Environment for approval.

2.2 Results

Stage 3 (Sanitary) was developed on the basis of development of seven discussion papers covering the following topics:

- Discussion Paper No. 1 - Considerations for Adding New Sewered Areas to the District of Sooke Sewer Specified Area
- Discussion Paper No. 2 - Satellite Treatment Plant Effluent Standards
- Discussion Paper No. 3 - Treatment Options for Areas Around Sooke Basin and Harbour
- Discussion Paper No. 4 – Rainwater Management Plan: Scope, Budget and Schedule
- Discussion Paper No. 5 – On-Site System Management Options
- Discussion Paper No. 6 – Investigation of Beneficial Reuse of Septage and Treatment Plant Biosolids
- Discussion Paper No. 7 – Priority Assessment for Sewering Catchment Areas in the District of Sooke

These discussion papers were presented to and discussed with the Sanitary Plan Advisory Committee over a series of meetings from April 2007 to December 2009. The membership of the Advisory Committee (Sanitary) included the Ministry of Health (VIHA), the Ministry of Environment, Environment Canada, District of Sooke Council,



District Development Services staff, members of the public and First Nations (both T'Sou-ke and Beecher Bay were invited to participate).

The discussion papers were revised as a result of these advisory committee meetings and the revised discussion papers were contained in a Stage 3 LWMP (Sanitary) Summary Report (Part A of this document). A draft of the Stage 3 (Sanitary) Summary Report and its results were presented to the Public, along with the LWMP (Rainwater) updates, at three open houses (September 2008, May 2009 and November 2009). These open houses are documented in the Summary Report LWMP (Sanitary) (Part A).

The three most important aspects of the Stage 3 LWMP (Sanitary) work are:

- Satellite treatment plants will not be permitted to discharge to Sooke Harbour or Basin, either directly or indirectly. Discharges to Sooke Bay were to be permitted, subject to meeting the necessary Ministry of Environment and federal department requirements.
- A formal septic system management program like the Capital Regional District's program would not be implemented unless the results of a septic tank inventory, identification of "hot spot" trouble areas and implementation of an education program were reviewed and found lacking after a three year trial period.
- Kaltasin and Whiffin Spit North were the two highest rated candidates for the next expansion of the Sewer Specified Area. The Kaltasin catchment was the most likely candidate for inclusion in the Sewer Specified Area (SSA).

Based on the work presented in the Stage 3 LWMP (Sanitary) Summary Report, the District of Sooke (the District) makes the following commitments regarding the LWMP (Sanitary):

- The District will maintain user payment policies/bylaws that ensure existing SSA users do not pay more than they are already paying and that any new users, either through in-fill or SSA expansion, pay their fair share of both the capital and operating costs of the wastewater collection and treatment system.
- The District will develop and implement a bylaw prohibiting direct discharges from satellite treatment plants to Sooke Harbour or Sooke Basin. In this bylaw, the following options for disposal of satellite treatment plant effluent will be allowed:
 - Open marine outfall to Sooke Bay;
 - Approved discharge to ground; or
 - Connection to sewer system using a "user-pay" basis.
- The District will set protocols for review and evaluation of development proposals for wastewater treatment strategies for developments outside of the SSA. This systematic approach will provide a consistent framework for the District to approve, reject or negotiate a variation on the proposal they have been given.



- The District will complete the development and implementation of a LWMP (Rainwater) Stage 2 and Stage 3 that is consistent with guiding principles for stormwater planning and meets the guidelines of the MoE (see Part B of this document).
- The District will implement a regulated maintenance program for private on-site septic systems within the District. This program will include the:
 - Development and implementation of a public education program;
 - Inventory of existing septic systems within the District;
 - Identification and monitoring of water quality “hotspots” within the District; and
 - After three years, review the impact of the public education program on water quality “hotspots”. At which time, the need to develop a bylaw regulating maintenance of on-site septic systems should be reviewed.
- The District will, with its treatment plant operations contractor, develop a biosolids management program for beneficial reuse of septic tank and wastewater treatment plant biosolids. The following options will be considered for the District’s biosolids management program:
 - Composting of biosolids at an existing facility on Vancouver Island or the development of local facilities.
 - Land application of biosolids for use in reforestation situations.
- The District will confirm the preferred order of catchment areas to be included in the SSA in the future. The preferred order of catchment areas could vary based on on-going environmental monitoring activities and the priorities of the District. At this point, of the two highest ranked candidate areas, Whiffin Spit North and Kaltasin, the Kaltasin area is the preferred candidate for the next expansion of the Sewer Specified Area (SSA). This list should be revisited on a five year basis to determine which areas are in greatest need of connection.

Priority catchment areas for sewerage and inclusion within the SSA will be subject to change based on available economic information; improvements in environmental information, such as the collection of additional fecal coliform and microbial source-tracking data for catchment areas; and the priorities of the District. At the current time, the Kaltasin catchment area, at approximately \$9200/SFE (excluding grants) is recommended to be the next area to be added to the Sewer Specified Area (SSA) in part because of the analysis conducted during Stage 3 (Sanitary) and the fact that it is well recognized that this area is vulnerable to high groundwater conditions and failing septic systems.



2.3 Implementation Plan – LWMP (Sanitary)

Based on the results of the Stage 3 LWMP (Sanitary) discussion papers and the resulting recommendations, there are four major projects and several related minor projects to be implemented. The major projects include the following:

- Development and implementation of a bylaw that bans discharge of wastewater effluent from any treatment plants, e.g. satellite treatment plants, into Sooke Basin and Sooke Harbour and any of their tributaries.
- Development of protocols for review and evaluation of development proposals for wastewater treatment strategies for developments outside of the SSA.
- Investigation of biosolids disposal options that result in beneficial reuse rather than the landfilling of the biosolids.
- Development and implementation of a program that develops a septic tank inventory, identifies “hot spots” related to septic tank failures and provides a septic tank operation and maintenance education program. The results of this combined program would be reviewed after three years and the decision regarding the need for a formal septic tank maintenance program would be re-evaluated.
- Implementation of a program to sewer the Kaltasin area catchment starting with refinement of the \$9200 per single family equivalent (SFE) cost estimate through a pre-design study, followed by implementation of the sewerage program.

Table 1 provides a summary of the LWMP (Sanitary) activities that are to be implemented, their estimated cost, proposed implementation schedule and their current status.

Table 1: Stage 3 LWMP (Sanitary) Plan Activity, Estimated Additional Costs, Implementation Schedule and Status.

Plan Activity	Estimated Additional Costs	Implementation Schedule	Status
Development and adoption of a bylaw to ban discharge of wastewater treatment plants to Sooke Harbour, Sooke Basin or any of their tributaries	\$20,000 or approximately \$4 per SFE ¹	2010	In Progress
Development of protocols for review and evaluation of development proposals for wastewater treatment strategies for developments outside of the SSA ²	\$20,000 or approximately \$4 per SFE	2010	In progress
Investigation of biosolids disposal options	\$40,000 or approximately \$8 per SFE	Investigation 2010, implementation 2011	Pending



Plan Activity	Estimated Additional Costs	Implementation Schedule	Status
Development and implementation of a septic tank inventory and education program	\$40,000 or approximately \$8 per SFE	Investigation 2010, implementation 2011 and review in 2014	Pending
Predesign of the Kaltasin area sewerage project including refinement of costs and determination of availability of grants	\$80,000 or approximately \$61 per affected SFE (about 1310 SFEs in the catchment area)	#1 priority in Strategic Plan	Pending grant funding
Implementation and construction of the Kaltasin sewerage project	Current estimate is about \$9200 per affected SFE	#1 priority in Strategic Plan	Pending grant funding
Review of the next areas to be seweraged, after the implementation of the Kaltasin sewerage project	\$20,000 or approximately \$4 per SFE	#1 priority in Strategic Plan	
Review of the LWMP	\$40,000 or approximately \$8 per SFE	2015	

¹Single Family Equivalent

²Sewer Specified Area

3.0 Stage 2 & 3 LWMP (Rainwater)

3.1 Background

In 2006, after the completion of Stage 2 (Sanitary) portion of the LWMP in October 2005, the District of Sooke commenced work on a separate component of the same LWMP for Rainwater. The purpose of the Stage 1 LWMP (Rainwater) was to introduce rainwater management issues to the community and provide a realistic set of rainwater management options considered appropriate for detailed investigation and discussion in the District of Sooke Stage 2 & 3 LWMP (Rainwater).

The Stage 1 LWMP (Stormwater) activities resulted in the development of three documents:

- District of Sooke, Liquid Waste Management Plan (Stormwater), Stage 1 Technical Support Document, November 28, 2006;
- District of Sooke, Liquid Waste Management Plan (Stormwater), Stage 1, November 28, 2006; and
- District of Sooke, Liquid Waste Management Plan (Stormwater), Stage 1 Summary of the Public Involvement Process, September 13, 2007

The Technical Support Document investigated 22 tasks identified in the Stage 1 Terms of Reference, and the Stage 1 LWMP (Stormwater) report provides a summary of the findings. The Stage 1 Plan is available on the District of Sooke website and was prepared to meet Province of British Columbia expectations for the process, content and delivery of a Stage 1 LWMP (Stormwater).



The Stage 1 LWMP (Stormwater) received provincial Ministry of Environment approval in a letter dated February 7, 2008. In that letter, the Province also approved the District's request to combine the remaining Stage 2 & 3 of the LWMP (Rainwater).

The Terms of Reference (ToR) for Stage 2 & 3 were prepared to meet provincial expectations for the process, content and delivery of a LWMP (Rainwater). Provincial guidelines require that the ToR be prepared in consultation with the Regional Environmental Protection Manager. This has been completed and all issues identified in the province's February 7, 2008 letter have been addressed. The District of Sooke Stage 2 & 3 LWMP (Rainwater) is consistent with provincial objectives and principles of sustainability.

Following direction from the Ministry of Environment, the Stage 2 & 3 LWMP (Rainwater) has ensured that rainwater management has a high profile in the District of Sooke Official Community Plan. Terms of Reference have been developed for the ongoing Plan Monitoring Committee and costs per household and an implementation schedule has been developed for the life of the plan. The Rainwater component of the Plan has been integrated where necessary with the Sanitary component.

A public consultation process was designed and implemented during Plan development using the Ministry of Environment's Proposed Revised Guidelines for Preparing Liquid Waste Management Plans.

3.2 Results

Stage 2 & 3 LWMP (Rainwater) has been developed with significant input from the municipal planning and engineering departments, the community and the LWMP Advisory Committee. Plan development required the consultants to undertake detailed investigations of 72 recommendations identified in the District of Sooke Stage 1 LWMP (Stormwater). The Stage 2 & 3 LWMP (Rainwater) provides the following information for each of the 72 aspects of rainwater management:

- Background (to provide the rationale for inclusion within the Plan);
- Discussion;
- Commitments; and
 - lead agency
 - primary contact
 - human, financial and other resources required
 - potential funding sources
 - implementation schedule
- Status.

During the Stage 2 & 3 (Rainwater) LWMP process, Plan requirements were either completed or developed to provide clear direction to the District of Sooke to ensure that:



- Municipal rainwater infrastructure is developed in a manner that will result in healthy watercourses and a healthy near shore marine environment;
- Watershed based management approaches implemented to protect the District of Sooke's watersheds;
- Low impact development techniques are employed to maintain, and where possible restore the pre-development hydrologic regime of urbanized and developing watersheds;
- Biological and chemical contaminants do not enter rainwater flows in the first place (rainwater source control);
- A green infrastructure approach to rainwater management is taken to provide for cleaner air through well treed riparian zones and streetscapes;
- Education and training activities are undertaken and community involvement is supported;
- Rainwater, on-site sewage treatment and groundwater recharge are not viewed in isolation;
- Spills are prevented and response and reporting protocols are in place;
- Annual monitoring and reporting of rainwater flows is undertaken;
- Methods to fund rainwater activities are investigated; and
- Regulatory policies, guidelines and options are discussed on an ongoing basis.

There are a total of 72 activities addressed in the Plan. Many of these activities were completed by the consultants and District of Sooke staff during the 22 months that the Plan was under development. It must be recognized that the District has in the past, and continues to expend significant staff time and financial resources on rainwater management. The existing initiatives include an annual contract with the CRD's monitoring program, the development of four Rainwater Management Plans, rainwater monitoring and ongoing consultation with developers during the development approval process. Plan implementation will have a cumulative effect on the work loads of existing staff and it is likely that additional staff will be required over time. This should be addressed through the District's ongoing internal assessments of staffing levels.

LWMP (Rainwater) - Activity, Estimated Additional Costs, Schedule and Status

Discussions with senior staff from the Ministry of Environment determined that it would be appropriate to base calculations on a costs per household basis. It was also determined that the LWMP (Rainwater) should have an initial 10 year planning horizon.

In addition to the completed and ongoing rainwater management activities, the plan identifies 13 new activities that the District of Sooke will have to fund through municipal budgets, external funding sources or a combination of both.

Table 2 provides a summary of each activity identified in the plan, an implementation schedule and status. Table 2 also provides the estimated costs for the 13 new activities that will require additional funding.



Table 2: LWMP (Rainwater) Plan Activity, Estimated Additional Costs, Implementation Schedule and Status.

Plan Activity	Estimated Additional Costs	Implementation Schedule	Status
Section A – Rainwater Flow – Rate and Quantity			
A 1 – finalize and adopt the updated draft Subdivision Bylaw 404 to ensure post development rainwater flows mimic predevelopment conditions	one time cost of \$5,500	2010	underway
A 2 – finalize and adopt the updated draft Subdivision Bylaw 404 to address rainwater runoff from roads	included in A 1	2010	underway
A 3 – modify the Zoning Bylaw and OCP to ensure impervious surfaces are minimized	0	2010	ongoing
A 4 – finalize and adopt the updated draft Subdivision Bylaw 404 to minimize piped rainwater systems	included in A 1	2010	underway
A 5 – finalize and adopt the updated draft Subdivision Bylaw 404 to encourage surface drainage	included in A 1	2010	underway
A 6 – finalize and adopt the updated draft Subdivision Bylaw 404 and the updated draft OCP to encourage rainwater management for existing development	included in A 1 & H 1	2010	underway
A 7 – finalize and adopt the updated draft Subdivision Bylaw 404 to require the use of the Water Balance Model during development proposals	included in A 1	2010	underway
A 8 – finalize and adopt the updated draft Subdivision Bylaw 404 and the updated draft OCP to encourage rainwater management for existing development	included in A 1 & H 1	2010	ongoing
Section B – Rainwater Quality			
B 1 - adopt and enforce a Rainwater Quality Protection Bylaw (source control)	\$15,000 per year	starting in 2011	pending
B 2 - finalize and adopt the updated draft Subdivision Bylaw 404 to encourage the infiltration and treatment of road runoff	included in A 1	2010	ongoing

Plan Activity	Estimated Additional Costs	Implementation Schedule	Status
B 3 - modify plumbing permits to address cross connections	\$3,500 (once)	2011	pending
B 4 – ensure public information on sewage spills and releases is provided	0	2010	pending
B 5 – provide a sani-dump facility for RVs	0	dependent on a development opportunity	ongoing
B 6 – provide a dockside system to pump out holding tanks on boats	0	dependent on a development opportunity	pending
B 7 – finalize and adopt the updated draft Subdivision Bylaw 404 to require erosion and sediment control plans	0	2010	pending
B 8a – ensure activities on ALR land are in compliance with provincial requirements	0	2010	pending
B 8b - ensure timber harvesting on crown land is in compliance with provincial requirements	0	2010	pending
B 9 - ensure timber harvesting on private land is in compliance with provincial requirements	0	2010	pending
B 10 – promote appropriate handling and disposal of chemical contaminants	0	2010	ongoing
B 11 – ensure appropriate handling and disposal of street materials	0	2010	complete
B 12 – support educational initiatives to protect rainwater quality	0	underway	ongoing
B 13 – continue with the annual CRD monitoring program	0	underway	ongoing
Section C – Watershed Approach to Rainwater Management			
C 1 – Part 1: complete Rainwater Management Plans for 7 remaining high and moderate rated watersheds	\$70,000 per year for 7 years	2011	ongoing
C 1 – Part 2: collect outstanding rainwater management plan information for the 4 RMPs in progress	\$40,000 (once)	2011	ongoing
C 2 – prioritize watersheds for rainwater management	included in C 1	2009	complete
C 3 – discuss planning processes for shared watersheds with neighbouring jurisdictions	0	2010	pending
C 4 – follow development of the Sooke River WMP	0	2010	pending



Plan Activity	Estimated Additional Costs	Implementation Schedule	Status
C 5 – collect missing watershed data	included in C 1 Part 2	2011	ongoing
C 6 – collect baseline ecological and geophysical information	included in C 1 Part 1 & K 8	2010	ongoing
Section D - Groundwater Recharge			
D 1 – use the information in the Associated Engineering soils map to promote groundwater recharge	0	2010	pending
D 2 - finalize and adopt the updated draft Subdivision Bylaw to ensure development practices mimic the natural hydrology	included in A 1	2010	pending
Section E - Management Options for Properties Serviced by On-site Sewage Treatment Systems			
E 1 - use the information in the Associated Engineering soils map to protect rainwater flows from on-site sewage treatment systems	0	2010	pending
E 2 – ensure compliance with MoE and VIHA requirements to determine lot size for properties with on-site treatment and rainwater management requirements	0	implemented	complete
E 3 – ensure appropriate siting of rainwater management systems to on-site systems and potable wells	0	implemented	complete
Section F – Monitoring Rainwater Discharges, Watercourses and the Marine Receiving Environment			
F 1 – continue with the CRD monitoring program	included in B 13	underway	ongoing
F 2 – expand the CRD monitoring program to determine the effectiveness of various BMPs	included in B 13	underway	ongoing
F 3 – integrate precipitation information into CRD monitoring program	included in B 13	underway	ongoing
F 4 – use monitoring data to promote BMPs	included in B 13	underway	ongoing
F 5 – enhance the CRD monitoring programs educational component	included in J 1	every three years, to coincide with new Councils	ongoing
Section G – Protect and Enhance the Marine Coastline, Waters and Marine Life			

Plan Activity	Estimated Additional Costs	Implementation Schedule	Status
G 1 - adopt and enforce a Rainwater Quality Protection Bylaw (source control)	included in A 1 & B 1	2011	pending
G 2 – minimize impervious surfaces along the marine coastline	included in A 1	2010	underway
G 3 – continue monitoring to assess effectiveness of sewage collection system	included in B 13	underway	ongoing
G 4 – ensure the draft OCP addresses rainwater management and the protection of the marine foreshore	included in G 4	2010	complete
G 5 - host initial meeting to determine level of interest in Shellfish Project	\$1,000 (once)	2011	pending
G 6 – ensure development is in compliance with the Fisheries Act	included in M 1	2010	ongoing
G 7 - support environmental groups	included in K 8	2011	pending
Section H – Rainwater Management and Low Impact Development			
H 1 - incorporate LID principles in OCP	0	2010	complete
H 2 – finalize and adopt the updated draft Subdivision Bylaw 404, ensuring that LID requirements are addressed	included in A 1	2010	underway
H 3 – compile and provide information on LID techniques on Sooke web site	0	ongoing	ongoing
H 4 – undertake a LID pilot project	0	ongoing	ongoing
Section I – Promote the Prevention, Response and Reporting of Spills to Rainwater Flows and the Marine Environment			
I 1 - provide training to staff on spill prevention, response and reporting	\$1,000 every 2 years	2011	ongoing
I 2 - provide training to community members on spill prevention, response and reporting	\$1,000 per year	2010	ongoing
I 3 - facilitate the installation of small I D signs at rainwater discharge points	\$5,000 (once)	2011	pending
I 4 – post the oil spill reporting # at marinas	0	2010	ongoing
I 5 – host spill prevention, response and reporting workshops for businesses	included in I 1	2011	ongoing
I 6 – provide information to residents on spill prevention, response and reporting	included in I 2	2010	ongoing
I 7 – ensure spill prevention, response and reporting is required during development	included in A 8	2010	ongoing

Plan Activity	Estimated Additional Costs	Implementation Schedule	Status
I 8 – provide a generic spill response and reporting form on Sooke's web site	0	2010	pending
Section J – Rainwater Management, Education and Training Opportunities			
J 1 – provide facilitated tours of innovative rainwater management facilities	0	every three years, to coincide with new Councils	ongoing
Section K – Support Local Community Groups Involved With Rainwater Protection			
K 1 – provide resource information on rainwater management systems on Sooke's web site	0	2009	ongoing
K 2 – support community groups by providing info on funding opportunities	included in L 1	2010	ongoing
K 3 – provide environmental stewardship resources on Sooke's web site	0	2009	ongoing
K 4 – provide mapping resources to the community	0	2009	complete
K 5 – amend the Community Grant Program to include environmental projects	0	2010	pending
K 6 - provide field equipment to stewardship groups	\$1,600 once (2010) and \$200 per year after that for replacement costs	2010	pending
K 7 - provide environmental stewardship workshops	\$2,000 per year	2010	pending
K 8 - facilitate the creation and training of Streamkeeper Teams	\$3,000 every 3 years	2011	pending
K 9 - enhance the Volunteer Recognition Program to recognize environmental stewardship	\$1,000 per year	2010	pending
Section L – Methods to Fund Rainwater Activities			
L 1 – investigate funding opportunities for rainwater management and ecosystem restoration	0	2010	ongoing
L 2 – partner with others to obtain funding for rainwater management and ecosystem restoration	included in L 1	2010	ongoing
L 3 – include statement requiring DCCs for rainwater management in OCP	0	2010	complete



Plan Activity	Estimated Additional Costs	Implementation Schedule	Status
L 4 – explore other methods of accumulating funds for rainwater management facilities	0	2010	complete
Section M – Regulatory Mechanisms			
M 1 – ensure District of Sooke compliance with all federal and provincial regulations	0	2010	ongoing

Estimated costs per year to implement the unfunded LWMP (Rainwater) activities over a 10-year planning horizon (2009 dollars).

2010	\$ 11,100
2011	\$142,700
2012	\$ 89,200
2013	\$ 90,200
2014	\$ 92,200
2015	\$ 90,200
2016	\$ 89,200
2017	\$ 93,200
2018	\$ 19,200
2019	<u>\$ 20,200</u>
Total	\$737,400

Estimated Costs per Household to Implement the LWMP (Rainwater)*

Estimated total cost to implement the plan over 10 years is \$737,400.

Estimated number of households (2009) to fund plan activities is 4,529**.

Estimated average cost per household to implement the unfunded activities in the LWMP (Rainwater) over a 10 year period = **\$162.82*****.

Estimated average annual cost per household to implement the unfunded activities in the LWMP (Rainwater) = **\$16.28*****.

* Discussions with senior staff from the Provincial Ministry of Environment advised that it would be appropriate to base calculations on a cost per household basis. It was also determined that the LWMP (Rainwater) should have an initial 10 year planning horizon.

**The 2009 BC Assessment lists a total of 4,824 property parcels within the municipality. Of this total, 4,529 (residential and commercial) are shown with improvements. It was determined that using 4,529 would provide the most accurate number to calculate the estimated "cost per household".

*** The average cost per household has been calculated under the assumption that the District of Sooke will pay the entire costs of all unfunded plan activities. However, it is highly likely that the District will receive funding assistance from the provincial and federal governments and other sources to assist with plan implementation.



4.0 Approval and Adoption

The District of Sooke will adopt this combined Stage 3 LWMP (Sanitary) and Stages 2 & 3 LWMP (Rainwater) document as a Bylaw upon approval of the document by the Ministry of Environment. Following Ministerial approval, the District will give the Bylaw first and second reading, public hearing, third and fourth reading and formally adopt the LWMP.

5.0 Monitoring Committee

The purpose of the LWMP monitoring committee is to monitor the implementation of the approved LWMP (Sanitary and Rainwater) and develop strategies to mitigate issues related to implementation as they arise.

Below are the terms of reference:

Select Committee Name: LIQUID WASTE MANAGEMENT PLAN
MONITORING COMMITTEE

Established: Council resolution *Insert date*

Purpose of Committee:

The purpose of the Liquid Waste Management Plan (LWMP or the “Plan”) monitoring committee (the Committee) is to monitor the implementation of the approved LWMP (Sanitary and Rainwater) and develop strategies to mitigate issues related to implementation as they arise.

Members:

Up to (11) voting members consisting of:

- Two (2) representatives from District of Sooke Development Services, Planning and Engineering;
- Representative from Local First Nations (T’Sou-ke First Nation and/or Beecher Bay);
- Ministry of Environment, Regional Environmental Protection Manager, or designate;
- Ministry of Community and Rural Development;
- Vancouver Island Health Authority;
- Environment Canada;
- District of Sooke community sewer purveyor; and
- At least two (2) members of the public at large chosen from:
 - the development community;
 - local environmental groups; and
 - local business and the general community.



Council Representative: Councilor as appointed by Council

Chairperson: The Committee will elect either a sitting member of the public or a member of the District's Development Services staff.

Term: At least one (1) year in accordance with Policy No. 1.4., *Committee Structure and Function Policy, 2006*

Staff Support: Engineering

Responsibilities of the Committee:

- Meet two (2) times per year or at the call of the Chairperson.
- Review Development Services reports on the status of the LWMP implementation. These staff reports will provide information on plan activities including scheduling and budgets.
- Assist District staff in identifying potential funding opportunities, developing partnerships and encouraging pilot projects in all aspects of the Plan implementation.
- Review the terms of reference for contracts with agencies involved in implementation and/or operation of aspects of the Plan.
- Assist District staff to ensure that municipal and private projects are in compliance with all aspects of the Plan.
- Develop recommendations to be forwarded to the District Council.
- Review terms of reference for additional work to maintain the implementation schedule.
- Review an annual LWMP implementation and status report developed by District staff for subsequent submittal to the Ministry of Environment.

Budget: Engineering

Part A: Stage 3 Sanitary



Part B: Stage 2 & 3 Rainwater

