



Islands Trust

STAFF REPORT

March 24, 2010

File No.: X

To: Salt Spring Island Local Trust Committee

From: Justine Starke, Planner 2

Re: Local Trust Committee Special Project: Watershed Management
Cusheon Watershed Management Plan
St. Mary Lake Watershed Management Plan

BACKGROUND

The Salt Spring Island Local Trust Committee has identified watershed management on Salt Spring Island as one of its top priorities. The purpose of this report is to present recommendations on the management of two watersheds on Salt Spring Island: the Cusheon watershed and St. Mary Lake watershed. This report specifically discusses the implementation of aspects of the Cusheon Watershed Management Plan and the St. Mary Lake Watershed Management Plan by the Salt Spring Island Local Trust Committee. These recommendations are seen as a first step in considering the needs of other watersheds on Salt Spring Island.

Cusheon Watershed Management Plan

The Cusheon Watershed Management Plan was previously presented to the Salt Spring Island Local Trust Committee. The plan was finalized in 2007 and developed by the Cusheon Watershed Management Plan Steering Committee; it includes many years of research and data collection and is the product of many hours of volunteer labour, including the contributions of professional scientists and hydrologists. The plan presents an extremely thorough analysis of the characteristics of the Cusheon watershed, water supply and use, and the water quality status of the watershed. Groundwater in the basin was not evaluated as part of the plan. The plan includes objectives and recommendations for restoring and protecting the sources of water in the watershed to ensure Cusheon Lake water is potable (given reasonable treatment), algal blooms are reduced, and fish and wildlife habitat are improved. The plan speaks directly to actions the Islands Trust can take to achieve the goals and objectives of the plan.

The five main objectives of the Cusheon Watershed Management Plan are to:

1. Define and map Cusheon's watershed, its land uses, creeks, wetlands and the status of riparian vegetation.
2. Undertake a scientific analysis of the phosphorus sources in the watershed.
3. Reduce inputs of phosphorus from land management activities.
4. Reduce inputs of phosphorus from water management activities.
5. Monitor springtime concentrations of phosphorus.

The Cusheon Watershed:

Located in central Salt Spring Island, the Cusheon watershed covers contains 10.65 square kilometres. Human impacts have involved a large degree of modification of the basin:

- 62% has been logged or otherwise cleared
- 8% is in small-scale agriculture.
- Residences are scattered throughout the basin and clustered around Cusheon Lake.
- There is one resort, a subdivision of prefabricated homes, a golf course, a garbage transfer station, a private school and yoga centre.
- Only 13% of the basin is considered “natural;” All creeks in the basin are intermittent.
- Cusheon Lake is well used for recreation and supports appreciable populations of smallmouth bass, three-spine stickleback, cutthroat trout, and small Coho salmon.

Water quality in Cusheon Lake suffers from an overloading of nutrients that cause algal and cyanobacterial blooms. These blooms have caused prohibitions on use of the water. Phosphorus is the key limiting nutrient controlling the amount of algal growth in Cusheon Lake. The largest source of phosphorus (53.5%) is from land runoff. This drainage flows directly from the land into the lake and also has its source from lakes upstream of Cusheon Lake, but in the same watershed. Septic systems and shoreline effects from residences near the lake contribute about 23% of the phosphorus load. Internal recycling of phosphorus from bottom sediments is caused by enrichment and lack of oxygen in deep waters, and contributes about 21% of the total load. The Cusheon Watershed Management Plan Steering Ccommittee recommends that the lake should be returned to its estimated natural status of nutrient levels which would require a reduction of total annual inputs of phosphorus.

Efforts to reduce nutrient flux from the general basin should involve preventing clear-cutting and other vegetation removal, educating people on the benefits of reforestation of previously cut areas, controlling animal waste, preventing escape of commercial or organic fertilizer, and reducing direct runoff from roads and other impervious areas.

The Cusheon Watershed Management Plan Steering Committee also recommends enhancing the riparian zone by protecting areas already in good condition, and restoring vegetation in areas that have been disturbed. This will reduce the escape of nutrients to the lakes, and have other advantages for water quality in the creeks. The committee recommends inventory and mapping of the watershed, an extension of Development Permit Areas, implementation of the Riparian Areas Regulations, and encouraging eco-credits on taxation.

St. Mary Lake Watershed Management Plan

The St. Mary Lake Watershed Management Plan was released in 2009 by the St. Mary Lake Steering Committee. It has been previously presented to the Salt Spring Island Local Trust Committee. The purpose of the management plan is to facilitate the restoration and protection of the quality of surface waters within the St. Mary Lake watershed.

The St. Mary watershed is in the north part of Salt Spring Island. With a surface area of 182 hectares, St. Mary is the largest lake on Salt Spring, but the watershed itself is relatively small, with an area of 690 hectares (including the lake). Uses on the lake are predominantly residential with a few commercial lakeside resorts and several farms.

Water quality on St. Mary lake is compromised by high phosphorus concentrations making it eutrophic (highly enriched) and subject to algal and cyanobacterial blooms. Phosphorus is the key

limiting factor controlling the amount of algal growth on St. Mary Lake. Sources of phosphorus include both external, from uses surrounding the lake, and internal, from vegetation within the lake.

“Regeneration from bottom sediments is the largest source of phosphorus, with an input of 63% Septic fields around the lake contribute another 29%. The various sources are listed below:

*Regeneration from bottom sediments 63 % 625 kg/yr
Domestic sewage (septic fields) around lake 29 % 290 kg/yr
Land runoff 4 % 40 kg/yr
Rain and dust fall to surface of lake 2 % 20 kg/yr
Groundwater entering lake 1 % 10 kg/yr
Total loading to the water of the lake 100 % 985 kg/yr”*

The overall goal is to restore and protect the sources of water in the St. Mary Lake watershed so that algal blooms will be reduced, St. Mary Lake will provide potable water after reasonable treatment, and fish and wildlife habitat will be improved. To achieve its overall goal, the plan has 8 main objectives:

1. Define and map St. Mary Lake's watershed, its land uses, creeks, wetlands, the status of riparian vegetation and drainage ditches.
2. Continue to monitor the lake for phosphorus levels and sources as improvements are made. Subject this data to scientific analysis as required.
3. Reduce loading from sediment through aeration.
4. Reduce phosphorus inputs from domestic sewage.
5. Reduce phosphorus runoff from built-up areas.
6. Reduce phosphorus inputs from other land runoff.
7. Continue to assess target levels for phosphorus reduction.
8. Encourage stewardship activities and increased protection by local and provincial government.

The St. Mary Lake Management Plan recommends an empirical approach for applying remedies to the lake, based on the data on phosphorus sources shown above. According to the plan, responsibility for coordinating and evaluating the program should reside with local government, water districts and the St. Mary Lake Stewardship Committee. While the role of Islands Trust is land use planning and does not involve the kind of scientific research needed for monitoring improvement in the lake over the years, Islands Trust can play a role in protecting the land surrounding the lake and in supporting efforts by other groups to pursue an empirical approach to water quality management. It should be noted that the St. Mary Lake Management Plan endorses the recommendations to reduce phosphorus inputs from land management in the Cusheon Watershed Management Plan, as well as endorses the many changes in the revised Official Community Plan that strengthen protection of watersheds and riparian areas.

CURRENT PLANNING STATUS OF THE PROJECT:

Please see Appendix 1 for an overview of the Islands Trust Policy Statement as it applies to this project. Please see Appendix 2 for an overview of the Islands Trust Official Community Plan policies as they apply to this project.

Salt Spring Island Official Community Plan Development Permit Areas:

Parts of both the Cusheon Watershed and the St. Mary Lake Watershed are within *Development Permit Area 4: Lakes, Streams, and Wetlands* (DPA 4), including the lakes themselves. DPA 4 encloses the land (measured horizontally) that is within 10 m of the natural boundary of streams, the land that is within 300 m of the natural boundary of Maxwell Lake and the land that is within 61 m of the natural boundary of all other island lakes. The objectives of DPA 4 are to:

E.4.3.1 To protect the quality of drinking water supplies.

E.4.3.2 To protect fish habitat.

E.4.3.3 To protect sensitive riparian habitat and the unique species that depends upon it.

Please see Appendix 3 for a complete copy of OCP Bylaw 434 Development Permit Area 4.

STAFF COMMENTS:

The Islands Trust Policy Statement gives broad support for watershed management and ecosystem protection. Policies in the Salt Spring Island Officially Community Plan Bylaw 434 enable the Salt Spring Island Local Trust Committee and wider community to pursue the protection of watersheds and watershed management. The Salt Spring Island Local Trust Committee will be amending the Salt Spring Land Use Bylaw #355 over the year and has the opportunity to implement some of the policies proposed in the OCP. The Salt Spring Island Local Trust Committee will also be reviewing its Development Permit Areas. DPA 4 policies and recommendations are in need of review in order to better meet its objectives.

Many of the recommendations found in both the St. Mary Lake Watershed Management Plan (SMLWMP) and the Cusheon Watershed Management Plan (CWMP) are applicable to both the Land Use Bylaw Review and a review of Development Permit Areas. Below is a table listing those recommendations that are applicable to the Islands Trust and outlining which of these two regulatory tools would best be used for implementation:

	Management Plan	Recommendation	Regulatory Tool	Staff Comments
1	CWMP	Develop maps of Cusheon Lake watershed with current land use & other key features.	DPA	Mapping of watershed ongoing as part of implementing RAR
2	CWMP	Ground truth watershed mapping.	N/A	Budget dependent
3	CWMP	Strengthen development permit areas, & soil removal bylaws on all lands within drinking watershed	DPA	DPA work forthcoming. Soil Removal and Deposit Bylaw 418 adopted 2008.
4	CWMP	Eliminate any flaw in Development Permit Area 4 related to infill/dumping of soils in streams & lakes.	DPA	DPA 4 should be reviewed entirely.
5	CWMP	Improve enforcement & education about DPAs	N/A	Education is needed to avoid the need for enforcement once a value has been lost.
6	CWMP	Limit docks on shoreline properties	DPA/LUB	The water adjacent the shoreline of both Cusheon and St. Mary lake is currently zoned S6 which permits docks for non-commercial boat moorage. A DP for DPA 4 may be required depending on how the dock is constructed. The LTC could consider limiting new docks on watershed lakes.
7	CWMP	Educate landowners and contractors about DPA responsibilities.	N/A	
8	CWMP	Designate entire Cusheon watershed as a DPA	DPA	DPA work forthcoming.
9	CWMP	Create treed buffer zones & tree cutting bylaw.	DPA/LUB S. 909 of LGA	Tree cutting bylaws are outside of Islands Trust authorities; Restrictions on vegetation removal can be included in the guidelines of a DPA; screening provisions to separate uses or protect environmental features can be included as a setback in a Land Use Bylaw, pursuant to Section 909 of the Local Government Act.
10	CWMP	Outline best management practices for	DPA	BMPs should be implemented through

		development in watershed.		DPA guidelines.
11	CWMP	Change OCP, LUB & Trust Policy to ensure no "upzoning" in drinking watersheds.	OCP, LUB, Islands Trust Policy Statement	OCP Bylaw 434 discourages new densities from being located in watersheds.
12	CWMP	Implement policy to disallow subdivision of land for relatives within the watershed.	LUB	Could be considered as part of policy change to LUB.
13	CWMP	Strengthen Trust Policy Statement	Islands Trust Policy Statement	The Policy Statement already supports watershed protection.
14	CWMP	Within watershed, disallow home-based businesses with significant water pollution potential.	LUB	Consider limiting the type or scale of home based business permitted in watershed zones.
15	CWMP	Reduce lot site coverage in watersheds.	LUB	For consideration. Could be specified to limit site coverage of impermeable surfaces.
16	CWMP	Investigate route alternatives & limit road width (impervious surfaces) in watershed.	LUB/DPA	While this generally is a MoTI responsibility, limiting driveways and other impermeable surfaces could be considered by LTC.
17	CWMP	Encourage farm owners to follow Agricultural stewardship practices & promote awareness of watershed protection.	DPA	Authority to regulate farm activities must be considered for compliance with the Right to Farm Act. Consider this recommendation in the process of RAR implementation.
18	CWMP	Document use of fertilizers & educate landowners regarding need to reduce or eliminate.	N/A	Advocacy and Education.
19	CWMP	Investigate potential water source contamination from former Blackburn garbage dump leachate.	N/A	Jurisdiction of the Ministry of Environment and Capital Regional District
20	CWMP	Inspect, monitor & remedy faulty septic systems in watershed, particularly those near riparian areas.	N/A	Jurisdiction of the Vancouver Island Health Authority.
21	CWMP	Ensure best management practices for storm water management on public roads in watershed as part of Islands Trust / MOT protocol agreement & maintenance contract.	MoTI/IT Protocol Agreement	To be considered when re-negotiating this agreement.
22	CWMP/ SMLWMP	Seek registration of the Plan under BC Drinking Water Protection Act legislation.	N/A	This recommendation requires further investigation
23	CWMP/SMLWMP	Watershed Awareness Program for entire community.	N/A	In collaboration with other groups and agencies.
24	SMLWMP	Develop maps of St. Mary Lake watershed showing current land use & other key features.	OCP	Mapping of watershed ongoing as part of implementing RAR
25	SMLWMP	Use above mapping to redefine watershed zoning within OCP and land use bylaw (LUB) designations.	OCP/LUB	OCP designations and zoning schedule should be reviewed based on outcome of watershed mapping.
25	SMLWMP	Initiate a stormwater management program to minimize effects of direct water runoff and reduce phosphorus inputs from surface runoff in built-up areas.	OCP/DPAs	Stormwater management can be addressed through Development Permit Area guidelines. DPA 4 guidelines should be reviewed with a specific focus on storm water management.
26	SMLWMP	Implement policies in the revised OCP that strengthen protection of watersheds and riparian areas in order to reduce	LUB/DPAs	The general recommendation is one purpose of the current staff report.

	phosphorus inputs from general runoff.		
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RECOMMENDATIONS:

THAT the Salt Spring Island Local Trust Committee direct staff to coordinate implementation of the recommendations made by both the Cusheon Watershed Management Plan and the St. Mary Lake Watershed Management Plan with the broader work being done to implement the Riparian Areas Regulation, to update the Salt Spring Island Land Use Bylaw 355, and to review the Official Community Plan Bylaw 434 Development Permit Areas.

Respectfully submitted by:

	Date:
Justine Starke, Planner 2	March 29, 2010

Concurred by:	Date:
Leah Hartley, Regional Planning Manager	

Appendix 1: Islands Trust Policy Statement

Islands Trust Policy Statement:

Support for watershed management in the Islands Trust Policy Statement can be found in *Part III: Ecosystem Preservation and Protection*:

3.1.1 Trust Council holds that:

- *proactive land use planning is essential for the protection of Trust Area ecosystems,*
- *planning must account for the cumulative effects of existing and proposed development to avoid detrimental effects on watersheds, groundwater supplies and Trust Area species and habitats.*

3.1.3 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address the identification and protection of the environmentally sensitive areas and significant natural sites, features and landforms in their planning area.

3.1.5 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address the regulation of land use and development to restrict emissions to land, air and water to levels not harmful to humans or other species.

3.2.2 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address the protection of unfragmented forest ecosystems within their local planning areas from potentially adverse impacts of growth, development and land-use.

3.3.2 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address means to prevent further loss or degradation of freshwater bodies or watercourses, wetlands and riparian zones and to protect aquatic wildlife.

Support for watershed management in the Islands Trust Policy Statement can also be found in *Part IV: Stewardship of Resources*:

4.4.2 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure:

- *neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater,*
- *water quality is maintained, and*
- *existing, anticipated and seasonal demands for water are considered and allowed for.*

4.4.3 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses¹.

4.4.4 Trust Council encourages island property owners, residents and visitors to adopt conservation practices in their use of freshwater.

4.4.5 Trust Council encourages the Provincial government to implement property tax incentives for the retention of groundwater and watershed recharge areas and

¹ *Instream Uses - include water uses such as fish and habitat uses, aesthetic uses, recreational opportunities and the maintenance of water quality in lakes and streams and wetlands.*

freshwater wetlands.

4.4.6 Trust Council encourages the Provincial government to adopt legislation that protects the sustainability and quality of the groundwater of the Trust Area.

4.4.7 Trust Council encourages government agencies, corporations, property owners and residents to use innovative technologies that promote efficient use of freshwater resources, including cisterns, alternative sewage disposal systems, reuse of water, the treatment and use of grey water, and the use of water saving devices.

Appendix 2: Salt Spring Island Official Community Plan Bylaw 434

Salt Spring Island Official Community Plan Bylaw 434

The following policies from the Salt Spring Island Official Community Plan Bylaw 434 identify support and give guidance for how the Local Trust Committee can pursue watershed management:

A.4 Community Objectives

A.4.1 General Objectives

A.4.1.1 *To recognize and protect the fragility and significance of our natural environment as one of our community's greatest and irreplaceable assets.*

A.4.1.2 *To recognize and protect our unique nature as an island - a remote place, unconnected to other land masses, which exists at a smaller scale; a place where boundaries are absolute, resources are finite, and biophysical and socioeconomic impacts can be concentrated due to containment and proximity.*

A.4.1.4 *To adopt the precautionary principle in the decision-making of the Local Trust Committee. The precautionary principle asserts that, when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically. In this context, the essential elements of a precautionary approach to decision-making include:*

- a. a duty to take anticipatory action to prevent harm;*
- b. the right for the community to know complete and accurate information on potential human health and environmental impacts as best it can be determined;*
- c. requiring the proponent to supply this information to the public;*
- d. an obligation to consider alternatives and select the alternative with the least potential impact on human health and the environment, including the alternative of no change;*
- e. a duty to consider broader short-term and long-term costs and benefits to the community when evaluating potential alternatives; and*
- f. a responsibility to make decisions in a transparent, participatory manner, relying on the best available information.*

A.4.2 Sustainability

A.4.2.1 *To recognize the importance of sustainability in all community decisions. To avoid land use decisions that threaten the integrity or sustainability of natural ecosystems.*

A.4.2.2 *To maintain and restore the community's natural capital represented by such items as our agricultural and forest land base, our potable water supplies, and primary value of our natural and unspoiled rural character.*

A.4.3.1 *To continue to focus attention on the finite nature of all of our island's resources, especially those that are drawn from our natural environment.*

A.4.3.2 *To provide direction for the conservation and stewardship of natural resources, especially our surface and groundwater supply.*

A.4.3.3 *To reflect the finite nature of islands by identifying limits to residential, commercial and institutional growth tailored to the community's land base and ecological carrying capacity. Special attention should be paid to ensuring that the human use of potable water can be sustained without negative impact on other values and uses for natural water bodies.*

A.5 THE ISLAND ENVIRONMENT**A.5.1 Objectives**

- A.5.1.1 *To recognize the intrinsic value of our ecosystems and that the health of our ecosystems is inextricably linked to human health.*
- A.5.1.2 *To maintain and improve the quality of the island's natural environment. To give particular attention to the quality of fresh water to sustain healthy fish and wildlife habitat and for human supplies.*
- A.5.1.3 *To identify and encourage protection of those parts of the island that are especially sensitive to development, including those Environmentally Sensitive Areas shown on Maps 9 through 12.*
- A.5.1.4 *To protect areas of high biodiversity. To recognize and protect the island's native plant, animal and bird life. To give particular attention to the streams, wetlands and shorelines of Salt Spring Island.*
- A.5.1.6 *To encourage sustainable land use practices and adopt best management practices.*

A.5.2 Policies

- A.5.2.5 *The Local Trust Committee should not make zoning changes that would result in more development or greater impacts on areas identified as Environmentally Sensitive.*
- A.5.2.6 *The Local Trust Committee may work with the Capital Regional District to develop property tax exemptions as an incentive for the protection of riparian habitat should this be considered feasible.*
- A.5.2.8 *The Local Trust Committee will encourage protection of Crown foreshore, wetland, stream and riparian corridor habitats, other sensitive ecosystems, and wildlife habitat through the development permit process:*
 - a. *The Local Trust Committee will update watercourse mapping and development permit area designations and guidelines to comply with provincial Riparian Area Regulations-*
- A.5.2.9 *The Local Trust Committee will continue to use Development Permit Area designations for protection of the natural environment to protect watersheds used for community surface water supplies or within the capture zone of community water supply wells. Zoning changes should not be made so that more development would be located in these areas. Development permit area guidelines should encourage subdivision layouts that avoid impacts on these areas. Stewardship on the part of property owners and other agencies will also be encouraged.*
- A.5.2.14 *The Local Trust Committee should retain existing regulations to control, surface run-off and to manage stormwater. The LTC should consider adopting regulations to manage soil removal and deposit in order to protect productive or sensitive soils, wetlands, environmentally sensitive areas, and residential neighbourhoods.*
- A.5.2.17 *The Local Trust Committee will recognize the needs of the local farming community, the Farm Practices Protection ("Right to Farm") Act, the Agricultural Land Commission Act and regulations, and the recommendations of the Area Farm Plan when developing policies or bylaws about environmental protection. The Agricultural Advisory Committee and the Ministry of Environment will be consulted as part of this process to develop mutually acceptable management solutions which protect sensitive environments but do not prohibit or unreasonably restrict farming.*
- A.5.2.18 *The Local Trust Committee should support efforts to restore and enhance environmentally sensitive areas and habitat, including the restoration of streams and other watercourses that have been modified (culverted, ditched, diverted, etc.).*

Appendix 3: DPA 4: Volume II of Salt Spring Island Official Community Plan Bylaw 434

E.4 DEVELOPMENT PERMIT AREA 4 LAKES, STREAMS and WETLANDS

*Note: While this Development Permit Area extends only 10 m from the natural boundary of some streams, the federal Department of Fisheries and Oceans and the B.C. Ministry of Environment recommend that the area within at least 15 m of the **top of the bank** of streams be left undisturbed to ensure that fish habitat is protected. It is an offence under the Fisheries Act to do anything that results in the harmful alteration, disruption or destruction of fish habitat. Property owners with land that lies within 15 m of the top of the bank of a fish bearing stream should ensure that they take appropriate precautions, even if their land is not within this Development Permit Area.*

E.4.1 DESCRIPTION OF DEVELOPMENT PERMIT AREA AND EXEMPTIONS

E.4.1.1 Development Permit Area 4 is shown on Map 21. It is made up of the island's major lakes, streams and wetlands. It also encloses the land (measured horizontally) that is within 10 m of the natural boundary of streams, the land that is within 300 m of the natural boundary of Maxwell Lake and the land that is within 61 m of the natural boundary of all other island lakes, except for the land in Development Permit Area 3. Development Permit Area 4 is designated according to Section 879 (1) (a) of the *Municipal Act* to protect the natural environment.

Background Note: The official version of Map 21 is drawn at a scale of 1:20,000 and is available through the offices of the Islands Trust. The page size version of Map 21 attached to this Plan has been included for convenience.

E.4.1.2 **All** development in this Development Permit Area is exempted from the requirement to obtain a Development Permit, **except:**

- a. Removal of trees within 10 m of the natural boundary of a lake or a stream (or within 300 m of Maxwell Lake).
- b. Removal of other vegetation within 10 m of the natural boundary of a lake or stream (or within 300 m of Maxwell Lake) that results in the exposure of a total area of bare soil more than 9 m² in area.
- c. Removal of vegetation in a wetland.
- d. Installation of a septic field within 61 m of the natural boundary of a lake (or within 300 m of Maxwell Lake).
- e. Development of an impervious surface within 10 m of the natural boundary of a lake or a stream (or within 300 m of Maxwell Lake).
- f. Any works or installation of structures within a stream or below the natural boundary of a lake.
- g. The subdivision of land parcels that create additional new lots within this Development Permit Area.

E.4.1.3 Despite Section E.4.1.2, the following activities are also exempted from the requirement to obtain a Development Permit:

- a. land alteration and vegetation removal on agricultural land that is more than 3 m from the natural boundary of a lake or stream (except Maxwell Lake), that is done for farming purposes and that is consistent with normal farm practices under the *Farm Practices Protection (Right to Farm) Act*.
- b. forest management activities related to timber production and harvesting in the Forest Land Reserve.
- c. fish habitat enhancement work approved by the Department of Fisheries and Oceans or the Ministry of Environment.
- d. the emergency removal of a hazardous tree.

- e. emergency works to prevent flood damage to structures or repair to public service utilities.
- f. vegetation removal or other works within 10 m of a lake or stream (or within 300 m of Maxwell Lake) that has been approved in writing by the Ministry of Environment or by the Department of Fisheries and Oceans.
- g. works below the natural boundary of a lake or stream or a wetland that have been approved in writing by the Ministry of Environment or by the Department of Fisheries and Oceans.
- h. activities on land that is within 300 m of Maxwell Lake, but is outside the lake's surface catchment area, as demonstrated by survey.
- i. the subdivision of land parcels where a conservation covenant satisfactory to and in favour of the Salt Spring Island Local Trust Committee or the Islands Trust Fund Board has already been registered for the maintenance of natural drainage and protection of environmentally sensitive areas.
- j. works undertaken by a waterworks district that have been certified by a Professional Engineer as consistent with the *Land Development Guidelines for the Protection of Aquatic Habitat*.

E.4.2 REASONS FOR THIS DEVELOPMENT PERMIT AREA

- E.4.2.1 The lakes and streams in this Development Permit Area provide natural fish and wildlife habitat. Many also supply drinking water to individual license holders or community water supply systems. If not carefully managed, development in this Area could result in degradation of water quality. Poor water quality would be detrimental to fish and wildlife populations and could lead to increased costs for remedial drinking water treatment.
- E.4.2.2 This Development Permit Area contains riparian habitat that is important to many different species and is particularly susceptible to disturbance. Development in this Area could lead to the disturbance or loss of a disproportionately large number of different native plant and animal species.

E.4.3 Objectives of this Development Permit Area

- E.4.3.1 To protect the quality of drinking water supplies.
- E.4.3.2 To protect fish habitat.
- E.4.3.3 To protect sensitive riparian habitat and the unique species that depends upon it.

E.4.4 GUIDELINES FOR NEW DEVELOPMENT

Background Note: Development Permits that are issued for developments in this Development Permit Area could contain conditions that are based on the following guidelines. Not all guidelines will apply to every permit. Permits will not contain conditions that are unrelated to these guidelines. The conditions on a Development Permit will not prevent a property from being used as the local zoning bylaw allows.

While forest management activities within the Forest Land Reserve are excluded from the Permit process, voluntary compliance with the guidelines of this section is encouraged for such activities.

- E.4.4.1 All work that takes place in this Development Permit Area should be done in a way that minimizes degradation in water quality and disturbance to natural drainage patterns.
- E.4.4.2 All work that takes place on land within 10 m of the natural boundary of a lake or stream (or within 300 m of Maxwell Lake) or within a wetland should be planned and carried out in a way that is consistent with the *Land Development Guidelines for the Protection of Aquatic Habitat* (Appendix 7).

- E.4.4.3 Native vegetation and trees are to be retained or replaced to control erosion, protect banks and protect fish and wildlife habitat.
- E.4.4.4 New roads and septic fields should not be located in this Development Permit Area. If such a location cannot be avoided, then the design and construction of the road or septic field should be supervised by a qualified professional to ensure that the objectives and guidelines of this Area are met. Septic systems that are adjacent to lakes or to streams that drain to lakes should be designed to minimize both nutrient loading and coliform contamination of lake waters.
- E.4.4.5 Where this Area includes unique native species dependent on riparian habitat which have been identified by a qualified professional as worthy of particular protection, their habitat areas should be left undisturbed. If development is permitted, it should be undertaken only under the supervision of a professional who is qualified in environmental protection, with advice from the Ministry of Environment, the Department of Fisheries and Oceans, or Environment Canada.
- E.4.4.6 To assist in the preparation of development permits for larger projects, the Local Trust Committee could request an applicant to provide a report, prepared by a qualified professional with experience in surface water management and the protection of habitat. The report should indicate the type of conditions that should be incorporated into the development permit to achieve the objectives and comply with the guidelines of this Development Permit Area.

E.4.5 GUIDELINES FOR SUBDIVISION

- E.4.5.1 If a proposed land subdivision is to create additional new lots within this Development Permit Area, then any new lots, roads, building sites, septic fields and driveways should be located and constructed in a way that meets the objectives of this Area. A covenant should be registered against the part of the property that is within this Area to guide future development and meet the objectives of this Area.