



File No.: 2021- Groundwater
Sustainability -
Implementation

DATE OF MEETING: December 5, 2022
TO: Galiano Island Local Trust Committee
FROM: Narissa Chadwick, Island Planner
Southern Team
COPY: Robert Kojima, Regional Planning Manager
Brad Smith, Island Planner
SUBJECT: Groundwater Sustainability Implementation Project

RECOMMENDATION

- 1. That the Galiano Island Local Trust Committee Bylaw No.283 cited as “Galiano Island Official Community Plan Bylaw No. 108, 1995, Amendment No. 1, 2022” and the Galiano Island Local Trust Committee Bylaw No. 284 cited as “Galiano Island Land Use Bylaw No. 127, 1999, Amendment No. 1, 2022” be brought forward for consideration of first reading and scheduling of a public hearing at the next regular LTC meeting.**

REPORT SUMMARY

This report provides:

- Background on the Galiano Groundwater Sustainability Implementation Project
- A summary of proposed bylaw amendments
- A summary of the methodology used to identify the proposed boundaries for the Groundwater Protection Development Permit Area.
- Identification of alternatives to the proposed recommendation

BACKGROUND

At their February 1, 2021 meeting the Galiano LTC received a report on the preliminary results of the mapping and data analysis phases of the Groundwater Sustainability Project. This project, which started in 2019 was an initiative of five southern Local Trust Committees. The project involved: data and information inventory, groundwater recharge potential mapping and groundwater availability assessment. [The reports can be found here.](#)

The next step in the process involved identifying how the data and mapping could be implemented through bylaw amendments supporting freshwater sustainability. The Galiano LTC supported the development of a new Groundwater Protection Development Permit Area. They also supported amendments that were not directly related to the data gathered but will support freshwater sustainability these include: updates to definitions, the addition of cistern requirements for all new builds and updated to subdivision regulations related to potable water.

A community information webinar was held in September 2021 to introduce the community to the data and mapping work that had been done. An in person community information meeting was held in July 2022 to engage the community in the discussion of development permit boundary options.

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At their September 27, 2022 LTC meeting the LTC supported the following resolutions:

2022-129

That the Galiano Island Local Trust Committee endorse Bylaw No. 283 cited as 'Galiano Island Official Community Plan Bylaw No. 108, 1995, Amendment No.1, 2022' with Schedule G including the Groundwater Recharge Protection Development Permit Area boundaries based on 5 hectares of lot coverage excluding areas designated as park or conservation.

2022-128

That the Galiano Island Local Trust Committee endorse Bylaw No. 284 cited as "Galiano Island Land Use Bylaw No. 127, 1999, Amendment No. 1, 2022".

2022-127

That the Galiano Island Local Trust Committee Bylaw No.283 cited as "Galiano Island Official Community Plan Bylaw No. 108, 1995, Amendment No. 1, 2022" and the Galiano Island Local Trust Committee Bylaw No. 284 cited as "Galiano Island Land Use Bylaw No. 127, 1999, Amendment No. 1, 2022" be brought forward for first reading at the next regular LTC meeting.

The Draft amendments are attached to this memo. The bylaw amendments are comprised of:

1. Bylaw 284 - Amendments to the Land-Use Bylaw (Attachment 2)

- New definitions
- Cistern Requirements for all new builds (18,000 litres). Increase in cistern size for secondary suites to 18,000 litres. Captured and stored water is not required to be potable or connected to the dwelling except in the Water Management Areas as per existing regulation 13.23.
- References to "rainwater" with respect to cisterns has been changed to "freshwater" to support the capture and retention of groundwater as well as rainwater.
- Updates to regulations related to proof of water for subdivision based on model bylaw for the Southern Gulf Islands. These regulations have been extensively reviewed by provincial staff through a multi-year project of the Salt Spring Islands LTC.

*As indicated at the previous LTC meeting, looking at site specific zoning options for South Galiano and Cain Peninsula to address critical groundwater vulnerability in that area would be a separate initiative require as it would require additional process and separate bylaw amendments.

2. Bylaw 283 - General Amendments to OCP (Attachment 1)

- Minor changes to OCP language
- Updates to relevant policies and objectives to facilitate consistency with revised language, the new Groundwater Recharge Protection DPA, and other proposed changes to the OCP and the LUB.
- Replacement of Schedule D – Water Resources, with Schedule D – Groundwater Regions.
- Replacement of Schedule G – DPA Area 4: Elevated Groundwater Catchment, with DPA 4: Groundwater Recharge Protection.

3. Bylaw 283- A Groundwater Recharge Protection DPA (Attachment 1)

- New DPA guidelines which would amend the DPA guidelines for Galiano's Elevated Groundwater Catchment DPA. Amendments include: reference to 2021 mapping of recharge areas, additional exemptions including clustering development and professional reliance, changes consistent with introduction of cistern requirements for new builds, and changing the name of the DPA.

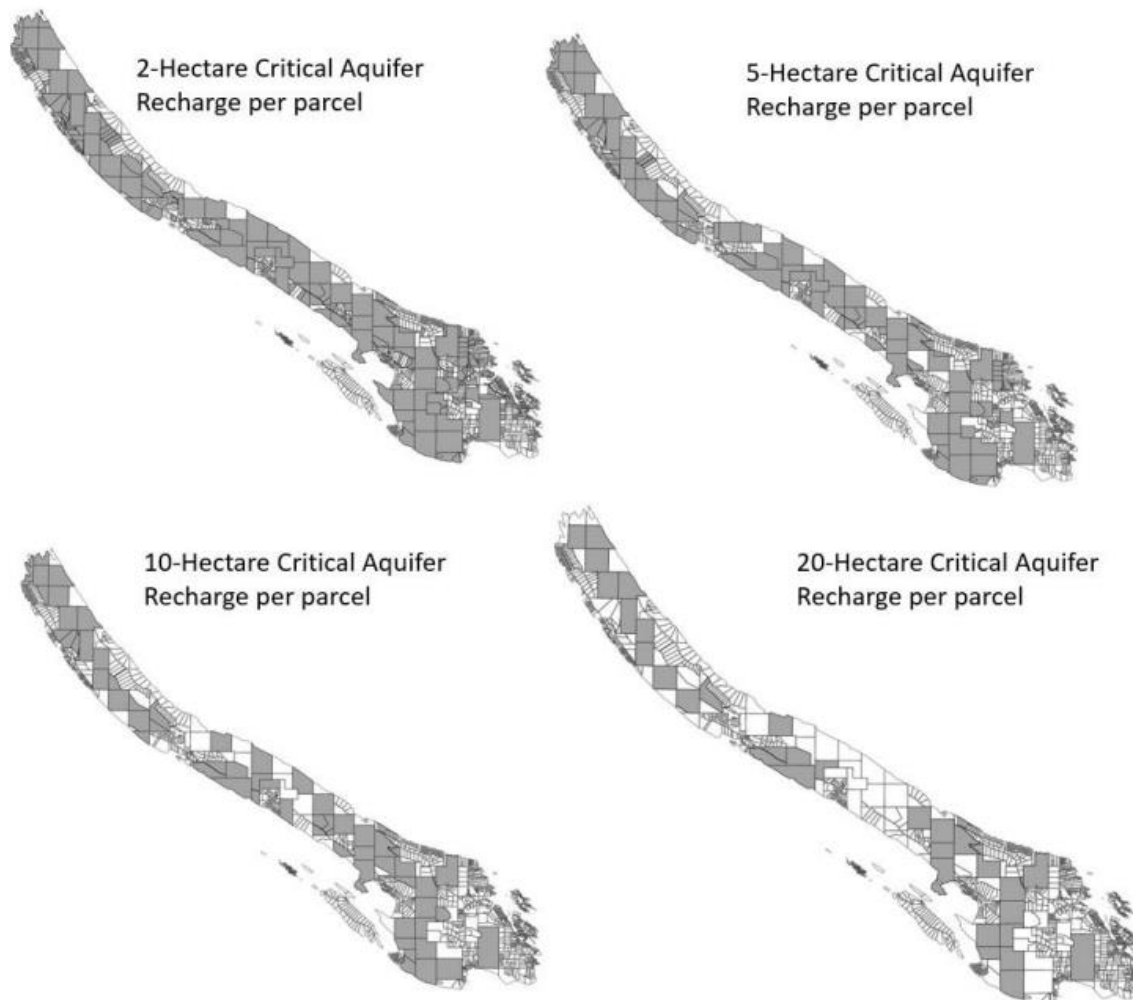
- Proposed options for DPA boundaries and methodology are contained in the memo written by the Senior Freshwater Specialist which is attached to the [June 2, 2022 staff report](#).
- The attached draft Bylaw includes the Schedule map for the 5 hectare critical aquifer coverage option with the parks and protected areas taken out.

DPA Boundary Methodology

The [methodology](#) for identifying boundaries for the Groundwater Protection DPA as described in the memo attached to the June 2, 2022 staff report includes:

- Examining groundwater recharge potential data from the Islands Trust Groundwater Recharge Mapping project.
- Identifying Critical Aquifer Recharge Areas.
- Identifying the amount of Critical Aquifer Recharge on every parcel of land on Galiano Island.
- Identifying which parcels could be included in the DPA based on the amount of Critical Aquifer Recharge Area on each parcel.
- The memo identifies how many parcels could be included for 4 different scenarios (coverage of critical aquifer recharge area of up to 2 hectares, 5 hectares, 10 hectares, and 20 hectares). These scenarios are identified below.

Figure 1: Groundwater Recharge Protection Development Protection Area Options



The scenarios above still include parks and protected areas while the map identified in the draft bylaw (Schedule G) does not. As identified in the September 27, 2022 resolution above, the LTC supported staff's recommendation for the DPA to not extend to parks and protected areas for the following reasons:

- Provincial and Federal parks are not subject to local government regulation
- Land for conservation with a covenant is exempt from DPA (see guidelines)
- Local government parks are exempt from the DPA (see guidelines)

ANALYSIS

The previous Galiano LTC's resolution to bring forward the draft bylaws for first reading was based on their understanding of the impact of the bylaws and the interests of the community. Staff are recommending the new LTC take some time to understand the bylaws before moving to first reading. Staff are also continuing to review the specific wording in the subdivision regulations and further minor revisions may be made to the LUB draft. However, staff encourage the LTC to schedule the public hearing by the end of March as the funding for this project will expire at that time. This funding will support the public hearing and other related community engagement before the end of the fiscal year.

Given the two years of time spent on this project including two community information meetings and much time for community input these bylaw are ready to move through the process to adoption. This will be the first groundwater sustainability implementation project completed by an LTC. As such, it would serve as an example for other LTC to follow.

ALTERNATIVES

1. Request staff schedule special meeting of the LTC prior to reading the bylaws for the first time

The LTC may choose to hold a special meeting of the LTC to provide the opportunity for more detailed discuss on the project and the bylaws prior to first reading.

That the Galiano Island Local Trust Committee request staff schedule a special meeting of the LTC to discuss the bylaws associated with the Groundwater Sustainability Implementation Project.

2. Request staff schedule a community meeting prior to the reading of the bylaws for the first time

The LTC may choose to hold another community information and discussion meeting prior to the reading of the bylaws.

That the Galiano Island Local Trust Committee request staff schedule a community information meeting to discuss the bylaws associated with the Groundwater Sustainability Implementation Project.

NEXT STEPS

If the staff recommendation is supported:

- Bylaws will be presented to the LTC at next LTC meeting;
- LTC gives first reading;
- Bylaw referral comments to be received prior to Public Hearing;
- Community Information Meeting and Public Hearing held;
- LTC gives second and third reading;

- Proposed bylaws referred to Executive Committee and the OCP Bylaw is referred Minister of Municipal Affairs for approval; and
- LTC gives final reading and adopts bylaw.

Submitted By:	Narissa Chadwick RPP, Island Planner	November 17, 2022
Concurrence:	Robert Kojima, Regional Planning Manager	November 18, 2022

ATTACHMENTS

1. Bylaw 283 (OCP)
2. Bylaw 284 (LUB)

DRAFT

GALIANO ISLAND LOCAL TRUST COMMITTEE BYLAW NO. 283

A BYLAW TO AMEND GALIANO ISLAND OFFICIAL COMMUNITY PLAN BYLAW NO. 108, 1995

The Galiano Island Local Trust Committee in open meeting assembled enacts as follows:

1. CITATION

This Bylaw may be cited for all purposes as “Galiano Island Official Community Plan Bylaw No. 108, 1995, Amendment No. 1, 2022”.

2. SCHEDULES

Galiano Island Official Community Plan No. 108, 1995 is amended as shown on Schedule 1, attached to and forming part of this bylaw.

3. SEVERABILITY

If any provision of this Bylaw is for any reason held to be invalid by a decision of any Court of competent jurisdiction, the invalid provision must be severed from the Bylaw and the decision that such provision is invalid must not affect the validity of the remaining provisions of the Bylaw.

READ A FIRST TIME THIS	_____	DAY OF	_____	20__
PUBLIC HEARING HELD THIS	_____	DAY OF	_____	20__
READ A SECOND TIME THIS	_____	DAY OF	_____	20__
READ A THIRD TIME THIS	_____	DAY OF	_____	20__
APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS	_____	DAY OF	_____	20__
APPROVED BY THE MINISTER MUNICIPAL AFFAIRS THIS	_____	DAY OF	_____	20__
ADOPTED THIS	_____	DAY OF	_____	20__

CHAIR

SECRETARY

**GALIANO ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 283**

SCHEDULE 1

The Galiano Island Official Community Plan No. 108, 1995, is amended as follows:

1. Table of Contents Section V is amended by deleting “4. Development Permit Area 4 – Elevated Groundwater Catchment Areas” and replacing it with “4. Development Permit Area 4 – Groundwater Recharge Protection”.
2. Section II Land Use, Residential Policy “o)” is amended by deleting “Community, Sport and Cultural Development” and replacing it with “Municipal Affairs”.
3. Section II Land Use, Subsection 5.4 Light Industry, Light Industry Advocacy Policy “m)” is amended by inserting “recharge and” after “groundwater” and before “catchment areas”.
4. Section III Services, Subsection 2 Water Supply, Water Supply Objectives is amended by deleting Objectives 1-4 in entirety and replacing with:
 - “1) to ensure an adequate supply of potable freshwater to all users now and into the future,
 - 2) to ensure that groundwater use, and alteration to the land does not pollute or otherwise increase the vulnerability of groundwater regions,
 - 3) to protect critical groundwater recharge areas by evaluating land use decision based on available groundwater vulnerability data and applying the precautionary principle to land use decisions, and
 - 4) to consider and address climate change impacts on freshwater supply and quality.”
5. Section III Services, Subsection 2 Water Supply, Water Supply Policies is amended by deleting policy “a)” in its entirety and replacing it with:
 - “a) Areas identified to be key areas for water supply , fresh water catchment, storage and recharge shall be preserved and protected.

Land identified through groundwater recharge mapping to have significant recharge potential shall be designated as a development permit area for the protection of the watershed.”

6. Section III Water Supply, Water Supply Policy “b) vi)” is amended by deleting “elevated groundwater catchment” and replacing it with “groundwater recharge protection”.
7. Section III Water Supply, Water Supply Policies is amended by removing policy “c)” in its entirety and replacing it with “c) Regulations may require new developments to provide cisterns.”
8. Section IV Conservation and Environment is amended by deleting all instances of “Fresh Water” and replacing them with “Freshwater”.
9. Section IV Conservation and Environment, Freshwater Advocacy Policies is amended by deleting “and the Provincial Ministry of Environment, Ministry of Transportation and Infrastructure, and Ministry of Forests, Lands and Natural Resource Operations” and replacing it with “and relevant Provincial Ministries”.
10. Section V Development Permit Areas is amended by deleting subsection “4. Development Permit Area 4-Elevated Groundwater Protection” in its entirety and replacing it with:

“4. Development Permit Area 4 – Groundwater Recharge Protection

4.1 Description of Area

Development Permit Area 4 includes critical groundwater recharge areas identified on Schedule G. Critical groundwater recharge areas contain hydrogeological conditions that facilitate aquifer recharge and/or transmit contaminants to an underlying aquifer. Factors considered in the identification of critical aquifer recharge areas include topography, remote sensing, satellite multispectral analysis depth to water table, presence of highly permeable soils, land-cover analysis, structural geology, presence of flat terrain, and the presence of more permeable surficial geology.

4.2 Authority

The Groundwater Recharge Protection Development Permit Area is designated a development permit area pursuant to Section 488(1)(a) of the *Local Government Act* for the protection of the natural environment, its ecosystems and biological diversity and Section 488(1)(i) of the *Local Government Act* for the establishment of objectives to promote water conservation.

4.3 Special Conditions and Objectives that Justify the Designation

It is the Object of the Islands Trust to “Preserve and protect the Trust Area and its unique amenities and environment of the Trust Area for the benefit of the residents of the Trust Area, and of British Columbia generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of British Columbia.”

It is Provincial legislation in Section 473(1)(d) of the Local Government Act that an official community plan must include statements and map designations for the area covered by the Plan respecting restrictions on the use of land that is environmentally sensitive to development.

The Islands Trust Council has committed to identifying, protecting and, where possible, restoring or rehabilitating groundwater recharge areas in the Trust Area.

It is policy of the Islands Trust Council that Local Trust Committees 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, and
- the quality and quantity of drinking water sources for current and future Trust Area residents is preserved and protected, and
- the overall health of watersheds and ground water in the Islands Trust Area is protected.

Mapping of recharge and water balance completed in 2021 for Galiano Island identifies that the island has a number of areas of critical concern with respect to groundwater vulnerability.

The Objectives of the development permit area are:

- to protect and sustain access to a reliable and safe supply of drinking water for groundwater wells
- to protect and sustain the quality and supply of surface and groundwater necessary to the provision of ecological services
- to mitigate the impacts of development and climate change on groundwater supplies

4.4 Development Approval Information

The Groundwater Recharge Protection DPA is also designated an area for which development approval information (DAI) may be required according to Section 485(1) of the *Local Government Act*. The designation of these areas for this purpose is based on the special conditions or objectives supporting the designation of the DPA. Development approval information means information on the anticipated impact of the proposed activity or development on the community or the natural environment.

4.5 Applicability

A development permit is required for the subdivision of land, construction of, addition to or alteration of a building or other structure, or land alteration, including the cutting of trees, unless exempted below.

4.6 Development Permit Exemptions

The following activities are exempt from any requirement for a development permit:

- a) Development for which Islands Trust has been provided with a written statement from a registered professional hydrogeologist with relevant experience certifying that the proposed would have no impact on critical groundwater recharge.

- b) Repair, maintenance, alteration, additions to, or reconstruction of existing lawful buildings, structures or utilities, including those that are lawfully non-conforming (a building permit may still be required).
- c) Dwellings, cottages, accessory buildings and structures, and associated land alteration that are clustered within a residential home plate not exceeding an area of 1000m², and one access driveway and overhead utility lines and poles outside of the residential home plate
- d) Land that is subject to a conservation covenant under section 219(4) of the *Land Title Act* in relation to natural, environmental, wildlife or plant life value relating to the land, granted to the Local Trust Committee or a covenantee designated under section 219(3)(c) of the *Land Title Act* .
- e) Repair and maintenance of existing roads, driveways, paths and trails, provided there is no expansion of the width or length of the road, driveway, path or trail, and no creation of additional impervious surfacing, including paving asphaltting or similar surfacing.
- f) Removal of invasive species.
- g) Cutting and removal of up to 5 trees per hectare (with a trunk diameter greater than 20 centimetres measured 1.5 metres above the ground) within a 12-month period on any one lot.
- h) Removal of trees that have been examined by an arborist and certified to pose an immediate threat to life or property.
- i) Farm operations as defined in the *Farm Practices Protection (Right to Farm) Act* and farm uses as defined in Section 2(2), (3), (4) and (5) of the *Agricultural Land Reserve Use, Subdivision, and Procedure Regulation*.
- j) Forest management activities, as defined in the *Private Managed Forest Land Regulation*, on land classified as managed forest land under the *Private Managed Forest Land Act*.
- k) The construction of an accessory building or structure with a lot coverage of less than 100m².
- l) Construction of trails or fences that does not alter contours of the land.
- m) Emergency actions required to prevent, control or reduce an immediate threat to human life, the natural environment or public or private property including:
 - i. Forest fire, flood and erosion protection works;
 - ii. Protection, repair or replacement of public facilities;
 - iii. Clearing of an obstruction from a bridge, culvert, dock wharf or stream; or
 - iv. Bridge repairs.
- n) Works undertaken by a local government or a body established by a local government.
- o) Works authorized under a provincial statute.

4.7 Guidelines

The *Local Government Act* prohibits construction of buildings and structures and the alteration of land and subdivision in Development Permit Area 4 unless the owner first obtains a development permit. Development permits will be issued in accordance with the following guidelines.

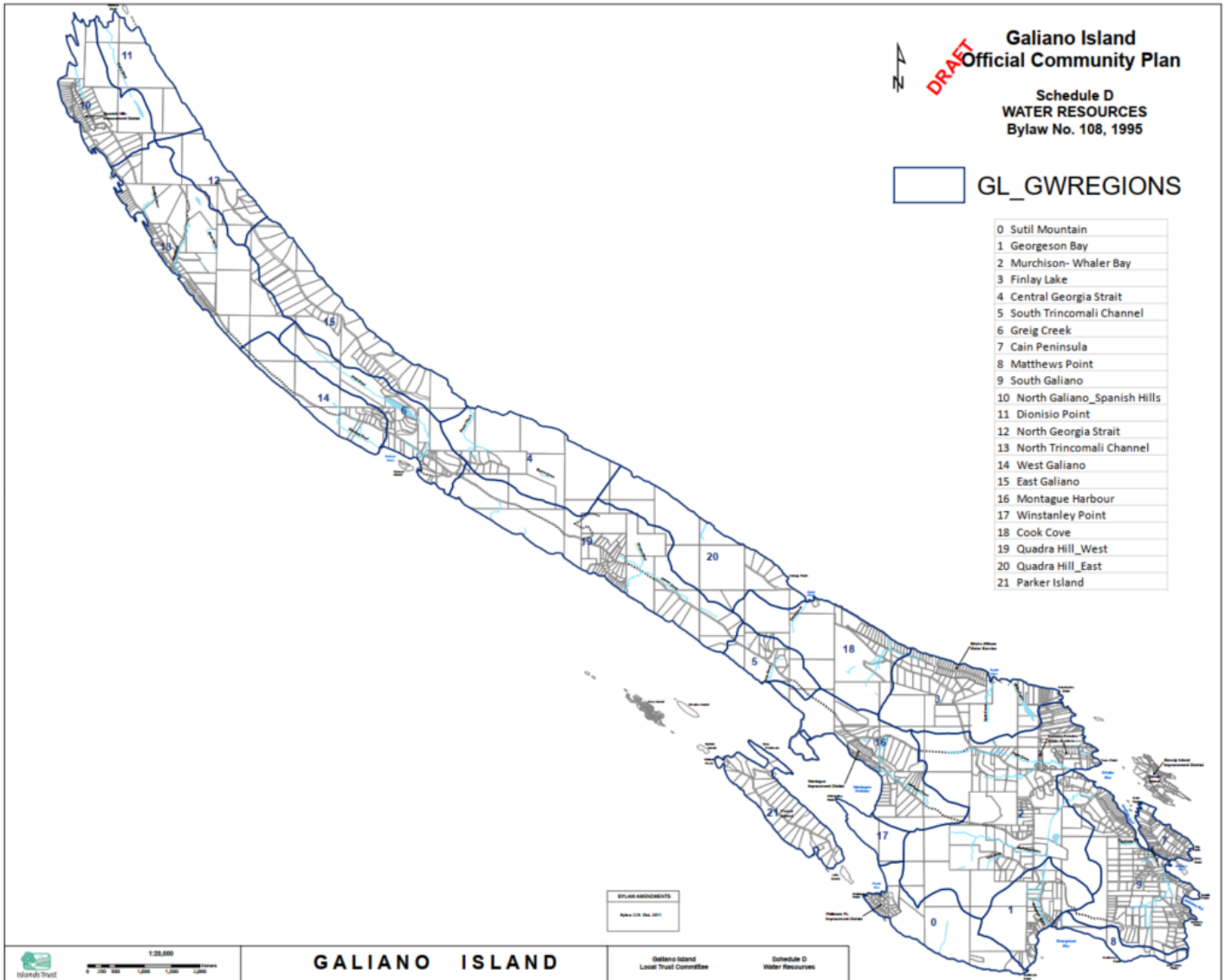
1. In general, development should minimize negative impacts on the quality and quantity of subsurface water supplies.
2. Where a qualified professional hydrogeologist or engineer has made recommendations for mitigation measures, the permit conditions may include a requirement for security in the form of an irrevocable letter of credit, to ensure the protection of groundwater supply quality or quantity consistent with the measures and recommendations described in the report.
3. Where the qualified professional hydrogeologist or engineer's report describes an area as suitable for development with special mitigating measures, the development permit should only allow the development to occur in compliance with the measures described in the report. Monitoring and regular reporting by a hydrogeologist or other professional at the applicant's expense may be required during construction and development phases, as specified in a development permit.
4. Where an application involves the subdivision of land, layout of the subdivision should be, to the greatest extent possible, designed to:
 - a) replicate the function of a naturally vegetated watershed;
 - b) maintain the hydraulic regime of surface and groundwater pre-development flow rates;
 - c) minimize interference with groundwater recharge;
 - d) not introduce or remove material where it would cause erosion of or the filling in of natural watercourses or wetlands.
5. Where freshwater collection and storage cisterns are required as a condition of the construction of a building, impervious surfaces should be minimized.
6. Where freshwater collection cisterns are required as a condition of construction of a building, the LTC may require that all new dwelling units include:
 - i. External equipment for collecting and distributing rainwater from the dwelling unit roof;
 - ii. A pumping system;
 - iii. An overflow handling system.
7. The use of impervious paved driveways shall be discouraged.
8. Where tree removal is not exempt from the requirement for a permit:
 - a. Removal of trees from steep slopes should only be allowed where necessary and where replacement vegetation / erosion control measures are established. Plans delineating extent of vegetation / tree removal and location of proposed construction, excavation and / or blasting, may be required.

- b. All development should be undertaken and completed in such a manner as to prevent the release of sediment to any watercourse. An erosion and sediment control plan, including actions to be taken prior to land clearing and site preparation and the proposed timing of development activities to reduce the risk of erosion, may be required as part of the development permit application.
 - c. Existing, native trees should be retained wherever possible and trees to be retained near development should be clearly marked prior to development, and temporary fencing installed at the drip line to protect them during clearing, grading and other development activities.
 - d. If the area has been previously cleared of trees, or is cleared during the process of development, replanting requirements may be specified in the development permit. Areas of undisturbed bedrock exposed to the surface or natural sparsely vegetated areas should not require planting.
 - e. Tree species used in replanting, restoration or enhancement should be selected to suit the soil, light and groundwater conditions of the site, should preferably be native to the area, and should be selected for erosion control and/or wildlife habitat values as needed. Suitably adapted, non-invasive, non-native trees may also be considered acceptable.
 - f. All replanting should be maintained by the property owner for a minimum of 2 years from the date of completion of the planting to ensure survival. This may require removal of invasive, non-native weeds (e.g., Himalayan blackberry, Scotch broom, English ivy) and irrigation. Unhealthy, dying or dead trees should be replaced at the owner's expense in the next regular planting season. Permits may include, as a condition, the provision of security to guarantee the performance of terms of the permit.
9. Roads, driveways, trails and pathways should follow the contours of the land and appropriately manage drainage. The construction of roads and utility corridors and other activities involving the disturbance of the soil, must be conducted in such a manner that the productivity of the local groundwater recharge area is not impaired through soil compaction, altered surface drainage patterns, siltation, erosion, or salt water intrusion.
10. Parking areas should be located and constructed so as to minimize erosion and water pollution by controlling storm runoff. Structural measures such as catch basins, oil separators, bio-filtration trenches or swales, unpaved or permeable all-weather surfaces should be considered for this purpose.
11. Permits may include minor variances to subdivision or building and structure siting or size regulations to meet the objectives of the development permit area.”
12. Section VI Development Approval Information, Subsection 2. Special Conditions “ii” is amended by deleting “elevated groundwater catchments” and replacing it with “groundwater recharge”.
13. Schedule “D – Water Resources” is removed and replaced with Schedule “D – Groundwater Regions” as shown on Plan No.1 attached and forming part of this bylaw.

14. Schedule "G – Development Permit Area 4: Elevated Groundwater Catchment" is removed and replaced with Schedule "G – Development Permit Area 4: Groundwater Recharge Protection" as shown on Plan No.2 attached and forming part of this bylaw.

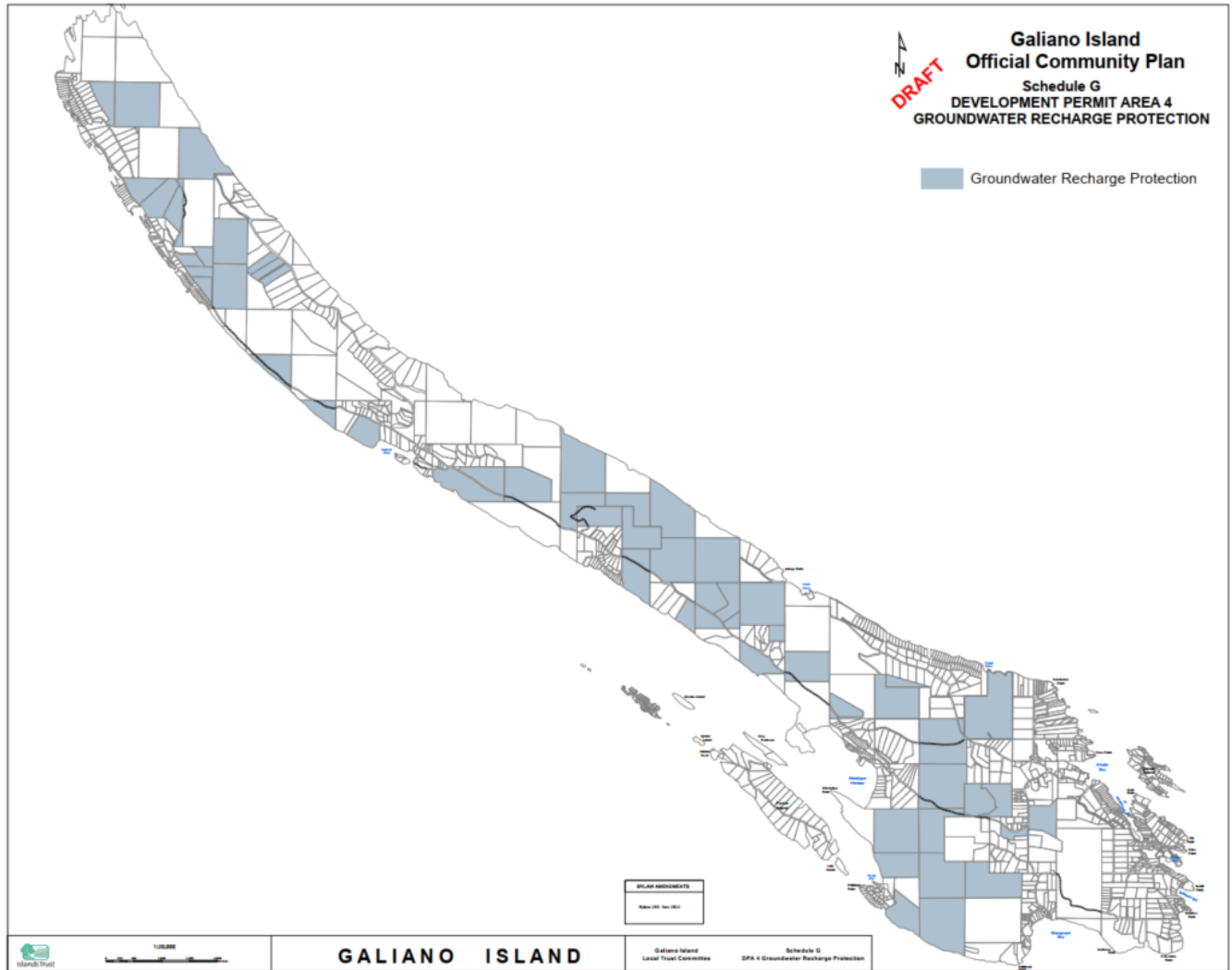
GALIANO ISLAND LOCAL TRUST COMMITTEE
 BYLAW NO. 283
 Plan No.1

Schedule D – Groundwater Regions



GALIANO ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 283
Plan No.2

Schedule G – Development Permit Area 4: Groundwater Recharge Protection



DRAFT

GALIANO ISLAND LOCAL TRUST COMMITTEE BYLAW NO. 284

A BYLAW TO AMEND GALIANO ISLAND LAND USE BYLAW, NO. 127, 1999

The Galiano Island Local Trust Committee, being the Local Trust Committee having jurisdiction in respect of the Galiano Island Local Trust Area under the *Islands Trust Act*, enacts as follows:

1. Citation

This bylaw may be cited for all purposes as “Galiano Island Land Use Bylaw No. 127, 1999, Amendment No. 1, 2022”.

2. Galiano Island Local Trust Committee Bylaw No. 127, cited as “Galiano Island Land Use Bylaw No. 127, 1999,” is amended as follows:

2.1 Section 2 General Regulations, Subsection 2.28– Secondary Suites is amended by removing 2.28.6 in entirety and replacing it with “ 2.28.6 A building permit for a property outside a water service area shall not be issued for a secondary suite unless a freshwater catchment and storage system having a capacity of at least 18,000 litres is installed on the property.”

2.2 Section 2 General Regulations is amended by inserting “Cistern Requirements” as a new heading under Section 2.28.

2.3 Section 2 General Regulations is amended by inserting, under the heading “Cistern Requirements” the following:

“2.29 A building permit for a property outside a water service area shall not be issued for a new building to be used as a dwelling, including a cottage, unless a cistern (or combination of cisterns) for the storage of freshwater having a capacity of at least 18,000 litre is installed on the property.

2.30 The floor area occupied by any cistern located in a building and the housing provided for such cistern is excluded from the calculation of the floor area of the building and the lot coverage of the lot on which it is located. “

2.4 Section 13 Subdivision and Development Regulations 13.23 is amended by removing “16,000” and replacing it with “18,000”.

2.5 Section 13 Subdivision and Development Regulations is amended by deleting 13.24 through 13.29 in entirety and replacing with the following and by making such consequential numbering alterations to effect this change.

13.24 Each lot in a proposed subdivision must be supplied with sufficient potable water to supply the uses permitted on the *lot* by this Bylaw according to the standards set out in Table 1.

TABLE 1 POTABLE WATER SUPPLY STANDARDS FOR SUBDIVISION	
USE	VOLUME (litres per day)
<i>Per lot (including one dwelling unit)</i>	2000
<i>Each additional dwelling unit</i>	2000

Information Note: If more than one dwelling unit is connected to the same source of water, the water system may be subject to the Drinking Water Protection Act, the Water Utility Act or other regulations pertaining to water supply systems.

Information Note: Water obtained from a stream, or non-domestic groundwater use requires a licence under the Water Sustainability Act.

13.25 Where potable water is to be supplied by a community water system, the community water system must provide written confirmation that it is able to supply potable water for the uses specified in Table 1 to each lot.

13.26 Where potable water is to be supplied from a stream, the applicant for subdivision must provide proof of authorization (water licence) indicating the total volume of water granted to the licence holder confirming that it is able to supply *potable* water for the volume specified in Table 1 to each *lot*.

13.27 Where a lot proposed to be subdivided contains a non-domestic use that requires a licence under the *Water Sustainability Act*, the applicant must provide proof of authorization (water licence) indicating the total volume of water granted to the licence holder confirming that it is able to supply water for the non-domestic use, as well as potable water for the volume specified in Table 1 to each lot.

13.28 In the absence of a water licence, where potable water is to be supplied by a drilled well, a pumping test shall be carried out on each well in a proposed subdivision by:

- a. pumping groundwater, at a constant rate, for a minimum period of 12 hours; and
- b. withdrawing the total daily required volume specified in Table 1 over a maximum period of 24 hours; and
- c. monitoring groundwater levels continuously during the pumping test and during the recovery period.

13.29 Where potable water is to be supplied by a drilled well in accordance with Subsection 13.28, a sounding tube or wellhead port must be installed to enable the insertion of water level monitoring equipment.

13.30 Drilled wells used for the purposes of subdivision application must not be located within 50 metres of the natural boundary of the sea.

- 13.31 Where potable water is to be supplied by a drilled well in accordance with Subsection 13.28, the applicant for subdivision must provide written certification under seal of a hydrogeologist that:
- a. Each well has been constructed in accordance with the *Groundwater Protection Regulation*;
 - b. Each well has been constructed in accordance with Subsections 13.28 and 13.29;
 - c. Each well has sufficient available groundwater to provide the daily required volume of potable water for each lot in accordance with Table 1; and
 - d. Includes recommendations for mitigation measures, if applicable, to ensure long-term sustainable yield of the drilled well.
- 13.32 If the daily required volume of potable water cannot be supplied in accordance with Subsections 13.24 or if the certification referred to in Article 13.31(c) cannot be made, the applicant must grant a covenant under the *Land Title Act* to the Galiano Island Local Trust Committee that restricts the development of the subdivision to the uses for which there is a sufficient volume of water.
- 13.33 Where the potable water supply is provided through a drilled well or water licence, a hydrogeologist must also provide:
- a. Results of a water quality analysis, completed by an accredited laboratory;
 - b. A plan of the proposed subdivision indicating the location where each water sample was taken;
 - c. A statement that the water samples upon which the water quality analysis was performed were unadulterated samples taken from the locations indicated on the plan.
 - d. Confirmation, based on the accredited laboratory water quality analysis, that the proposed water supply source is potable, or can be made potable, with a treatment system; and
 - e. Confirmation, based on the accredited laboratory water quality analysis of chloride concentrations, that the drilled well is not likely to be affected by the intrusion of saline groundwater or sea water in accordance with the Province of British Columbia guidance documents;
- 13.34 If the water to be supplied is not potable, but can be made potable with a treatment system, the applicant must grant a covenant under the *Land Title Act* to the Galiano Island Local Trust Committee that requires on-going treatment of the water to potable water standards.
- 13.35 For the purposes of subdivision, drilled wells impacted by seawater intrusion or whose operation is likely to cause seawater intrusion are not permitted sources of potable water.
- 13.36 For the purposes of subdivision, alternative potable water supplies including, but not limited to, shallow dug wells, rainwater catchment and desalination are not permitted sources of potable water.
- 13.37 The requirements of Section 13.24 -13.36 shall not apply where the proposed subdivision is a boundary adjustment that does not result in an increase in the number of lots or permitted dwelling units, provided that all lots in the subdivision

are currently serviced by existing wells, community water system connection or water licence.”

- 2.5 Section 17 Interpretation, Subsection 17.1 Definitions, is amended by adding the following in alphabetical order:

““aquifer” means a geological formation; or a group of geological formations, or a part of one or more geological formations that is groundwater bearing and capable of storing, transmitting and yielding groundwater.

“groundwater” means water naturally occurring below the surface of the ground.

“Hydrogeologist” means an engineer or geoscientist with competency in the field of hydrogeology, regulated under the Professional Governance Act, Engineers and Geoscientists Regulation.

“potable” means water that is safe to drink, fit for domestic purposes and meets the Health Canada Guidelines for Canadian Drinking Water Quality or any guidance documents or legislation which may be enacted in substitution.”

“pumping test” means a flow test to determine the long-term sustainable yield of a well, conducted under supervision of a hydrogeologist, and that is consistent with the British Columbia Guide to Conducting Pumping Tests, Guidance for Technical Assessments in Support of an Application for Groundwater Use in British Columbia, other guidance documents which may be issued, applicable legislation, and consists of pumping groundwater from a well typically for 12 to 72 hours depending on aquifer characteristics.

- 2.6 Section 17 Interpretation, Subsection 17.1 Definitions, is amended by removing the definition of “community water system” in its entirety and replacing it with
““community water system” means a system of waterworks that serves more than one lot and is owned, operated and maintained by an improvement district, a regional district, a water utility, a society, or a water supplier.”