



STAFF REPORT

October 20, 2009

File No.: SA/11

To: Saturna Island Local Trust Committee
Prepared for the October 28, 2009 LTC Meeting

David Marlor, RPM

From: Gary Richardson
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Local Planning Services

Re: Groundwater Conservation – Eastpoint, Saturna Island

Owner: Various
Applicant: Saturna Island Local Trust Committee
Location: Eastpoint, Saturna Island

1. THE PROPOSAL:

At its August 6, 2009 special meeting the Saturna Island Local Trust Committee (LTC) requested staff to prepare some options for regulations that could reduce the impacts of development on groundwater in the Eastpoint area. At the September 2, 2009 LTC meeting staff provided several options which included: reducing or restricting development, transferring development to other parts of the island, obtaining water storage through amenity zoning, creating a water district, using development permits to guide development, requiring water storage be created at time of construction, limiting the number of water consuming fixtures in a residence and desalinization.

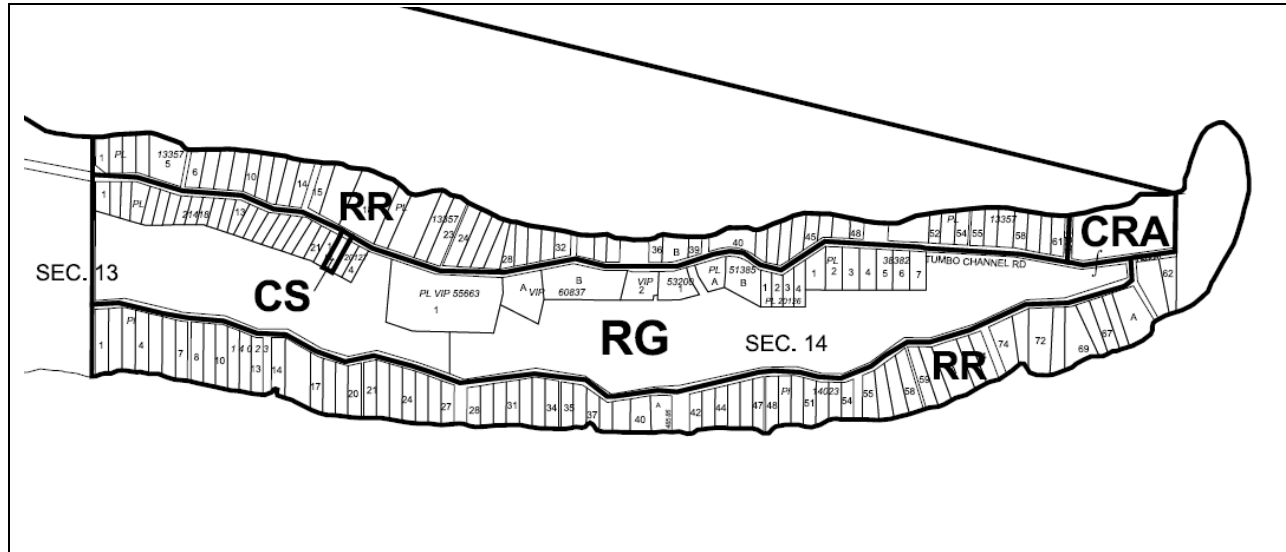
At the September 2, 2009 LTC meeting the LTC directed staff to prepare a report and draft wording for a bylaw that could be applied to the Eastpoint area, and possibly other areas, that would require cisterns for the storage of rainwater to be provided at time of new construction of residences. This would require proof of the existence of a cistern, of a specified size, to be provided before a building permit for a residence could be issued by the Capital Regional District (CRD). The cistern requirement could also be required at the time of construction for visitor accommodation units.

In this report staff has reviewed: the Islands Trust Policy Statement, Saturna Island OCP Bylaw No. 70, 2000 (OCP), Saturna Island Land Use Bylaw No. 78, 2002 (LUB), provided draft wording for a bylaw that would require cisterns prior to the construction of a new residence or addition to an existing residence, outlined issues, outlined options, and recommended a course of action.

2. SITE CONTEXT:

Eastpoint peninsula is 2.5 kilometers long and is at the eastern end of the island. The outer area of the peninsula has been subdivided into 117 small residential lots, 53 of which are listed as vacant according to BC Assessment Authority data. There are 63 recorded wells on the peninsula.

The subject area and zoning is shown on the following map.



Groundwater is the main source of water in this area as is the case on the rest of the island. The peninsula is surrounded by the ocean on all but the west side.

There have been studies done in the past that show Eastpoint as being subject to saltwater intrusion which is partially due to increased residential development. The studies have been done by: Hodge 1985, Allen and Suchy 2001. During the summer of 2009 the Ministry of Environment staff monitored some of the wells on the peninsula and found evidence of saltwater intrusion. The Ministry will be finalizing its report in the next few weeks.

3. CURRENT PLANNING STATUS OF SUBJECT LANDS:

Trust Policy Statement:

The following policies may have relevance to the consideration of this application:

4.4 Freshwater Resources Commitment of Trust Council

4.4.1 It is Trust Council's policy that islands in the Trust Area should be self-sufficient in regard to their supply of freshwater.

Directive Policies

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 uses.

Recommendations

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

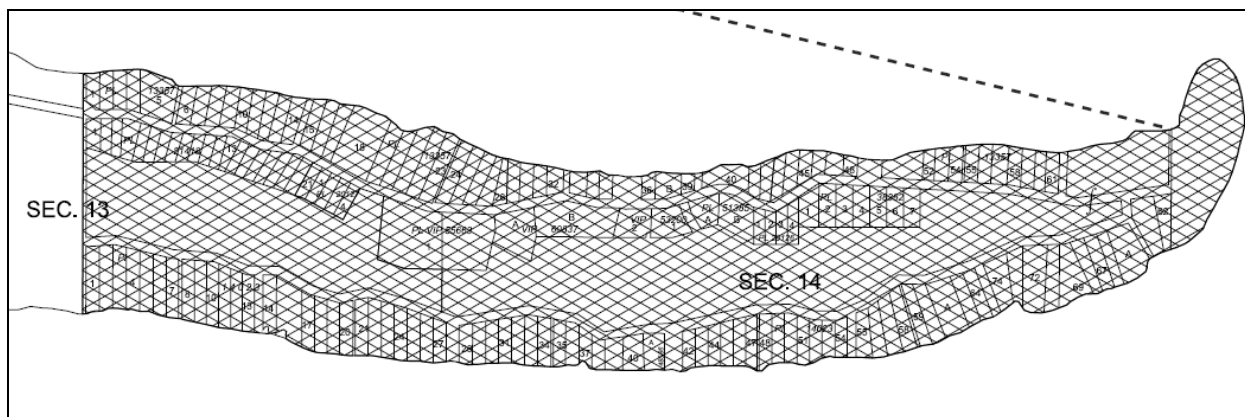
4.4.5 Trust Council encourages the Provincial government to implement property tax incentives for the retention of groundwater and watershed recharge areas and freshwater wetlands.

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.

Official Community Plan:

The property is designated as Rural (crosshatched area denotes rural designation) in the Saturna Island OCP as shown below:



Rural and Water Supply policies and objectives from the OCP are cited below.

D.1 RURAL

The Rural designation identifies areas where a wide variety of human use and development activities may be permitted. All the following categories will be implemented through zoning and not designated within this Plan.

The Objective of this designation is to support a diverse community structure with a range of lot areas and forms of residential accommodation and to provide a range of zoning options for residential, commercial and industrial uses.

D.1.1 *To protect the character of neighbourhoods, separate zones in regulatory bylaws should provide for the following uses:*

- a) Rural Residential for single-family homes and private recreation uses;*
- b) Rural General where home based industry will be mixed with family homes and cottages, includes all home based occupations customary to a rural area;*
- c) Rural Comprehensive for large parcels when more than 5 principal residences are desired on a lot to accommodate co-operatives or joint land ownership;*
- d) Multiple Family Residential;*
- e) Industrial, with distinctions made between differing scales of industrial use;*
- f) Commercial;*
- g) Commercial Recreation and Accommodation; and*
- h) Public Utility and other public uses, which may include environmental conservation.*

D.1.2 *The Saturna Island Local Trust Committee, when zoning Rural designated land, shall ensure that on lots with more than one base designation, the residential density will not exceed one primary residence and one cottage per 2.02 hectares (5 acres) of the Rural designated area in the parcel, plus any density received from any Watershed, Farmland, Wilderness Reserve, Forest or Heritage Forest designated portions of the lot and any density granted from the Community Amenity Density Reserve.*

D.1.3 *Development criteria relating to minimum lot area, such as set backs, depth to width ratio, and site coverage, should be specified in regulatory bylaws for each type of residential use and each form of commercial, commercial recreation and accommodation, and industrial use.*

D.1.4 *Rural Subdivision Capacity:*

The maximum number of lots that can be created shall equal the acreage of the lot designated rural divided by five (5) except where:

- a) a restrictive covenant limits further subdivision then it shall be the amount specified in the covenant;*
- b) the lot has split designations then section D.7 applies; or*
- c) density from the Community Amenity Density Reserve is granted in exchange for an amenity.*

F.5 WATER SUPPLY

The objective of this section is to ensure safe potable water supply for the residents and visitors of Saturna Island.

***F.5.1** The availability of potable water sufficient to support the proposed use while meeting environmental objectives should be a condition of subdivision approval.*

***F.5.2** The Saturna Island Local Trust Committee in reviewing all development requirements, referrals, and approvals should consider or require developers provide a guarantee of the availability and sustainability of freshwater resources and will consider the use of sources other than ground water including the collection and storage of rain water.*

***F.5.3** The use of new technologies for water conservation, purification, desalinization, and efficient use of water may be permitted provided all by-products can be disposed of in a safe and environmentally acceptable manner.*

***F.5.4** The Saturna Island Local Trust Committee will permit and promote rainwater cisterns and ponds for fire protection, irrigation, and to supplement or as an alternate source of potable water for households.*

***F.5.5** The Saturna Island Local Trust Committee should create and maintain a data base of water well information through the subdivision referral process to supplement the information contained in the Groundwater report by Diane Allan 1998.*

***F.5.6** Community water systems, the collection and storage of water, shared wells, and new technologies are to be encouraged and required as a condition of subdivision approval where groundwater sources are insufficient or endangered.*

Water Supply Advocacy Policies

***F.5.7** The Ministry of Environment, Lands and Parks is requested to create a groundwater well registration system, including water quality and quantity information and site locations with a global positioning system.*

***F.5.8** Where a groundwater well produces a high salt content, it should be grouted to protect against the intrusion of salt into the fresh water table. Development approval by the Medical Health Officer should be refused when a proposed lot contains an ungrouted high salt-content well unless an impermeable lining in the water well is installed to protect the freshwater table.*

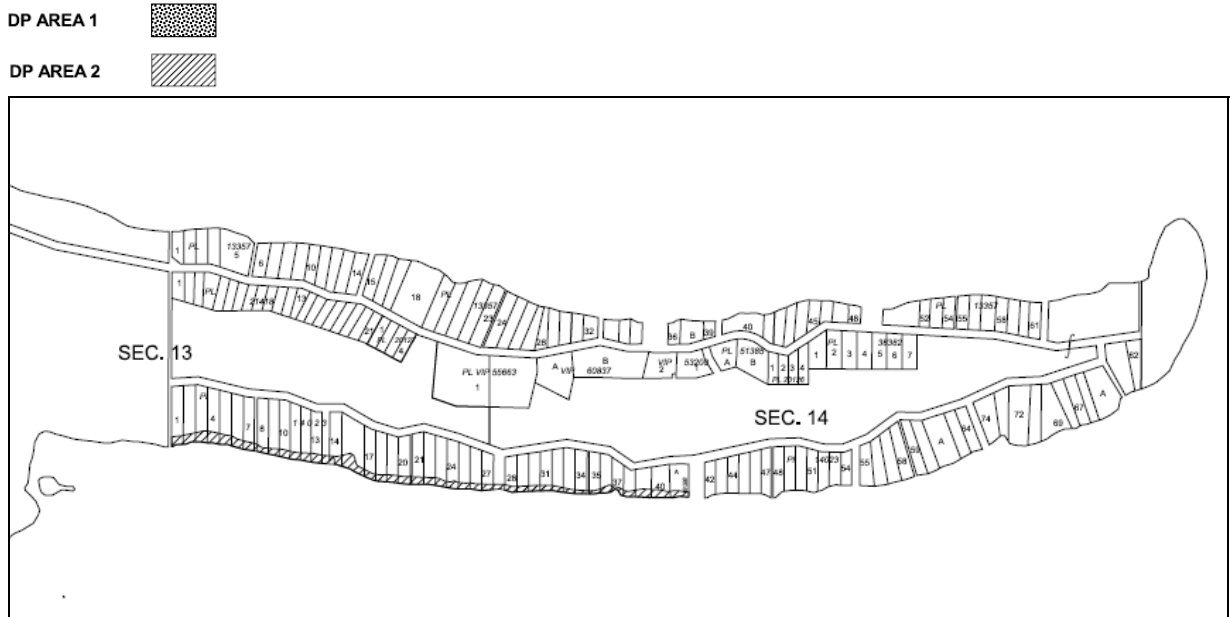
***F.5.9** The Saturna Island Local Trust Committee will request:*

- a) the Ministry of Environment and Lands and Parks to undertake a full investigation of water sources, quality, use, and hydrogeology as the basis for a wetlands, water table recharge, and groundwater strategic plan to assist in future land use decisions;*
- b) the Ministry of Environment, Lands and Parks to develop groundwater management legislation, including a groundwater licensing program that would protect existing wells from depletion;*
- c) the Capital Health Region to permit the development and use of on-island sewage treatment methods that create re-circulated grey water for garden or other non-potable use and to require more water-efficient plumbing fixtures in its building bylaw; and*

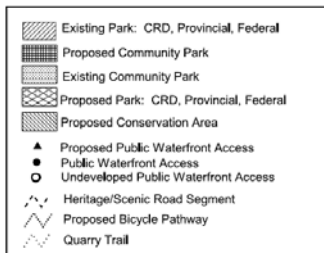
d) the Capital Health Region to monitor the water quality of community water systems.

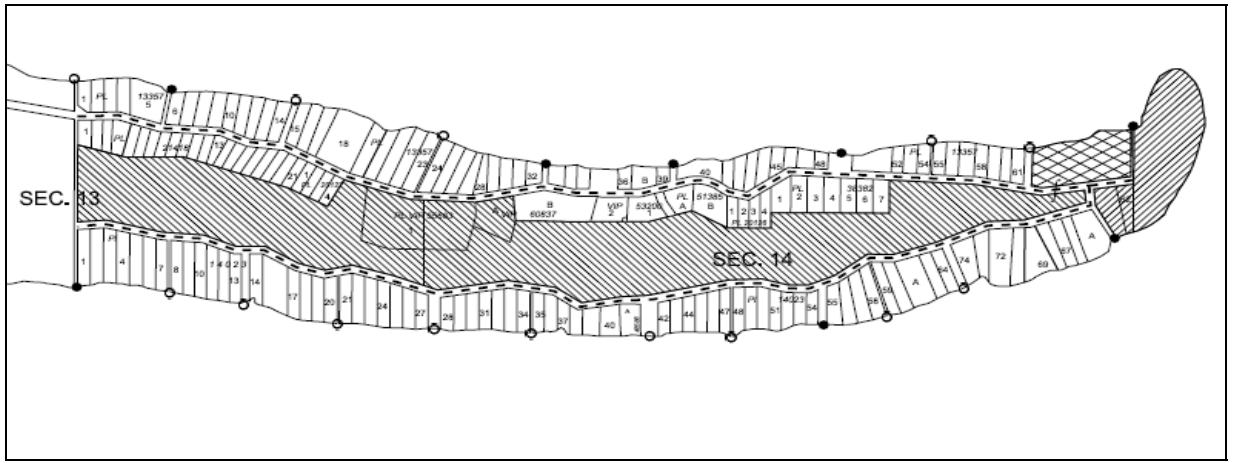
Development Permit Areas:

Schedule E – Development Permit Areas, for Lyall Creek and Bluffs below shows a portion of the peninsula along the south as being in DP area 2 (Bluffs).



Schedule D - Open Space is shown below. There is a large proposed conservation area shown in the center of the peninsula.





Land Use / Zoning Bylaw:

The area contains properties in 4 different zones: Rural Residential (RR), Rural General (RG), CRA, Commercial Recreation and Accommodation and Community Services (CS) see the site plan at the beginning of this report for zone boundaries.

4. COMMUNITY INFORMATION MEETING(S):

None held to date; however if a LUB amendment proceeds a community information meeting is recommended to be held at the next LTC meeting.

5. RESULTS OF CIRCULATION:

No circulation to date.

6. SUGGESTED WORDING

Staff recommends the following wording be placed in the “General Regulations” section of the LUB:

A building permit shall not be issued for any residential building, visitor accommodation unit, or addition to a residential building or tourist accommodation unit exceeding 9.3 square metres in floor area, in the water management area depicted on Schedule C unless the building is equipped with a cistern for the storage of rainwater having a capacity of at least 16,000 litres.

Schedule C will identify the Eastpoint peninsula as a water management area.

7. ISSUES SUMMARY:

Staff have identified the following issues:

1. Islands Trust Policy Statement compliance
2. Saturna OCP compliance
3. Effectiveness of amendment
4. Will other agencies accept water catchment as proof of potable water

5. Should cisterns be required for all new construction
6. Can the number of wells be reduced
7. Should this be applied to other known water short areas on Saturna
8. How big will the cistern need to be

8. STAFF COMMENTS:

Policy Statement Compliance:

The policy statement supports regulations that address areas that have known water quality and/or quantity problems, encourages water self sufficiency and encourages the maintenance of water quality. The Policy Statement supports the proposed amendment.

OCP Compliance:

The OCP objective in the water supply section is to ensure a safe potable water supply. The water supply section has policies supporting the collection and storage of rainwater. The OCP supports the proposed amendment.

Effectiveness of amendment:

Requiring that water catchment and storage be required prior to any new residential or tourist accommodation construction will in staff's opinion be effective in reducing the impacts of new development on the groundwater by reducing new demand; however many of the lots on Eastpoint have residences constructed on them which rely on groundwater as a sole source of fresh water.

Requiring cisterns alone will not in itself resolve the groundwater problem on Eastpoint; however it will certainly help to reduce the impact of new development on the groundwater.

Acceptance by Other Agencies:

It is staffs understanding that both the Vancouver Island Health Authority and Capital Regional District Building Inspection will accept water from water catchment and storage systems for domestic purposes. Any draft bylaw will need to be forwarded to agencies for review and comment.

Should Cisterns be required for all new construction:

Staff drafted wording that would only apply to new residential and tourist accommodation construction and additions of a certain size. Residential use and Tourist accommodation use is the main use associated with increased groundwater demand so it seemed reasonable to tie the cistern to construction of these uses.

Reducing the number of wells:

The wells that exist on Eastpoint will likely not be reduced in number unless the quality and/or quantity fall below levels that can be used by the landowner. The Ministry of the Environment can issue orders under the *Water Act* to cease the pumping of water impacted by sea water intrusion.

Requiring cisterns at the time of residential and tourist accommodation unit construction will likely reduce the number of wells being drilled in the future as a landowner will not go to the effort and added cost of drilling a well if they have a functional water catchment and storage system in place.

Should this be applied to other water short areas:

Staff is of the opinion that if cisterns are made a requirement for new construction on Eastpoint that staff should be directed to review studies on other areas of the island where water is in short supply.

Size of Cistern:

The size of cistern required in the proposed wording is 16,000 litres. This is based on a cistern requirement for residential use in the Galiano Island Land Use Bylaw No. 127, 1999. If staff is directed to draft a bylaw requiring cisterns for residential and tourist accommodation use a further report will be provided on the recommended capacity of the cistern.

9. OPTIONS:

- 1) Proceed no further with this project.
- 2) Direct staff to prepare a LUB amendment that would require cisterns for the collection of rainwater at the time of construction for new residences and tourist accommodation units, or additions to residences and tourist accommodation units of a specified floor area.
- 3) Direct staff to pursue other options to reduce the impact of development of groundwater in the Eastpoint area.

10. RECOMMENDATIONS:

That staff be directed to prepare a LUB amendment that would require cisterns for the collection of rainwater at the time of construction for new residences, tourist accommodation units or additions to residences and tourist accommodation units of a specified floor area.

That staff arrange a Community Information meeting on the date of the next LTC meeting.

That staff provide a supplementary report at the next LTC meeting with recommendations and supporting calculations for cistern capacity.

Respectfully submitted by:



Oct 20, 2009

Gary Richardson

Date

Concurred in by:

David Marlor, MCIP
Regional Planning Manager

October 22, 2009
Date

