



File No.: Groundwater Sustainability
Implementation

DATE OF MEETING: May 26, 2022
TO: North Pender Island Local Trust Committee
FROM: Narissa Chadwick, Island Planner
Southern Team
COPY: Robert Kojima, Regional Planning Manager
Kim Stockdill, Island Planner
SUBJECT: Groundwater Sustainability Implementation – Proposed OCP Amendments

RECOMMENDATION

1. That the North Pender Island Local Trust Committee endorse the general amendment and Development Permit Area guidelines contained in Bylaw No. 228 cited as “North Pender Island Official Community Plan Bylaw No. 171, 2007, Amendment No. 1, 2022”.
2. That the North Pender Island Local Trust Committee request staff prepare a draft amendment to the Development Approval Information Bylaw that would include requirements for the development permit area in proposed Bylaw No. 228.
3. That the North Pender Island Local Trust Committee request staff send Bylaw No. 228 to relevant agencies and First Nations for early referral once preferred DPA boundary option is confirmed.

REPORT SUMMARY

The purpose of this report is to provide an overview of the amendments being proposed in Bylaw 228 which include Development Permit Area guidelines for the proposed Groundwater Recharge Protection DPA.

BACKGROUND

At the February 1, 2021 meeting the LTC endorsed a project charter for the implementation phase (Phase 3) of the Groundwater Sustainability Science Program. Staff have been working to identify options for supportive bylaw amendments based on review and analysis of groundwater availability studies and groundwater recharge mapping.

At the February 24, 2022 LTC meeting the following resolutions were passed:

“That the North Pender Island Local Trust Committee request staff to prepare a draft bylaw to amend the “North Pender Island Official Community Plan Bylaw No. 171, 2007” to include Critical Aquifer Recharge Development Permit Area guidelines, map updates and minor updates to relevant sections as identified in the February 24, 2022 staff report”

The draft Bylaw 228 containing the draft Development Permit Guidelines was included in the April 28, 2022 LTC agenda. However, due to time constraints the LTC agreed to move the discussion regarding the guidelines and maps to the next scheduled regular LTC meeting.

The maps of the potential DPA boundaries are still being finalized and will be presented a subsequent meeting.

ANALYSIS

General Amendments to OCP (Bylaw 228 Attachment 1):

- Updates to Objectives and Policies for Land Use to include focus on groundwater sustainability and acknowledgement of indigenous cultural knowledge.
- Removing reference to “Schedule F” which will be updated to include groundwater regions.
- Updating Water Systems (3.2) to align with other proposed changes.
- Updating Groundwater Resources (4.1) to align with other proposed changes and existing realities including reference to the Islands Trust Freshwater Sustainability Strategy.

Groundwater Recharge Protection DPA:

Objectives:

- 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

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.

Exemptions

Exemptions included in Bylaw 228 fall into the following categories:

Hydrogeologist Assessment Identifies No Impact

- Where written statement has been provided from registered professional hydrogeologist that proposed development will have no impact to critical groundwater recharge.

Construction, Repair, Maintenance

- Repair, maintenance, alteration, reconstruction of lawful building
- Clustered buildings within 1000m² homeplate

- Repair and maintenance of existing roads, driveway, path or trail
- Construction of structure less than 100m²
- Construction of trails or fences that do not alter contours of the land

Limited Tree and Vegetation Removal

- Removal of invasive species
- Cutting and removal of up to 5 trees (20 centimetres diameter) per year
- Removal of trees that pose thr

Farm, Forest and Emergency Operations

- Farm operations defined in the *Farm Practices Protection (Right to Farm) Act* and Agricultural Land Reserve Use Subdivision and Procedure Regulation.
- Forest management activities on land classified as managed forest
- Emergency actions (fire, flood, erosion protection; protection of public facilities; clearing obstruction from bridge, culvert, dock wharf or stream; bridge repairs).

Other

- Land that is subject to a conservation covenant
- Works undertaken by a local government or a body established by a local government
- Works authorized under a provincial statute

Guidelines

The items to be considered in the creation of the Development Permit requirements for the Groundwater Recharge Protection DPA include the following:

- Development should minimize negative impacts to quality and quantity of groundwater
- DP should only support compliance with professional recommendations
- Permit conditions could include confirmation of hydrogeologist recommendations
- Subdivision should replicate function of watershed, maintain flow rates, minimize impact to recharge, not impact natural watercourses of wetlands (eg. introduction of removal of materials)
- Impervious surfaces should be minimized
- Equipment for collection, distribution, pumping, overflow handling of rainwater may be required
- Tree removal is not exempt, native tree planting is encouraged for replanting, replanting to be maintained for minimum of 2 years
- Roads, driveways, trails and pathways should follow the contours of the land. Construction should be conducted in way that does not impair recharge area.
- Parking should be located and constructed so as to minimize erosion and water pollution from stormwater runoff.

Permits may include minor variances to subdivision or building and structure siting or size to meet DPA objectives.

Policy/Regulatory

Official Community Plan:

The North Pender OCP currently acknowledges the importance of supporting groundwater sustainability. Groundwater Resources (4.1) objectives are as follows:

- 1) *To implement land use planning that ensures the sustainable use of groundwater resources as a source of potable drinking water.*
- 2) *To ensure that the supply of groundwater on North Pender remains as a shared community resource that should not be used as a private commodity.*
- 3) *To ensure land use does not pollute the groundwater resources.*
- 4) *To ensure the best available information and science regarding the groundwater resources is utilized so water resources are preserved for current and future generations.*

The OCP also references the implementation of a “Groundwater Management Strategy” (4.1.1.). This subsection has been changed to reference the Islands Trust “Freshwater Sustainability Strategy” as the equivalent of the strategy contemplated at the time of the drafting of the OCP.

Consultation

Once the North Pender LTC has endorsed Bylaw 228, staff are recommending that it be sent out for early referral to relevant agencies and First Nations. This will provide opportunity for early input and opportunity for revision prior to First Reading.

Agencies

The draft bylaws will be sent for early referral to a number of agencies. The list is as follows:

Capital Regional District
Ministry of Land, Water and Resource Stewardship
Ministry of Forests
Ministry of Environment and Climate Change Strategy
Engineers and Geoscientists of BC – Sustainability Advisory Group

First Nations

Cowichan Tribes	Semiahmoo First Nation
Halalt First Nation	Snuneymuxw First Nation
Lake Cowichan First Nation	Stz’uminus First Nation
Lyackson First Nation	Tsartlip First Nation
Malahat First Nation	Tsawout First Nation
Pauquachin First Nation	Tsawwassen First Nation
Penelakut Tribe	
Tseycum First Nation	
WSANEC Leadership Council	

Rationale for Recommendation

LTC endorsement of Bylaws 228 will enable staff to engage in early consultation with relevant agencies once DPA boundaries have been confirmed. Early consultation will enable input and update to draft bylaws prior to first reading facilitating a more efficient bylaw approval process. Changes to the DAI bylaw will be required in order to facilitate the implementation of the new development permit area guidelines.

ALTERNATIVES

1. Hold a special meeting to consider DPA guidelines and other OCP amendments.

The LTC may ask staff to schedule a special meeting to provide for more time and focussed discussion on the proposed amendments before moving forward.

That the North Pender Island Local Trust Committee request staff to schedule a special meeting to consider all the proposed amendments identified in Bylaw 228.

2. Endorse DPA guidelines and hold a special meeting to consider the DPA boundaries as opposed to considering them at a future LTC meeting.

The LTC may endorse the DPA Guidelines and schedule a special meeting to focus on the DPA boundaries as opposed to considering the boundaries at a future LTC meeting.

That the North Pender Island Local Trust Committee request staff schedule a special meeting to consider the DPA boundaries associated with the Groundwater Implementation Project.

3. Request further information

The LTC may request that staff return to a future LTC meeting with further information prior to making a decision.

That the North Pender Island Local Trust Committee request that staff provide further information on.....

4. Make further revisions to amendments

The LTC may ask staff to make further revisions to the draft bylaw .

That the North Pender Island Local Trust Committee request staff to make the following changes....

NEXT STEPS

If the staff recommendation are endorsed the next steps are as follows:

- Staff will provide LTC with options for DPA boundaries at a future LTC meeting;
- Once preferred DPA boundaries are identified, staff will send draft bylaws out for early referral;
- Bylaw 228 will come back to the LTC for review and consideration of first reading;
- LTC gives first reading;
- Bylaw referrals, with comments, received prior to Public Hearing;
- Community Information Meeting and Public Hearing held;
- LTC gives second and third reading;

- Proposed bylaw referred to Executive Committee and the OCP amendment to the Minister of Municipal Affairs & Housing for approval; and
- LTC gives final reading and adopts bylaw.

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

ATTACHMENTS

1. Bylaw 228

DRAFT

**NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 228**

**A BYLAW TO AMEND NORTH PENDER ISLAND OFFICIAL COMMUNITY PLAN
BYLAW NO. 171, 2007**

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

1. CITATION

This Bylaw may be cited for all purposes as “North Pender Island Official Community Plan Bylaw No. 171, 2007, Amendment No. 1, 2022”.

2. SCHEDULES

North Pender Island Official Community Plan Bylaw No. 171, 2007 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

**NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 228**

SCHEDULE 1

The North Pender Island Official Community Plan No. 171, 2007, is amended as follows:

1. Section 2.1 Residential Land Uses is amended by deleting “3)” in its entirety and replacing it with “3) To plan for a land use pattern which ensures the sustainable use of natural resources, protects groundwater recharge potential and water quality and minimizes greenhouse gas emissions.”
2. Section 2.1 Residential Land Uses, Subsection 2.1.G is amended by adding “and limit or reduce negative impact on groundwater quality and quantity” after “reduce greenhouse gas emissions” and before “.”
3. Section 2.1.1. Rural Residential Land Use “2)” is amended by removing “and” between “natural habitat” and “to limit” and replacing it with “,” and by adding “and protects groundwater recharge potential and water quality” after “greenhouse gas emissions”.
4. Section 2.1.1 Rural Residential Land Use, Subsection 2.1.1.5 is amended by adding “, protect critical groundwater recharge areas,” after “reduce emissions” and before “or preservation”.
5. Section 2.1.2 Rural Land Use, Subsection 2.1.2.5 is amended by removing “2.1.2.3” and replacing it with “2.1.2.4” and by adding “f) The proposal is not in an area where increasing density will threaten groundwater recharge and availability.”
6. Section 2.1.2 Rural Land Use, Subsection 2.1.2.6 is amended by adding “groundwater recharge areas and other” after “preservation of” and before “the environmentally sensitive” and removing “the” after “and other” and before “environmentally sensitive”.
7. Section 2.4 Commercial Land Uses, is amended by removing Subsection 2.4.8 in entirety and replaced by “ 2.4.8 New buildings are encouraged to incorporate water conservation measures, including freshwater catchment and retention systems.”
8. Section 3.2 Water Systems is amended by removing “The location of the existing community water systems and water licenses are shown on Schedule F.”
9. Section 3.2 Water Systems, Subsection 3.2.3 is amended by removing “2045 litres/day/lot (450 gallons/day/lot)” and replacing it with “2000 litres/day/lot (440 gallons/day/lot)”

10. Section 3.2 Water Systems, is amended by deleting 3.2.4 in its entirety and replaced with “Regulations may be considered requiring the installation of freshwater catchment and retention systems in new construction.”
11. Section 4.1 Groundwater Resources, Objective “4)” is amended by adding “, including indigenous cultural knowledge, after “resources” and before “is utilized”.
12. Section 4.1 Groundwater Resources is amended by removing Subsection 4.1.1 in its entirety and replacing it with “4.1.1 The Local Trust Committee shall work with other agencies and the community in the implementation of the Islands Trust’s Freshwater Sustainability Strategy. The Strategy Implementation should involve the following elements:
 - a) the development of land use polices and regulations informed by groundwater recharge data and groundwater availability assessment data;
 - b) the use of groundwater recharge data and groundwater availability assessment data in land use decision-making to reduce impacts on groundwater recharge and groundwater supply;
 - c) the assessment of existing zoning and implementation of changes to support the sustainability of groundwater resource;
 - d) the protection of groundwater from potential contamination;
 - e) the promotion of sustainable use of the groundwater resource.”
13. Section 4.1 Groundwater Resources, Subsection 4.1.4 is amended by removing the space between “ground” and “water”
14. Section 4.1 Groundwater Resources, Subsection 4.1.12 is amended by inserting “freshwater” after “retention of” and before “in cisterns”.
15. Section 5.2 Development Permit Areas is amended by adding:

“5.2.12 DEVELOPMENT PERMIT AREA ELEVEN – GROUNDWATER RECHARGE PROTECTION

5.2.12.1 Description of Area

Development Permit Area 11 includes critical groundwater recharge areas identified on Schedule Q. 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.

5.2.12.2 Authority

The Critical Groundwater Recharge 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.

5.2.12.3 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 North Pender 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

5.2.12.4 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.

5.2.12.5 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.

5.2.12.6 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.

5.2.12.7 Guidelines

The *Local Government Act* prohibits construction of buildings and structures and the alteration of land and subdivision in Development Permit Area 11 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.”
16. Schedule “F – Select Surface Water Resources” is removed and replaced with Schedule “F – Groundwater Regions and Water Service Areas” as shown on Plan No.1 attached and forming part of this bylaw.
17. Schedule “Q – Development Permit Area 11 – Groundwater Recharge Protection Development Permit Area” is added after “Schedule P – Development Permit Area 10 – Riparian and Aquatic Development Permit Area “ as shown on Plan No.2 attached and forming part of this bylaw.

**NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 228**

Plan 2

Schedule F - Groundwater Regions and Water Service Areas

**NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 228**

Plan 2

**Schedule Q – Development Permit Area 11 – Groundwater Recharge Protection
Development Permit Area**