

12.0 Development Permit Areas

A Development Permit Area (DPA) is a set of development guidelines pertaining to a specific area as specified by the OCP. The authority for local governments to establish DPA's is set out in Sections 919.1 and 920 of the [Local Government Act](#). A DPA is perhaps the most important tool used by Local governments to ensure that the potential impacts of development are identified and addressed. This OCP relies on the use of DPA's as the primary tool



which will assist the community in working towards achieving its vision and ensuring that future development is consistent with the Sustainability Principles, goals, objectives, and policies of this plan.

Development applications within DPA's are reviewed to ensure that the proposal is consistent with the DPA Guidelines. In some cases, a report from a biologist, engineer, or other professional may be required to assist staff in evaluating an application. The OCP specifies the information required in order to submit a development permit application.

A common misconception about DPA's is that they are setbacks or "no-go" buffer zones. Development may occur within a DPA provided the proposal satisfies the DPA Guidelines. In addition, certain activities may be permitted within a DPA without a development permit as specified within each DPA.

This section of the OCP identifies those areas where a development permit may be required, prior to the commencement of subdivision, development, redevelopment, construction, or land alteration on a property, pursuant to the [Local Government Act](#). The designation DPA's is consistent with the strategic goals and actions of the RDN 2009-2012 Strategic Plan, the goals and objectives of the RGS, the Sustainability Principles, Community Goals, and is required to achieve the Community Vision.

The landscaping and screening requirements of this plan may not be consistent with '[RDN Land Use and Subdivision Bylaw No. 500, 1987](#)'. Therefore, the RDN should consider amending Bylaw No. 500 to bring it in to conformity with this plan. If inconsistency is found between Bylaw 500 and the DPA's Guidelines of this plan with respect to landscaping and screening, this plan shall prevail and a variance to Bylaw No. 500 may be required.

Section 12.0 helps achieve the Community Vision by contributing towards community goals 4, 6, 7, 11, 12, 14, and 15. Please refer to Section 3.3 for a list of community goals.



12.1 Environmentally Sensitive Features Development Permit Area

PURPOSE:

This Development Permit Area (DPA) has been designated pursuant to Section 919.1(a) of the *Local Government Act: protection of the natural environment, its ecosystems and biological diversity*.

AREA:

This DPA is intended to minimize the impacts of developments on a number of environmentally sensitive features including coastal areas, nesting trees, rare and endangered species, and other Environmentally Sensitive Areas identified on Map No. 9 of this plan and are defined as follows:

1. For all coastal areas – the DPA shall be 15 metres horizontal distance upland of the present natural boundary and within 15 metres horizontal distance seaward of the present natural boundary.
2. All lands that have been identified in the Sensitive Ecosystem Inventory: East Vancouver Island and Gulf Islands 1993 – 1997 and any subsequent editions as being endangered or sensitive to disturbance including ‘Coastal Bluff’, ‘Terrestrial Herbaceous’ ‘Riparian Vegetation’, ‘Wetland’, and ‘Older Forest’ as shown on Map No. 9.
3. For Eagle Nesting Trees - the DPA shall be a 60 metre radius measured from the base of the nesting tree.
4. For Heron Nesting Trees – the DPA shall be a 100 metre radius measured from the base of the nesting tree.
5. For known locations of rare and endangered species those locations shown on Map No. 9.

JUSTIFICATION:

Increasing development pressure and environmental awareness, as well as the RGS goal of environmental protection has lead to the need for the protection of the plan area’s most sensitive environmentally significant features including components of the Coastal Douglas Fir Ecosystem, coastal shoreline, watercourses, aquifer’s, eagle and heron nesting trees, rare species, and other environmentally sensitive features to ensure their continued survival and enjoyment for generations to come.

APPLICABILITY:

A development permit is required for the following activities unless specifically exempt:

1. Land alteration which results in removal, alteration, disruption, or destruction of natural features, including mature and native vegetation;
2. Disturbance of soils, including grubbing, scraping and removal of top soils;
3. Construction or erection of buildings and structures;
4. Creation of non-structural impervious or semi-pervious surfaces; and,
5. Subdivision as defined in the [Land Title Act](#) or the [Strata Property Act](#).



EXEMPTIONS:

The following activities are exempt from requiring a development permit:

1. Development or alteration of land proposed to occur outside the designated DPA as shown on Map No. 9, as determined by a registered professional biologist and surveyed by a BC Land Surveyor or as determined by the RDN.
2. Fence building, growing, rearing, producing and harvesting of agricultural products in accordance with recognized standards of the [Farm Practices Protection Act](#) (Right to Farm) on lands upon which the Act applies.
3. Internal renovations and maintenance to existing buildings and structures within the existing building footprint.
4. Minor additions to existing buildings and structures to a maximum of 25 percent of the total floor area of the existing building or structure, as well as renovations, repairs, or maintenance provided that the proposed improvements do not result in the building or structure being situated closer to or further impacting on the environmentally sensitive feature than the existing building or structure.
5. Additions, excluding cantilevered construction, to a legally sited structure within the existing footprint of the existing structure.
6. Emergency procedures to prevent, control, or reduce erosion, or other immediate threats to life and property including:
 - a. Emergency flood or protection works;
 - b. Clearing of an obstruction from bridge, culvert, or drainage flow; repairs to bridges and safety fences; and
 - c. Emergency procedures to prevent, control, or reduce erosion, or other immediate threats to life and property must be reported to the RDN and applicable provincial ministry immediately to secure an exemption under this section.
7. Where the [Riparian Areas Regulation](#) does not apply, a property owner may construct a single trail within this DPA, subject to the following:
 - a. The trail provides the most direct route of feasible passage through the DPA;
 - b. Sensitive habitat will not be impacted by the presence of the trail;
 - c. The ground must be stable, i.e. erodible stream banks or other erosion prone areas must be avoided;
 - d. No motorized vehicles are permitted;
 - e. The trail is maximum 1.5 metres in width;
 - f. No trees, which are greater than five metres in height and 10 centimetres in diameter, are to be removed; limbing, pruning and topping of trees should be done instead; and,
 - g. The trail's surface must be pervious.
9. Wildlife habitat restoration or enhancement works that have obtained the required Provincial and Federal approvals. Any activity within watercourse that has or may have an impact on a stream requires compliance with Provincial and Federal legislation and notification to the RDN.
10. The planting of trees, shrubs, or groundcovers for the purpose of enhancing the habitat values and/or soil stability within the DPA provided the planting is carried out in accordance with the guidelines provided '[Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia](#)', published by MOE, or any subsequent editions.



11. The removal of invasive plants or noxious weeds on a small scale within the DPA including, but not limited to, Giant Hogweed, Scotch Broom, Himalayan Blackberry, Morning Glory and Purple Loosestrife provided such works are conducted in accordance with a vegetation management plan and measures are taken to avoid sediment or debris being discharged into the watercourse or onto the foreshore and the area is replanted immediately in accordance with “10” above.
12. Works conducted and/or approved by the RDN, DFO and/or MOE with respect to trail construction, stream enhancement and fish and wildlife habitat restoration.
13. The maintenance and introduction of landscaping in previously disturbed areas, excluding retaining walls and anything that is considered a structure as defined by the current zoning bylaw provided that any newly introduced landscaping satisfies the criteria in exemption 10 as stated above.
14. With the exception of nesting trees protected under section 34 of the [Wildlife Act](#), cutting of vegetation and trees provided the cutting is not a precursor to development, the roots/stump are left in the ground, and the cutting does not result in land alteration.
15. An application for subdivision where the following criteria can be met:
 - a. Minimum parcel sizes will be met exclusive of the Development Permit Area; and
 - b. No development activities including grading, clearing, trenching, or installation of pipes, relating to the creation of all parcels will occur within the DPA.

GUIDELINES:

General Guidelines:

1. The location and characteristics of the environmentally sensitive features identified on Map No. 9 of this plan are intended for convenience only. Ground truthing may be required by a British Columbia Land Surveyor or registered professional biologist to accurately determine the geographical location and characteristics of the features identified.
2. The RDN may require the applicant to supply an assessment, prepared by a registered professional biologist or person with similar qualifications and acting in their area of expertise, which inventories the existing environmentally sensitive feature(s) and assesses the environmental impact of the proposed development and prescribes appropriate recommendations for construction, mitigation and protection of habitat, to the satisfaction of the RDN.
3. The RDN, as a condition of the issuance of a development permit, may require compliance with any or all conditions recommended in the report prepared by the registered professional biologist or other qualified professional.
4. Where the applicant’s biologist or qualified professional recommends revegetation and/or enhancement works within the DPA or elsewhere on the subject property, the RDN shall require the applicant to submit a landscaping and security deposit equal to the total estimated costs of all materials and labour as determined by a landscape architect or other qualified person to the satisfaction of the RDN.
5. Development or subdivision of land should be designed to:
 - a. Replicate the function of a naturally vegetated watershed;
 - b. Maintain the hydraulic regime of surface and groundwater and pre-development flow rates;



- c. Not interfere with groundwater recharge; and
 - d. Not introduce or remove materials where it would cause erosion of or the filling in of natural watercourses and/or wetlands.
6. Variances may be considered in order to minimize encroachment into the DPA.
7. If development or alteration of land is proposed within the DPA, it shall be located where it will cause the least impact on the environmentally sensitive features within the DPA. Notwithstanding, this policy, development shall only be supported in areas with environmentally sensitive features if the applicant can provide compelling reasons supported by a qualified professional's recommendation to support the request.
8. Where an applicant is proposing to disturb native vegetation within this DPA, the RDN may require the applicant to supply a re-vegetation plan to the satisfaction of the RDN.
9. Construction at a time of year and using construction methods that minimize the impacts on rare and sensitive species within the DPA shall be required.
10. In order to ensure that unnecessary encroachment does not occur within the DPA at the time of construction, permanent or temporary fencing measures may be required.
11. On parcels where development (including tree and vegetation removal) is proposed for an area with a slope of 30 percent or greater, the RDN may require the applicant to supply a report, prepared by a professional geotechnical engineer, indicating that slope stability will not be jeopardized and soil erosion and site mitigation measures can be implemented, to the satisfaction of the RDN.
12. Development applications shall generally comply with the environmental protection policies contained in Section 4.0 of this plan.
13. All development proposals should be designed in substantial compliance with the guidelines contained in the document: [“Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia”](#) dated March 2006 as amended from time to time and in the case of a wetland [“Wetland Ways: Interim Guidelines for Wetland Protection and Conservation in British Columbia 2009”](#) as amended from time to time both published by the Ministry of Environment.
14. The RDN may require a Section 219 covenant to be prepared at the applicant's expense and to the satisfaction of the RDN, registering professional reports on title, specifying areas that must remain free from development and/or protecting an environmentally sensitive feature.
15. The use of rain gardens, vegetated swales, a reduction in impervious surfaces, and other methods for managing rain water on-site should be included in all development proposals considered in this DPA.
16. The RDN shall consider the site-specific natural features, ecological processes that support ecosystem function, natural geological processes, wildlife ecology, and unique ecosystems. These include, but are not limited to:
 - a. Maintenance of an effective visual and sound (natural vegetated) buffer around eagle and heron nesting sites or the sensitive ecosystem;
 - b. Vegetation, trees, snags and root systems;
 - c. Rare and uncommon species and plant communities;
 - d. Soils and soil conditions (moisture, nutrients and permeability);
 - e. Bird and other wildlife and their habitats, such as nesting and breeding areas;
 - f. Maintenance of linkages with adjacent sensitive ecosystems to minimize fragmentation;



- g. Topography and relative orientation of features on neighbouring properties;
 - h. Natural movement and deposition of shoreline materials;
 - i. Wildlife habitat, including but not limited to wildlife breeding areas as well as nesting and perch trees;
 - j. Appropriate timing of construction; and,
 - k. Maintenance of linkages with adjacent sensitive ecosystems to minimize fragmentation.
17. Best practice fire mitigation techniques shall be considered where they minimize impacts on the environmentally sensitive features and ecological function within the DPA.

Guidelines specific to Coastal Areas

18. The RDN may require an applicant to supply a sediment and erosion control and/or rain water management plan, complete with recommendations for implementation, prepared by a registered professional engineer or person with similar qualifications, to the satisfaction of the RDN.
19. For applications where a shoreline stabilization device is being proposed, the RDN shall require the applicant to supply a report from a registered professional engineer assessing the risk of erosion on the subject property and the suitability of the subject property for a shoreline stabilization device. The report must also include an analysis of the impacts on adjacent properties as a result of installing or not installing the proposed shoreline stabilization device. Shoreline stabilization devices are not supported on parcels that are not subject to active erosion.
20. The use of marine retaining walls and other “hard” surfaces such as seawalls, concrete groynes, headlands, gabions, and rip rap shall only be supported where a qualified professional has determined that “soft” approaches to shoreline stabilization such as vegetation enhancement, upland drainage control, biotechnical measures, beach enhancement, anchor trees and gravel placement are not appropriate given site specific conditions.
21. Shoreline stabilization measures near the natural boundary that obstruct pedestrian access to and along public beaches or foreshore areas shall be opposed by the RDN.
22. Where it is determined by a qualified professional that a retaining wall is required, it should be located upland of the natural boundary and should, where feasible, meet the applicable minimum required zoning setbacks. The placement of retaining walls to reclaim land lost to erosion shall not be supported.

12.2 Watercourse and Fish Habitat Protection Development Permit Area

PURPOSE:

This Development Permit Area (DPA) has been designated pursuant to Section 919.1(a) of the ***Local Government Act***: *protection of the natural environment, its ecosystems, and biological diversity.*



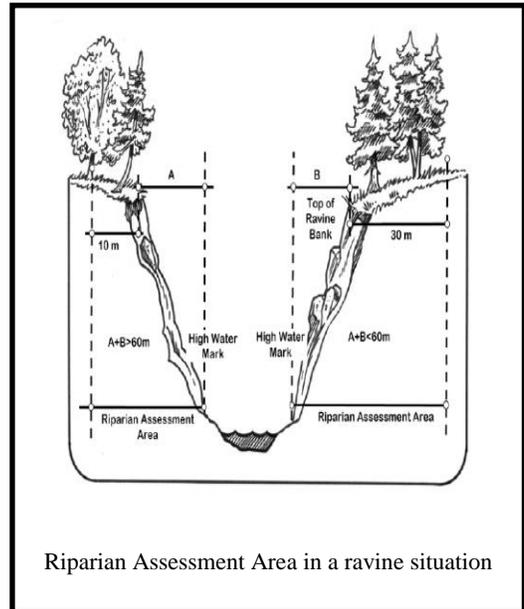
AREA:

This DPA applies to all streams subject to the provincial [Riparian Areas Regulation](#) (RAR) as well as mapped lakes, wetlands, ponds, and other watercourses which are not subject to the RAR.

This DPA is defined as follows:

A. For all mapped and unmapped streams **which are subject to the RAR** in the area identified on Inset No. 1 on Map No. 9, this DPA consists of the following Riparian Assessment Areas (RAA) within and adjacent to all streams:

1. For a stream, a 30 metre strip of land on both sides of the stream measured from the natural boundary;
2. For a ravine less than 60 metres wide, a strip on both sides of the stream measured from the high water mark to a point that is 30 metres beyond the top of the ravine bank; and,
3. For a ravine 60 metres wide or greater, a strip of land on both sides of the stream measured from the natural boundary to a point that is 10 metres beyond the top of the ravine bank.



The RAR establishes the Riparian Assessment Areas as described above.

B. For lakes, wetlands and ponds, shown on Map No. 9 **which are not subject to the RAR**, this DPA includes the following:

1. For lakes, wetlands and ponds as shown on Map No. 9, the DPA shall be 15 metres as measured from the natural boundary; and,
2. For all other watercourses as shown on Map No. 9, the DPA shall be 15 metres as measured from the top of the bank.

JUSTIFICATION:

The Province of British Columbia's Riparian Areas Regulation (RAR), under the [Fish Protection Act](#), aims to protect fish habitat. This regulation requires all residential, commercial, or industrial development in a Riparian Assessment Area to be subject to an assessment by a qualified environmental professional (QEP). This DPA has been designated to protect streams in accordance with the RAR.

In addition, aquatic and riparian ecosystems are biodiversity hotspots which play a vital role in the lifecycle processes of not only fish, but many other plant and animal communities. In addition to protecting the components which are required to support fish, this DPA is also intended to address other important values associated with aquatic and riparian ecosystems such as the occurrence of rare plant and animal communities, the maintenance of the natural



hydraulic regime, and the role that aquatic and riparian ecosystems play in supporting plant and animal species.

APPLICABILITY:

This DPA applies to all development proposed within the DPA described in (A) and (B) above. A development permit is required for the following development activities where such activities involve the subdivision of land, construction of, addition to, or alteration of a building or structure, or the alteration of land, except where such activities are specifically exempt:

- a. For streams subject to the RAR removal, alteration, disruption, or destruction of vegetation;
- b. Disturbance of soils;
- c. Construction or erection of buildings and structures;
- d. Creation of non-structural impervious or semi-impervious surfaces;
- e. Flood protection works;
- f. Construction of roads, trails, docks, wharves and bridges;
- g. Provision and maintenance of sewer and water services;
- h. Development of drainage systems;
- i. Development of utility corridors; and,
- j. Subdivision of land.

Exemptions from Requiring Application for a Development Permit

The following activities are exempt from the Watercourse and Fish Habitat Protection DPA requirements. **(Please note, a Riparian Assessment which satisfies the provincial requirements set out in the RAR Guidelines must be submitted to the Provincial Ministry of Environment for all development within the RAA as defined in (A) above regardless of whether a development permit is required from the RDN).**

1. Development activities more than 30 metres as measured from the top of the bank or present natural boundary, whichever is greater, for the Nanaimo River and Haslam Creek.
2. Development activities more than 15 metres as measured from the top of the bank or present natural boundary, whichever is greater, for all other watercourses, streams, lakes, wetlands and ponds.
3. For streams subject to the RAR, in the case where a simple assessment is submitted, a development proposed outside of the Streamside Protection and Enhancement Area (SPEA) where notification of an assessment report prepared in accordance with the *Riparian Areas Regulation* Assessment Methods has been received by the RDN.
4. Renovations, repairs, maintenance, additions, excluding cantilevered construction to existing buildings within the same footprint.
5. With the exception of nesting trees protected under Section 34 of the [Wildlife Act](#), cutting of vegetation and trees provided the cutting is not a precursor to development, the roots/stump are left in the ground, and the cutting does not result in land alteration.
6. All development on lands proposed to be used for 'farm operation' as defined by the [Farm Practices Protection Act](#).



7. All forest management activities on lands subject to the [*Forest Act*](#) or [*Private Managed Forest Land Act*](#).
8. All park or park land ancillary uses not containing commercial, residential, or industrial activities.
9. Stream Enhancement and Fish and Wildlife habitat restoration works that have obtained the required provincial and federal approvals. Any activity within the stream channel that has or may have an impact on a stream requires compliance with provincial and federal legislation and notification to the Regional District of Nanaimo.
10. The removal of invasive plants or noxious weeds on a small-scale within the DPA including, but not limited to, Giant Hogweed, Scotch Broom, Himalayan Blackberry, Morning Glory and Purple Loosestrife provided such works are conducted in accordance with a vegetation management plan prepared by a qualified professional and measures are taken to avoid sediment or debris being discharged into the watercourse or onto the foreshore and the area is replanted immediately in accordance with “9” above.
11. Subdivision where:
 - a. A qualified environmental professional has determined there to be no streams subject to the RAR on the subject property, or
 - b. Where no new parcel lines or amendments to existing parcel lines are being proposed within the RAA and no works are proposed within the RAA and the applicant agrees to register a Section 219 covenant in favor of the RDN which prohibits further development, land alteration, and vegetation cutting and removal within the Riparian Assessment Area as defined by the RAR¹.
12. In the case where a lake, wetland, watercourse, or pond is not subject to the RAR, the construction of a single trail subject to the following:
 - a. The trail provides the most direct route of feasible passage through the DPA;
 - b. Sensitive habitat will not be impacted by the presence of the trail;
 - c. The ground is stable, i.e. erodible stream banks or other erosion prone areas must be avoided;
 - d. No motorized vehicles are permitted;
 - e. The trail is maximum 1.5 metres in width;
 - f. No trees, which are greater than five metres in height and 10 centimetres in diameter, are to be removed. Limbing, pruning and topping of trees should be done instead; and,
 - g. The trail’s surface is pervious.

GUIDELINES

A. General Guidelines

The following guidelines apply to all development activities within this DPA:

1. Development or subdivision of land should be designed to:

¹ The covenant shall specify that development within the RAA may proceed at a future date following the establishment of a SPEA in accordance with the *Riparian Areas Regulations* and any applicable DPA Guidelines.



- a. Replicate the function of a naturally vegetated watershed;
 - b. Maintain the hydraulic regime of surface and groundwater and pre-development flow rates;
 - c. Not interfere with groundwater recharge; and,
 - d. Not introduce or remove materials where it would cause erosion of or the filling in of natural watercourses and/or wetlands.
2. Variances may be considered in order to minimize encroachment into the DPA.
 3. Construction at a time of year and using construction methods that minimize the impacts on rare and sensitive species within the DPA shall be required.
 4. Development applications shall generally comply with the environmental protection policies contained in Section 4.0 of this plan.
 5. On parcels where development (including tree and vegetation removal) is proposed for an area with a slope of thirty percent or greater, the RDN may require the applicant to supply a report, prepared by a professional geotechnical engineer, indicating that slope stability will not be jeopardized and soil erosion and site mitigation measures will be implemented, to the satisfaction of the RDN.
 6. All development proposals are subject to the requirements and procedures of the [Fish Protection Act](#) and the [Riparian Areas Regulation](#).
 7. Rain water should be managed on-site and no increase or changes to off site rain water flows should be supported.
 8. The use of rain gardens, vegetated swales, a reduction in impervious surfaces and other methods for managing rain water on-site should be included in all development proposals considered in this DPA.
 9. Best practice fire mitigation techniques shall be considered where they minimize impacts on the environmentally sensitive features and ecological function within the DPA.

B. Guidelines applicable to all streams subject to the RAR:

1. Unless otherwise exempt from the requirements of this DPA, for all development within the RAA of all streams subject to the RAR, a QEP must be retained at the expense of the applicant for the purpose of preparing a report pursuant to the provincial [Riparian Areas Regulation](#) (RAR) and the RAR Assessment Methodology Guidebook. The report must be electronically submitted using the prescribed form and method to the Ministry of Environment (MOE), Fisheries and Oceans Canada (DFO), and a hard copy must be provided to the RDN.
2. A development permit shall not be issued without notification from MOE and DFO that they have been advised of the proposed development and provided with an acceptable copy of the QEP assessment report or having received evidence of the Minister of Fisheries and Oceans approval under the authority the RAR.
3. Where the QEP report finds a ‘Harmful Alteration, Disruption, or Destruction’ (HADD) of fish habitat or where development is proposed to occur within the SPEA, a development permit shall not be issued unless approval pursuant to the RAR is received from DFO. The Regional Board may consider providing comments to DFO in regards to a proposed approval pursuant to the RAR. Please note, a variance to the minimum required setbacks from a watercourse pursuant to RDN Land Use and



Subdivision Bylaw No. 500, 1987 may be required and a development permit shall not be issued unless the Regional Board concurrently approves the required variance.

4. The RDN may, when considering comments to DFO on a proposed development that requires approval pursuant to RAR, require additional information from the QEP and other senior levels of government.
5. The RDN may require the applicant to provide an explanatory plan of the SPEA including the registration of a covenant prohibiting development in the SPEA and securing the measures required to protect it.
6. The owner shall implement all measures necessary to maintain the integrity of the SPEA as specified in the QEP's report and such measures may be included as conditions of the development permit.
7. In addition to implementing the measures contained in the QEP's report, to ensure future encroachment into the SPEA is reduced, the RDN in consultation with the land owner may consider the following:
 - a. Dedicating back to the Crown or RDN all or part of the SPEA;
 - b. Gifting to a nature preservation organization (tax receipts may be issued) all or part of the SPEA; and,
 - c. Registering restrictive covenant(s) or conservation covenant(s) securing the measures prescribed in the QEP's assessment report.
8. Permanent fencing, signage, and/or other approved means of clearly delineating the SPEA boundary may be required to the satisfaction of the RDN prior to land alteration and in the case of subdivision prior to the RDN notifying the Provincial subdivision approving officer that the conditions of the development permit have been met. Fencing must be designed to allow for the free and uninterrupted movement of organisms between riparian and upland ecosystems and must be maintained in good order.
9. Where signage is required, it must clearly identify the SPEA, must be in a form approved by the RDN, must be permanently installed in a clearly visible location on a fence or other permanent structure a minimum of every 10 metres, and in the case of subdivision there must be at least one sign installed on each proposed parcel including and/or adjacent to the SPEA.
10. In the case of a proposed subdivision within this DPA, minimum parcel sizes should be met exclusive of the SPEA.
11. In the case of a proposed subdivision within this DPA, the creation of new parcel lines and new parcels within the SPEA should be minimized to protect the integrity of the SPEA.
12. Developers are encouraged to exceed the minimum standards set out in the RAR.
13. Where revegetation and/or enhancement works are required, the RDN shall require the applicant to submit a landscaping and security deposit equal to the total estimated costs of all materials and labour as determined by a landscape architect or other qualified person to the satisfaction of the RDN.
14. Where a proposed development is subject to a building permit, the QEP shall be required to provide confirmation to the RDN's Planning Department that the development has been developed in accordance with the QEP's recommendations prior to final inspection or occupancy as applicable.



C. Guidelines applicable to lakes, wetlands, ponds, and other watercourses not subject to the RAR:

1. The location of lakes, wetlands, ponds, and other watercourses identified on Map No. 9 are intended for convenience only. Ground truthing may be required to accurately determine their geographical location.
2. The applicant may be required to supply an assessment, prepared by a Registered professional biologist or person with similar qualifications and acting in their area of expertise. The report must inventory the site to identify existing environmentally sensitive feature(s) and assesses the environmental impact of the proposed development. The report must provide recommendations for construction, mitigation, and protection of environmentally sensitive features and sensitive habitat, to ensure that the impacts of development are minimized and to preserve and/or restore the natural ecosystem components and processes which are important to maintain ecosystem function and health.
3. The RDN, as a condition of the issuance of a development permit, shall, where feasible, require compliance with any or all conditions recommended in the report prepared by the registered professional biologist or other qualified professional.
4. Where the applicant's biologist or qualified professional recommends re-vegetation and/or enhancement works within the DPA or elsewhere on the subject property, the RDN shall require the applicant to submit a landscaping and security deposit equal to the total estimated costs of all materials and labour as determined by a landscape architect or other qualified person to the satisfaction of the RDN.
5. If development or alteration of land is proposed within the DPA, it should be located where it will cause the least impact. Development shall generally only be supported in areas with environmentally sensitive features if the applicant can provide compelling reasons supported by a qualified professional's recommendations for mitigation to support the request or there are no alternate building locations.
6. Where an applicant is proposing to disturb native vegetation within this DPA, the RDN may require the applicant to supply a re-vegetation plan to the satisfaction of the RDN.
7. In order to ensure unnecessary encroachment does not occur into the DPA at the time of construction, permanent or temporary fencing measures may be required.
8. All development proposals should be designed in substantial compliance with the guidelines contained in the Provincial Ministry of Environment document: "[Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia](#)" as amended or replaced from time to time.
9. The RDN may require a Section 219 covenant be prepared at the applicant's expense and to the satisfaction of the RDN, registering professional reports on title, specifying areas that must remain free from development, and/or protecting an environmentally sensitive feature.
10. The RDN shall consider the site-specific natural features, ecological processes that support fish, riparian function, wildlife ecology, and unique ecosystems. These include, but are not limited to:



- a. Maintenance of an effective visual and sound (natural vegetated) buffer around nesting trees or another sensitive feature;
- b. Vegetation, trees, snags, and root systems;
- c. Rare and uncommon species and plant communities;
- d. Soils and soil conditions (moisture, nutrients and permeability);
- e. Birds and other wildlife species and their habitats, such as shelter, nesting trees, perch trees, and breeding areas;
- f. Maintenance of linkages with adjacent sensitive ecosystems to minimize fragmentation;
- g. Topography and relative orientation of features on neighbouring properties; and,
- h. Appropriate timing of construction.

Definitions:

Assessment Report means a report prepared in accordance with the Riparian Areas Regulation assessment methods to assess the potential impact of a proposed development in a riparian assessment area and which is certified for the purpose of the Riparian Areas Regulation by a qualified environmental professional.

Fish means all stages of:

- a. Salmonids;
- b. Game fish; and,
- c. Regionally significant fish.

Fish Habitat means the areas in or about a stream such as, spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes.

Qualified Environmental Professional (QEP) means an applied scientist or technologist acting alone or together with another qualified environmental professional, if:

- a. The individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association;
- b. The individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal; and,
- c. The individual is acting within that individual's area of expertise.

Riparian Area means a streamside protection and enhancement area as defined in the Riparian Areas Regulation.

Riparian Areas Regulation (RAR) means the [Riparian Areas Regulation](#) and amendments thereto enacted pursuant to Section 12, 13(1) and 37(2) of the [Fish Protection Act](#).

Stream includes all watercourses, whether mapped or unmapped, that provide fish habitat or flows to a water body that provides fish habitat and includes any of the following:

- a. A watercourse, whether it usually contains water or not;
- b. A pond, lake, river, creek, or brook;



- c. A ditch, spring, or wetland that is connected by surface flow to something referred to in (a) or (b) above.

Streamside Protection and Enhancement Area (SPEA) means an area:

- a. Adjacent to a stream that links aquatic to terrestrial ecosystems and includes both existing and potential riparian vegetation and existing and potential adjacent upland vegetation that exerts an influence on the stream; and,
- b. The width is determined according to the Riparian Areas Regulation on the basis of a report provided by a qualified environmental professional in respect of a development proposal.

Top of Ravine Bank means the first significant break in a ravine slope where the break occurs such that the grade beyond the break is flatter than 3:1 for a minimum distance of 15 metres measured perpendicularly from the break and the break does not include a bench within the ravine that could be developed.

12.3 Nanaimo River Floodplain Development Permit Area

PURPOSE:

This Development Permit Area (DPA) has been designated pursuant to the following Sections of the [Local Government Act](#):

- i. 919.1(a): *protection of the natural environment, its ecosystems, and biological diversity*
- ii. 919.1(b): *protection of development from hazardous conditions*

AREA:

This DPA is applicable to the Nanaimo River Floodplain identified on Map No. 9.

JUSTIFICATION:

The Nanaimo River floodplain (including portions of Haslam Creek) is designated by the province as a ‘high risk’ floodplain area. The DPA designation is intended to protect private property from flooding and potential loss of land and property due to high water, erosion, and instability.

APPLICATION

A development permit is required for the following activities unless specifically exempt:

1. Alteration of land, placement of fill, disturbance of soils, including grubbing, scraping and removal of top soils;
2. Construction or erection of buildings and structures;
3. Creation of non-structural impervious or semi-pervious surfaces; and,
4. Subdivision of land.

EXEMPTIONS:

The following activities are exempt from requiring a development permit:

1. Emergency procedures to prevent, control, or reduce flooding, erosion or other immediate threats to life and property including:



- a. Emergency flood or erosion protection works;
 - b. Clearing of an obstruction from a bridge, culvert, or drainage flow;
 - c. The planting of native vegetation for the purpose of bank stabilization; or,
 - d. Repairs to bridges and safety fences.
2. Notwithstanding Policy 1 above, emergency actions for flood protection and clearing of obstructions by anyone other than the RDN or a provincial ministry must be reported to the RDN and applicable provincial ministry immediately to secure exemptions under this provision.
 3. With the exception of nesting trees protected under Section 34 of the [Wildlife Act](#), cutting of vegetation and trees, provided the cutting is not a precursor to development, the roots/stump are left in the ground, and the cutting does not result in land alteration.
 4. Construction, repair, and maintenance of works by the RDN or its authorized agents and contractors.
 5. Fence building, growing, rearing, producing, and harvesting of agricultural products in accordance with recognized standards of the [Farm Practices Protection Act](#) (Right to Farm) on lands upon which the Act applies.
 6. The construction of buildings and structures which are in accordance with the RDN Floodplain Management Bylaw No. 1469, 2006, as amended or replaced from time to time, provided there is no land alteration, placement of fill, or modification to land within the floodplain outside of the building footprint.
 7. A development permit is not required prior to the issuance of a building permit if a geotechnical report has been prepared to the satisfaction of the Regional District of Nanaimo that satisfies the guidelines of this development permit area, and no land alteration outside the building envelope or placement of fill is proposed.
 8. A second storey addition to an existing structure provided the building footprint remains the same.
 9. The construction of a fence.
 10. Development activities located outside of the floodplain and above the designated flood elevation as determined by a BCLS and/or other qualified professional.
 11. In the case of an application to subdivide, a development permit is not required where:
 - a. Minimum parcel areas are met exclusive of the hazard area shown on Map No. 9;
 - b. No development activities (such as grading, clearing, trenching, installation of pipes, etc.) relating to the creation of parcels or provision of services for those parcels will occur within the DPA.

GUIDELINES:

1. The RDN may consider variances to the land use and subdivision bylaw to minimize encroachment into the DPA.
2. An assessment of the natural hazard by a geotechnical engineer or other qualified professional shall be required to determine if the site is safe for the intended use and to provide recommendations to ensure that the proposed development is protected from the natural hazard and will not result in a detrimental impact on the environment or adjoining properties. The assessment should include proposals for vegetation protection, enhancement or retention, where applicable and must include a statement from the engineer or other qualified professional that says that in their opinion the property is safe for the intended use.



3. Where the placement of fill is proposed within a floodplain, the RDN shall require a report by a professional engineer that ensures that the placement of the proposed fill would not restrict the passage of flood waters, redirect flood flows, decrease natural flood storage, or result in higher flood flows or flood potential elsewhere in the floodplain.
4. The RDN may require a Section 219 covenant to register the qualified professional's report and to save the RDN harmless from all losses or damages to life or property as a result of the hazard.
5. The RDN may require an applicant to supply drainage, sediment and/or erosion plan complete with recommendations for implementation prepared by a professional engineer or a person with similar qualifications, to the satisfaction of the RDN.
6. The RDN may require the applicant to supply a re-vegetation plan to the satisfaction of the RDN.
7. Where the applicant's qualified professional recommends revegetation and/or enhancement works within the DPA, the RDN shall require the applicant to submit a landscaping and security deposit equal to the total estimated costs of all materials and labour as determined by a landscape architect or other qualified person.
8. Mitigation and restoration measures shall be required as recommended by a qualified professional as a condition of development approval.
9. All development proposals should be designed in substantial compliance with the guidelines contained in the Provincial Ministry of Environment document: "[Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia](#)" as amended or replaced from time to time.
10. Where there is no alternative to use flood prone lands for development, such development is to be located only where there is no risk to life and where measures can be taken to safeguard buildings from flood or erosion damage as determined by a qualified professional.
11. Wetlands and other natural water features should be maintained in their natural state to enhance natural flood storage and protect environmentally sensitive ecosystems.
12. Development or subdivision of land should be designed to:
 - a. Replicate the function of a naturally vegetated watershed;
 - b. Maintain the hydraulic regime of surface and groundwater and pre-development flow rates;
 - c. Not interfere with groundwater recharge; and,
 - d. Not introduce or remove materials where it would cause erosion of or the filling in of natural watercourses and/or wetlands.
13. Where development in the Hazard Lands DPA is deemed necessary, the development will:
 - a. Be designed to ensure that development can withstand the hazard and that the property is safe for the use intended;
 - b. Take a form that minimizes the area of encroachment into and impact on the Hazard Lands DPA;
 - c. Be located so as to cause the least impact on the environmental values of the Hazard Lands DPA;
 - d. Be conducted at a time of year and use construction methods that minimize the impact on the Hazard Lands DPA; and,



- e. Be constructed in a way which helps preserve, protect, restore, or enhance habitat, natural watercourses or other specified natural features of the environment.

12.4 Farm Land Protection Development Permit Area

PURPOSE:

This Development Permit Area (DPA) has been designated pursuant to Section 919.1 (c) of the [Local Government Act](#) - protection of farming.

AREA:

The Farm Land Protection DPA is designated on Map No. 10.

This DPA is applicable to all land within the plan area which:

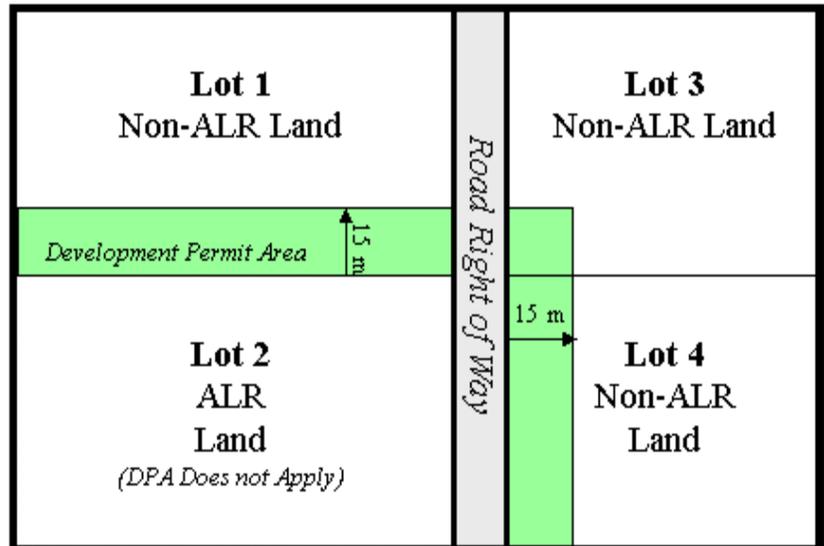


Diagram 1: Farm land Protection Development Permit Area

- i. is not located within the ALR; and,
- ii. is within 15 metres of land situated within the ALR as shown on the diagram to the right.

JUSTIFICATION:

Land located in the ALR requires protection against the impacts of non-farm use to protect agricultural viability. The development of non-farm uses on lands adjoining or reasonably adjacent to farm lands may compromise the ability to effectively use ALR lands for local food production and other agricultural uses. Inappropriately designed residential and non-farm developments adjacent to land within the ALR creates potential land use conflicts and incompatibilities. The intent of this DPA is to establish and/or protect a vegetated visual buffer between agricultural and non-agricultural uses to minimize potential land use conflicts and protect the plan areas ability to produce local food and agricultural products.

APPLICATION:

A development permit is required for the following activities unless specifically exempt:

1. Alteration of land, disturbance of soils, including grubbing, scraping and removal of top soils;
2. Construction or erection of buildings and structures;
3. Creation of non-structural impervious or semi-pervious surfaces; and,
4. Subdivision of land.



EXEMPTIONS:

The following are exempt from requiring a development permit:

1. Development activities on lands within the ALR;
2. Agricultural uses;
3. An application for the construction of a building or structure which is proposed to be located outside of the 15 metre DPA;
4. Construction of an access or driveway provided it is no more than 9.0 metres in width;
5. The construction of fencing in accordance with [*A Guide to Edge Planning Promoting Compatibility Along Urban-Agricultural Edges*](#) published in 2009 by the Ministry of Agriculture provided existing vegetation adjacent to the ALR boundary is maintained to the greatest extent possible;
6. Maintenance to existing buildings and structures;
7. Additions or alterations to existing buildings or structures provided the alterations or additions do not result in the buildings or structures being located further within the DPA than the existing buildings or structures;
8. The removal of invasive plants or noxious weeds on a small scale within the DPA including, but not limited to, Giant Hogweed, Scotch broom, Himalayan Blackberry, Morning Glory and Purple Loosestrife provided native species suitable to the local light, soil, and moisture conditions are replanted to maintain and enhance the existing vegetated buffer;
9. Subdivision where each proposed parcel within the DPA, have a minimum parcel depth of 50 metres or can provide adequate parcel depth to provide for a satisfactory building site area including accessory buildings and septic disposal system (if applicable) and provide for a vegetated buffer area in accordance with [*A Guide to Edge Planning Promoting Compatibility Along Urban-Agricultural Edges*](#) published in 2009 by the Ministry of Agriculture;
10. Reconstruction or redevelopment of an existing dwelling unit or other building or structure within the DPA provided the new building or structure is not located further within the DPA; and,
11. Development in accordance with landscaped buffer conditions previously approved by the Agricultural Land Commission.

GUIDELINES:

1. A vegetated buffer must be maintained and/or established on land within this DPA parallel to and/or along the ALR boundary. All buffer areas shall generally be designed and sized in accordance with Section 10 – Urban Side Buffer Design Criteria of [*A Guide to Edge Planning Promoting Compatibility Along Urban-Agricultural Edges*](#) published in 2009 by the Ministry of Agriculture.
2. Despite Guideline 1 above, a vegetated buffer of lesser width or type than what is identified in [*A Guide to Edge Planning Promoting Compatibility Along Urban-Agricultural Edges*](#) may be accepted in cases where it is not possible due to parcel size or configuration, or a natural or man-made constraint to provide the buffer recommended by the document above.



3. Buildings and structures, except for fencing, should generally be situated outside of the vegetated buffer area. Where fencing is constructed, it should be designed in accordance with Appendix C of [*A Guide to Edge Planning Promoting Compatibility Along Urban-Agricultural Edges*](#) published in 2009 by the Ministry of Agriculture.
4. Plant layout, spacing, and support shall generally be in accordance with [*A Guide to Edge Planning Promoting Compatibility Along Urban-Agricultural Edges*](#) published in 2009 by the Ministry of Agriculture.
5. A Section 219 covenant for the vegetation buffer area may be required which restricts the removal of vegetation and the construction of any buildings or structures other than fencing within the buffer area.
6. All planning, design, and construction of a landscaped buffer shall be to the standard of the BC Society of Landscape Architects/BC Nursery Trades Association (BCNTA) publication entitled BC Landscape Standards.
7. Subdivision design must minimize potential negative impacts that may occur between farm and non-farm land users. Public road endings or road frontage next to ALR should be avoided except as may be necessary for access by farm vehicles. Subdivision design and construction should minimize erosion and maintain ground water quality and quantity through adequate rainwater management.
8. The landscaped buffer should be installed prior to commencing construction or land alteration.
9. A buffer maintenance plan should be developed and signed off by a registered landscape architect or professional biologist.

12.5 South Wellington Industrial – Commercial Development Permit Area

PURPOSE:

This Development Permit Area (DPA) has been designated pursuant to the following Sections of the [*Local Government Act*](#):

- i. *919.1(a): protection of the natural environment, its ecosystems, and biological diversity*
- ii. *919.1(f): establishment of objectives for the form and character of commercial, industrial, or*
- iii. *919.1(h): establishment of objectives to promote energy conservation*
- iv. *919.1(i): establishment of objectives to promote water conservation*

AREA:

This DPA primarily includes those commercial and industrial activities designated South Wellington Light Industrial Commercial Area concentrated along the Trans Canada Highway bordering the south boundary of the City of Nanaimo as shown on Map No. 10.

APPLICATION:

A development permit is required for the following activities unless specifically exempt:

1. Alteration of land, disturbance of soils, including grubbing, scraping and removal of top soils;
2. Construction, alteration, or erection of buildings and structures; and,



3. Creation of non-structural impervious or semi-pervious surfaces;

JUSTIFICATION:

This DPA includes land with a range of commercial and industrial uses, most of which are currently servicing the region. There are no community water or community sewer services available to lands within this DPA. Residents are concerned with the protection of groundwater resources, their primary source of domestic drinking water, due to the lack of community services combined with the fact that there are heavy industrial uses on relatively small lots in close proximity to rural residential uses. Therefore, it is important to ensure that both existing and future commercial and industrial uses do not pose a threat to ground water quantity or quality.

The visibility of this area from the Trans Canada Highway, the gateway to the City of Nanaimo and surrounding residential neighbourhoods, justifies the need to ensure that the form and character of development compliments rather than detracts from the aesthetic appeal of the area, reduces visual distraction, and ensures that development is compatible with surrounding land uses.

EXEMPTIONS:

1. A development permit shall not be required for the construction, renovation, or addition to single or duplex dwelling units or accessory residential buildings.
2. A development permit shall not be required for the subdivision of land.
3. A development permit shall not be required for alterations or additions to a building which do not require a building permit. This exemption excludes new signage which shall require a development permit.

GUIDELINES:

Groundwater Protection

1. The use or disposal of substances or contaminants that may be harmful to area aquifers shall be discouraged and steps shall be taken to ensure the proper disposal of such contaminants.
2. Where the possibility of impacts exist, the RDN shall require the applicant to supply a report from a registered professional which includes an assessment of the characteristics of the aquifer and its ability to accommodate the additional groundwater demand proposed by the development which must include:
 - a. The anticipated water demand including potential impacts on adjacent properties;
 - b. A statement backed by a professional assessment that the proposed development will not have a negative impact on the aquifer; and,
 - c. Recommendations on what measures are required to ensure the aquifer is protected.

The RDN shall require the applicant to implement the report's recommendations in the proposed development and the recommendations shall become conditions of the development permit.

3. The RDN may require an applicant to submit a rain water management plan prepared by a qualified professional engineer which must ensure that any run off, rain water, or other liquid from any of the proposed land uses, buildings and impervious surfaces does not negatively impact groundwater quality. The plan must include recommendations on how



to minimize the risk of deleterious substances entering the groundwater. The RDN shall require the applicant to implement the report's recommendations in the proposed development and the recommendations shall become conditions of the development permit.

4. The RDN shall require that drainage from all impervious surfaces and areas where vehicles and machinery are stored, cleaned, dismantled, operated, and maintained be directed through an appropriately sized and engineered sedimentation, oil, water and grease separator and/or other engineered containment system approved by the RDN. The engineer must provide an appropriate maintenance schedule.
5. Where an engineered sedimentation, oil, water, and grease separator and/or other engineered containment system is required, the RDN shall require the applicant to enter into a Section 219 covenant registering the maintenance schedule and a commitment to maintain the sedimentation, oil, water, and grease separator or other containment system as per the engineer's recommendations.
6. Proposed developments that may reasonably pose a detrimental impact on either the quality or quantity of groundwater shall not be supported.
7. All development which proposes a site, facility, or premise where municipal solid waste or recyclable materials will be managed must be conducted in accordance with "[*RDN Waste Stream Management Licensing Bylaw No. 1386, 2004*](#)" as amended or replaced from time to time.

General Design:

8. The RDN shall require building elevations prepared by an architect or other qualified designer.
9. The use of non-combustible building materials is encouraged and where feasible locally produced natural building materials should be incorporated in to the design without compromising the building or structure's fire resistance.
10. There shall be no net increase in peak rain water run-off from the land to adjoining lands.
11. Development of land should be designed to:
 - a. Replicate the function of a naturally vegetated watershed;
 - b. Maintain the hydraulic regime of surface and groundwater and pre-development flow rates;
 - c. Not interfere with groundwater recharge; and,
 - d. Not introduce or remove materials where it would cause erosion of or the filling in of natural watercourses and/or wetlands.
12. Public open space and pedestrian walkway linkages to adjacent neighbourhoods which complement existing parks and recreation opportunities and reduce automobile dependence shall be encouraged.
13. The use of energy efficient building materials, techniques, and practices that reduce the amount of energy consumption shall be encouraged.
14. The use of rainwater catchment and reuse as well as other water conservation devices and strategies shall be encouraged.
15. Buildings and structures, located on parcels adjacent to the Tran Canada Highway, South Wellington Road, or Schoolhouse Road, shall generally be sited and shaped in a visually unobtrusive manner.



Parking and Loading:

16. Parking and loading areas shall generally be located to the rear of buildings, should be screened from view from the Trans Canada Highway and adjacent residential uses and be located outside of the minimum required zoning setback, unless a variance is being considered. Screening should consist of landscaping, fencing, or a combination of landscaping and fencing. Parking areas should include landscaped areas, defined by concrete curbs, to provide visual breaks between clusters of approximately ten stalls.
17. Vehicular and truck movement patterns must be illustrated on the site plan submitted by the applicant to ensure adequate circulation. A professional engineer may be required to ensure that adequate lane widths and turning radiuses are provided for all forms of vehicles intended to use the property.
18. Provision should be made for public transit, emergency vehicles, delivery and service vehicles.
19. Safe and effectively designed and located internal roadways, entrance points, parking areas, pedestrian paths, and open spaces shall be provided.

Landscaping and Screening:

20. The applicant may be required to submit a landscaping plan prepared by a landscape architect or equivalent designer which meets the current edition of the British Columbia Landscape Standard and satisfies the following objectives:
 - a. To use a variety of drought tolerant deciduous and evergreen native plant species that are best suited to the site specific growing conditions;
 - b. To minimize water consumption through means such as micro-irrigation and xeriscaping;
 - c. To provide visual separation from the Tran Canada Highway and compatibility with surrounding single residential uses;
 - d. To improve the aesthetic appeal of the development;
 - e. To assist in the safe movement of pedestrians throughout the site;
 - f. To reduce the amount of impervious surfaces on the site;
 - g. To complement the development and surrounding uses;
 - h. To establish or enhance habitat values on the development site where appropriate; and/or,
 - i. To shade the development from the summer sun.
21. The landscaping plan must be drawn to scale and show the type, size, and location of proposed landscaping and shall be submitted with the development permit application.
22. At minimum, and in addition to the requirements specified in Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987 as amended or replaced from time to time, the landscape design should provide:
 - a. A continuous landscaped screen area of at least 2.0 metres in width along the inside of all property lines, excluding access points and adjacent to all roads and highways;
 - b. Where landscaping is for the purpose of visual separation, a minimum height of 5.0 metres once mature; and,
 - c. A landscape buffer of at least 5.0 metres in width to create spatial separation between non-residential and residential zoned properties and should contribute towards the objectives identified in Policy 20 above.
23. Notwithstanding Policy 20 above, the landscaped buffer width and enhancement works adjacent to any watercourse shall be determined by a Qualified Environmental



professional and shall work towards Policy 20(h) above– to establish or enhance habitat values on the development site.

24. Development should be sited in a manner that minimizes the disturbance of existing native vegetation.
25. Vegetation species used in replanting, restoration, and enhancement shall be selected to suit the local soils; light conditions, and groundwater regime of the site and should be native to the area, and where applicable, selected for erosion control and/or fish and wildlife habitat values.
26. All landscaping shall require the following minimum depth of topsoil or amended organic soils on all landscaped areas of a property:
 - a. Shrubs – 45 cm;
 - b. Groundcover and grass – 30 cm; and,
 - c. Trees – 30 cm around and below the root ball.
27. Where irrigation is required to maintain proposed landscaping, it should be designed by an Irrigation Industry Association of British Columbia certified irrigation designer and be installed by an irrigation industry association of British Columbia irrigation contractor or other equivalent to the satisfaction of the RDN.
28. The RDN shall require the applicant to submit a landscaping and security deposit equal to the total estimated costs of all materials and labour as determined by a landscape architect or other similarly qualified person to the satisfaction of the RDN to be released upon final inspection by a landscape architect or other similarly qualified person to the satisfaction of the RDN.
29. Garbage and recycling containers shall be screened with landscaping and solid gated fencing to a minimum height of 2.0 metres. Similarly, utilities, service kiosks, meters, elevator housing, exhaust elements, satellite dishes, etc. shall be screened with fencing, landscaping, or a combination of the two.
30. Chain link fencing shall be used only when screened by landscaping. Decorative fences are encouraged which complement the materials used for the principle building.

Site Illumination and Signage:

31. Lighting should be designated for security and safety. However, there should not be glare on neighbouring properties, adjacent roads or light directed towards the sky.
32. All new, replacement, and upgraded exterior lighting in existing and proposed developments shall be Full Cut-off Flat Lens (FCO/FL) luminaries to light roads, parking, loading, and pedestrian areas. Exterior building lighting will also be required to have FCO lighting fixtures.
33. The size, location, and design of freestanding signage shall be architecturally integrated with the overall design of the buildings and landscaping. The design of fascia signs containing individual business signage shall be integrated into the design of the building.
34. Signage should be visually unobtrusive; particular emphasis should be given to signage which is aesthetically pleasing and requires a minimal amount of lighting or boldness to be effective. No video, reader board, neon, or LED signs will be supported.
35. Where there is a conflict between these DPA guidelines and the [RDN Sign Bylaw No. 993, 1995](#), these guidelines shall prevail. However, a variance to the sign bylaw may be required.



Pedestrian and Cyclist Considerations:

- 36. Pedestrian sidewalks or defined pathways connecting building entrances to and through parking areas and sidewalks or road right of ways of the adjacent streets should be provided.
- 37. All internal pedestrian walkways shall be distinguished from driving surfaces through the use of a clearly delineated pathway or durable low maintenance surface material such as pavers, bricks, or concrete to enhance pedestrian safety and comfort as well as the attractiveness of the walkways.
- 38. Bicycle parking facilities should be considered at grade near primary building entrances.

12.6 Cedar Main Street Development Permit Area

This DPA includes the properties identified within the Cedar Main Street Development Permit Area on Map No. 10. Refer to the Cedar Main Street Development Permit Area Guidelines contained in Section 6 of the Cedar Main Street Village Plan attached as Schedule B.

12.7 Cassidy Development Permit Area

PURPOSE:

This Development Permit Area (DPA) has been designated pursuant to the following Sections of the [Local Government Act](#):

- i. *919.1(a): protection of the natural environment, its ecosystems, and biological diversity*
- ii. *919.1(f): establishment of objectives for the form and character of commercial, industrial, or multi-family residential development*
- iii. *919.1(e): establishment of objectives for the form and character of intensive residential development*
- iv. *919.1(h): establishment of objectives to promote energy conservation*
- v. *919.1(i): establishment of objectives to promote water conservation*
- vi. *919.1(j): establishment of objectives to promote the reduction of GHG emissions*

AREA:

This DPA includes the properties within the Cassidy Rural Village Land Use designation as shown as Map No. 10.

APPLICATION:

A development permit is required for the following activities unless specifically exempt:

- 1. Alteration of land and disturbance of soils;
- 2. Construction, alteration, or erection of buildings and structures;
- 3. Subdivision as defined in the [Land Title Act](#) or the [Strata Property Act](#); and,
- 4. Creation of non-structural impervious or semi-pervious surfaces;

JUSTIFICATION:



The Cassidy Rural Village DPA has been designated by this plan in recognition of the community's desire to create a more compact complete community in Cassidy where residents can go to access local services, employment, and recreational opportunities.

A recent groundwater vulnerability study conducted by GW Solutions Inc. in partnership with Vancouver Island University indicates that Cassidy is underlain by a highly vulnerable aquifer. The report indicates that the upper Cassidy aquifer is highly vulnerable to surface contamination while the lower aquifer was found to be protected by a thick layer of blue clay. There is concern in the community based on the fact that the majority of residents draw their drinking water from the upper aquifer and there are no community water or sewer services.

Cassidy Residents also have concerns over the preservation of the community's rural characteristics and aesthetic values which this DPA is intended to address.

This DPA will ensure that development is conducted in a way which respects the environment and helps to maintain the rural characteristics of the community, encourages pedestrian and cyclist use, promotes energy and water conservation, and reduces GHG emissions.

EXEMPTIONS:

1. A development permit shall not be required for the construction, renovation, or addition to one single or duplex dwelling unit or accessory residential building on one single lot.
2. The replacement or repair of an existing sign provided that the sign is not enlarged or moved and is replaced with the same type of sign (i.e. fascia, freestanding, canopy, etc.).
3. A development permit shall not be required for alterations or additions to a building which do not require a building permit. This exemption excludes new signage which shall require a development permit.

GUIDELINES

Groundwater Protection

1. The use or disposal of substances or contaminants that may be harmful to area aquifers shall be discouraged and wherever practical, steps shall be taken to ensure the proper disposal of such contaminants.
2. Where the possibility of impacts exist, the RDN shall require the applicant to supply a report from a registered professional hydrogeologist or other qualified professional which must provide the following:
 - a. An assessment of the characteristics of the aquifer and its ability to accommodate the additional groundwater demand proposed by the development including potential impacts on adjacent properties;
 - b. A statement backed by a professional assessment that the proposed development will not have a negative impact on the quantity or quality of water in the aquifer(s); and,
 - c. Recommendations on what measures are required to ensure the aquifer(s) is protected.
3. The RDN may require an applicant to submit a rain water management plan prepared by a professional engineer which must ensure that any run off, rain water, or other liquid from any of the proposed land uses, buildings, and impervious surfaces does not negatively impact groundwater quality. The plan must include recommendations on how to minimize the risk of deleterious substances entering the groundwater. The RDN should



- require the applicant to implement the report's recommendations in the proposed development.
4. The RDN shall require that drainage from all impervious surfaces and areas where vehicles are parked be directed through an appropriately sized and engineered sedimentation, oil, water, and grease separator or other engineered solution. The engineer must provide an appropriate maintenance schedule.
 5. The RDN may require the applicant to enter into a Section 219 covenant registering on title the maintenance schedule and a commitment to maintain the sedimentation, oil, water, and grease separator as per the engineer's recommendations.
 6. The use of permeable paving and other methods to reduce rain water runoff shall be encouraged.
 7. Developments that are found to pose detrimental impacts on either the quality or quantity of groundwater shall not be supported.
 8. There shall be no net increase in peak rain water run-off from the land to adjoining lands.
 9. Development of land should be designed to:
 - a. Replicate the function of a naturally vegetated watershed;
 - b. Maintain the hydraulic regime of surface and groundwater and pre-development flow rates;
 - c. Not interfere with groundwater recharge; and,
 - d. Not introduce or remove materials where it would cause erosion of or the filling in of natural watercourses and/or wetlands.

General Design

10. For commercial, multi residential, The RDN shall require an applicant to submit building elevations prepared by an architect or other qualified designer.
11. Commercial and mixed use buildings should be designed to reflect the fact that they are located within a pedestrian environment and should be of human scale at street level and should aim to provide functional civic space.
12. The siting of buildings shall be integrated with other existing uses within the Cassidy Rural Village land use designation to promote safe pedestrian linkages and encourage consolidated vehicle access.
13. The use high quality building materials such as Hardiplank, stone, wood, brick, and other exterior natural building materials shall be encouraged.
14. Development should generally not be visible from the Trans Canada Highway with the exception of those properties north of Timberlands Road which are designated Commercial by this plan.
15. The architectural design of buildings and structures should be varied, aesthetically pleasing and visually ing.
16. Buildings clad entirely in vinyl siding will be strongly discouraged. Where vinyl is used, it should be used sparingly and in combination with other materials.



17. The use of energy efficient building materials, techniques, technologies, and practices that produce local energy and/or reduce the amount of energy consumption shall be strongly encouraged which include, but are not limited to:

- a. passive solar gain;
- b. district heat and hot water;
- c. solar voltaic cells;
- d. solar hot water;
- e. micro wind; and,
- f. geothermal.

Parking and Loading

18. Parking areas should be located to rear or side of buildings and should include landscaped boulevards and other aesthetically pleasing landscaping features.

19. In cases where parking is not practical to the rear or side of buildings, it may be supported in front of a building provided all parking areas are adequately screened by solid fencing, landscaping, or a combination of the two.

20. Loading areas should be located to the side or rear of buildings and should not be visible from the adjacent road.

21. Vehicular and truck movement patterns must be illustrated on the site plan submitted by the applicant to ensure adequate circulation. A professional engineer may be required to ensure that adequate lane widths and turning radiuses are provided for all forms of vehicles intended to use the property.

22. Provision should be made for public transit, emergency vehicles, delivery and service vehicles.

23. Safe, efficient, and effectively designed and located roadways, entrance points, parking areas, pedestrian paths and open spaces shall be provided.

Landscaping and Screening

24. The RDN may require the applicant to submit a landscaping plan prepared by a landscape architect or qualified designer which meets the British Columbia Landscape Standard and satisfies the following objectives:

- a. To use a variety of drought tolerant deciduous and evergreen native plant species that are best suited to the site specific growing conditions;
- b. To minimize water consumption through means such as micro-irrigation and xeriscaping;
- c. To improve the aesthetic appeal of the development;
- d. To screen the development from the Trans Canada Highway and adjacent established neighbourhoods;
- e. To maintain rural character;
- f. To shade the proposed development from the summer sun;
- g. To assist in the safe movement of pedestrians throughout the site;
- h. To reduce the amount of impervious surfaces on the site;
- i. To complement the development and surrounding uses; and,
- j. To establish or enhance habitat values on the development site where appropriate.

25. The landscaping plan must be drawn to scale and show the type, size, and location of proposed landscaping and shall be submitted with the development permit application.

26. Where development is proposed adjacent to Timberlands Road, Hallberg Road, or the Trans Canada Highway, the landscape design should provide a landscaped buffer



- consisting of native vegetation either maintained, enhanced, or established of sufficient height, width, and density to provide spatial separation and screen the proposed development from view from Timberlands Road, Hallberg Road, and the Trans Canada Highway with the exception of strategically placed and consolidated signage and access and egress points.
27. All landscaping shall require the following minimum depth of topsoil or amended organic soils on all landscaped areas of a property:
 - a. Shrubs – 45 cm;
 - b. Groundcover and grass – 30 cm; and,
 - c. Trees – 30 cm around and below the root ball.
 28. Where irrigation is required to maintain proposed landscaping, it should be designed by an Irrigation Industry Association of British Columbia certified irrigation designer and be installed by an Irrigation Industry Association of British Columbia irrigation contractor or other equivalent to the satisfaction of the RDN.
 29. The RDN shall require the applicant to submit a landscaping security deposit equal to the total estimated costs of all materials and labour as determined by a landscape architect or other similarly qualified person to the satisfaction of the RDN to be released upon final inspection by a landscape architect or other similarly qualified person to the satisfaction of the RDN.
 30. Garbage and recycling containers shall be screened with landscaping and solid gated fencing to a minimum height of 2.0 metres. Similarly, utilities, service kiosks, meters, elevator housing, exhaust elements, satellite dishes, etc. shall be screened with landscaping, fencing, or a combination of the two.
 31. Decorative fences are encouraged which complement the materials used for the principle building.

Site Illumination and Signage

32. Lighting should be designated for security and safety. However, there should not be glare on neighbouring properties, adjacent roads, or the sky.
33. All new, replacement and upgraded exterior lighting in existing and proposed developments shall be Full Cut-off Flat Lens (FCO/FL) luminaries to light roads, parking, loading, and pedestrian areas. Exterior building lighting will also be required to have FCO lighting fixtures.
34. The size, location, and design of freestanding signage shall be architecturally integrated with the overall design of the buildings and landscaping. The design of fascia signs containing individual business signage shall be integrated into the design of the building. No video, neon, reader board, or LED signs will be supported.
35. The installation of fascia or projecting signs that are handcrafted, hand painted, and individually designed are strongly encouraged.
36. Signage should be visually unobtrusive and particular emphasis should be given to signage which is aesthetically pleasing and requires a minimal amount of lighting or boldness to be effective.
37. If there is a conflict between these DPA guidelines and the [RDN Sign Bylaw No. 993, 1995](#) as amended or replaced from time to time, these guidelines shall prevail. However, a variance to the sign bylaw may be required.



Pedestrian and Cyclist Considerations

38. Pedestrian sidewalks or defined pathways to encourage pedestrian movement throughout the site should be provided.
39. All internal pedestrian walkways shall be distinguished from driving surfaces through the use of a clearly delineated pathway or durable low maintenance surface material such as pavers, bricks, or concrete to enhance pedestrian safety and comfort as well as the attractiveness of the walkways.
40. Bicycle parking facilities should be provided at grade near primary building entrances.

12.8 Cedar Development Permit Area

PURPOSE:

This Development Permit Area (DPA) has been designated pursuant to the following Sections of the [Local Government Act](#):

- i. 919.1(a): protection of the natural environment, its ecosystems, and biological diversity*
- ii. 919.1(f): establishment of objectives for the form and character of commercial, industrial, or multi-family residential development*
- iii. 919.1(e): establishment of objectives for the form and character of intensive residential development*
- iv. 919.1(h): establishment of objectives to promote energy conservation*
- v. 919.1(i): establishment of objectives to promote water conservation*
- vi. 919.1(j): establishment of objectives to promote the reduction of GHG emissions*

AREA:

This DPA includes a small number of multi-residential, intensive residential, commercial, and industrial zoned properties generally located along Cedar Road and throughout the Cedar GCB area as shown as Map No. 10.

APPLICATION:

A development permit is required for the following activities unless specifically exempt:

1. Alteration of land and disturbance of soils;
2. Construction, alteration, or erection of buildings and structures; and,
3. Creation of non-structural impervious or semi-pervious surfaces;

JUSTIFICATION:

This DPA has been designated in recognition of the properties existing commercial and industrial zoning to ensure that future development of these sites is compatible with surrounding residential uses, has minimal environmental impacts, promotes energy and water conservation, and does not pose a threat to groundwater resources.



EXEMPTIONS:

1. A development permit shall not be required for the construction, renovation, or addition to one single or duplex dwelling unit or accessory residential building on one single lot.
2. The replacement or repair of an existing signs provided that the sign is not enlarged or moved and is replaced with the same type of sign (i.e. fascia, freestanding, canopy, etc.).
3. A development permit shall not be required for the subdivision of land.
4. A development permit shall not be required for alterations or additions to a building which do not require a building permit. This exemption excludes new signage which shall require a development permit.

GUIDELINES:

Groundwater Protection

1. The use or disposal of substances or contaminants that may be harmful to area aquifers shall be discouraged and wherever practical, steps shall be taken to ensure the proper disposal of such contaminants.
2. The RDN may require an applicant to submit a rain water management plan prepared by a professional engineer which must ensure that any run off, rain water, or other liquid from any of the proposed land uses, buildings and impervious surfaces does not negatively impact groundwater quality. The plan must include recommendations on how to minimize the risk of deleterious substances entering the groundwater. The RDN should require the applicant to implement the report's recommendations in the proposed development.
3. The RDN shall require that drainage from all impervious surfaces and areas where vehicles and machinery are stored, cleaned, operated, and maintained be directed through an appropriately sized and engineered sedimentation, oil, water and grease separator or other engineered solution to the satisfaction of the RDN. The engineer must provide an appropriate maintenance schedule.
4. The RDN may require the applicant to enter into a Section 219 covenant registering on title the maintenance schedule and a commitment to maintain the sedimentation, oil, water and grease separator as per the engineer's recommendations.
5. Developments that are found to pose detrimental impacts on either the quality or quantity of groundwater shall not be supported.

General Design:

6. The RDN shall require building elevations prepared by an architect or other qualified designer.
7. Commercial development should be ground-oriented and in scale with the surrounding uses.
8. The use of non-combustible building materials is encouraged and where feasible, locally produced natural building materials should be incorporated in to the design without compromising the building or structure's fire resistance.
9. There shall be no net increase in peak rain water run-off from the land to adjoining lands.
10. Development of land should be designed to:
 - a. Replicate the function of a naturally vegetated watershed;



- b. Maintain the hydraulic regime of surface and groundwater and pre-development flow rates;
 - c. Not interfere with groundwater recharge; and,
 - d. Not introduce or remove materials where it would cause erosion of or the filling in of natural watercourses and/or wetlands.
11. Public open space and pedestrian walkway linkages to adjacent neighbourhoods, which complement existing parks and recreation opportunities and reduce automobile dependence, shall be encouraged.
12. The use of energy efficient building materials, techniques, and practices that reduce energy consumption shall be encouraged.

Parking and Loading:

13. Parking and loading areas should generally be located to the rear of buildings, should be screened from view from the adjacent road, and be located outside of the minimum required zoning setback, unless a variance is being considered. The screening should consist of landscaping, fencing, or a combination of landscaping and fencing.
14. Vehicular and truck movement patterns must be illustrated on the site plan submitted by the applicant to ensure adequate circulation. A professional engineer may be required to ensure that adequate lane widths and turning radiuses are provided for all forms of vehicles intended to use the property.
15. Provision should be made for public transit, emergency vehicles, delivery and service vehicles.
16. Safe and effectively designed and located internal roadways, entrance points, parking areas, pedestrian paths and open spaces shall be provided.

Landscaping and Screening:

17. The RDN may require the applicant to submit a landscaping plan prepared by a landscape architect or equivalent designer which meets the British Columbia Landscape Standard and satisfies the following objectives:
- a. To use a variety of drought tolerant deciduous and evergreen native plant species that are best suited to the site specific growing conditions;
 - b. To minimize water consumption through means such as micro-irrigation and xeriscaping;
 - c. To promote compatibility with surrounding residential uses;
 - d. To improve the aesthetic appeal of the development;
 - e. To assist in the safe movement of pedestrians throughout the site;
 - f. To reduce the amount of impervious surfaces on the site;
 - g. To shade the proposed development from the summer sun;
 - h. To complement the development and surrounding uses; and/or,
 - i. To establish or enhance habitat values on the development site where appropriate.
18. The landscaping plan must be drawn to scale and show the type, size, and location of proposed landscaping and shall be submitted with the development permit application.
19. To provide separation between residential and non-residential uses, a continuous landscaped buffer area of at least 2.0 metres in width along the inside of all property



lines, excluding access points, adjacent to all residential zoned property should be provided.

20. Landscaping should be provided adjacent to all roadways to improve aesthetic appeal, minimize impervious surfaces, and provide a visual screen for all outdoor storage, refuse, parking, loading, and unloading facilities and must also work towards the objectives identified in Policy 17 above.
21. Garbage and recycling containers shall be screened with landscaping and/or solid gated fencing to a minimum height of 2.0 metres. Similarly, utilities, service kiosks, meters, elevator housing, exhaust elements, satellite dishes, etc. shall be screened with fencing, landscaping, or a combination of the two.
22. Buildings and structures should be sited in a manner that minimizes the disturbance of existing native vegetation.
23. Vegetation species used in replanting, restoration, and enhancement shall be selected to suit the local soils; light conditions, and groundwater regime of the site and should be native to the area, and where applicable, selected for erosion control and/or fish and wildlife habitat values.
24. All landscaping shall require the following minimum depth of topsoil or amended organic soils on all landscaped areas of a property:
 - a. Shrubs – 45 cm;
 - b. Groundcover and grass – 30 cm; and,
 - c. Trees – 30 cm around and below the root ball.
25. Where irrigation is required to maintain proposed landscaping, it should be designed by an Irrigation Industry Association of British Columbia certified irrigation designer and be installed by an Irrigation Industry Association of British Columbia irrigation contractor or other equivalent to the satisfaction of the RDN.
26. The RDN shall require the applicant to submit a landscaping and security deposit equal to the total estimated costs of all materials and labour, as determined by a landscape architect or other similarly qualified person to the satisfaction of the RDN, to be released upon final inspection by a landscape architect or other similarly qualified person to the satisfaction of the RDN.
27. Chain link fencing shall be used only when screened by landscaping. Decorative fences are encouraged which complement the materials used for the principle building.

Site Illumination and Signage:

28. Lighting should be designated for security and safety. However, there should not be glare on neighbouring properties, adjacent roads or light directed towards the sky.
29. All new, replacement, and upgraded exterior lighting in existing and proposed developments shall be Full Cut-off Flat Lens (FCO/FL) luminaries to light roads, parking, loading, and pedestrian areas. Exterior building lighting will also be required to have FCO lighting fixtures.
30. The size, location, and design of freestanding signage shall be architecturally integrated with the overall design of the buildings and landscaping. The design of fascia signs containing individual business signage shall be integrated into the design of the building.



31. Signage should be visually unobtrusive and particular emphasis should be given to signage which is aesthetically pleasing and requires a minimal amount of lighting or boldness to be effective.
32. If there is a conflict between these DPA guidelines and the [RDN Sign Bylaw No. 993, 1995](#) as amended or replaced from time to time, these guidelines shall prevail. However, a variance to the sign bylaw may be required.

Pedestrian and Cyclist Considerations:

33. Pedestrian sidewalks or defined pathways connecting building entrances to and through parking areas and sidewalks or road right of ways of the adjacent streets should be provided.
34. All internal pedestrian walkways shall be distinguished from driving surfaces through the use of a clearly delineated pathway or durable, low maintenance surface material such as pavers, bricks, or concrete to enhance pedestrian safety and comfort, as well as the attractiveness of the walkways.
35. Bicycle parking facilities should be considered at grade near primary building entrances

12.9 Yellow Point Aquifer Protection Development Permit Area ¹

PURPOSE:

This Development Permit Area (DPA) has been designated pursuant to the following sections of the *Local Government Act*:

- i. *919.1(a): protection of the natural environment, its ecosystems and biological diversity.*
- ii. *919.1(i): establishment of objectives to promote water conservation.*

AREA:

This DPA is intended to ensure that new subdivision does not have a negative impact on groundwater levels both on the subject property and on adjacent properties on lands located above the Yellow Point Aquifer as shown on Map No. 9 of this plan. It is also intended to require water conservation measures to reduce water use and protect drinking water supplies for existing residents.

JUSTIFICATION:

The Yellow Point aquifer is a fractured sandstone bedrock aquifer east of the Island Highway. It stretches from Duke Point in the north down to Ladysmith Harbour in the south. The Yellow Point aquifer is composed of compacted mud and sandstone layers known as the 'Nanaimo Group'. Unlike the highly productive Cassidy aquifer nearby, the Yellow Point aquifer is a very 'low producing aquifer' with 'low permeability' and 'low porosity'. That means that this type of rock has a limited ability to store and produce water and that when water is removed from this aquifer it can take a long time to recharge, or 're-fill'. This type of aquifer is not well suited to large extractions or urban development. Several sources, including a 2010 Ministry of Environment study, the 2009 RDN Electoral Area 'A' Groundwater Assessment and Vulnerability report, and a recent Drinking Water and Watershed Protection Program public consultation process have indicated that some areas

¹ Bylaw No. 1620.02, adopted June 24, 2014



that draw from this aquifer are experiencing water supply issues. There are indications that water is being extracted faster than the aquifer's recharge capacity. If this continues, a point may be reached (or may have already been reached) where further extraction and further development is no longer sustainable.

RAINWATER HARVESTING BEST PRACTICES GUIDEBOOK

It is strongly recommended that applicants refer to the Regional District of Nanaimo Rainwater Harvesting Best Practices Guidebook for guidance on the design and installation of a rainwater harvesting system within the Yellow Point Aquifer Protection Development Permit Area.

APPLICABILITY:

A development permit is required for the following activities unless specifically exempt:

1. Subdivision of land as defined in the [Land Title Act](#) or the [Strata Property Act](#); and,
2. Construction, alteration, or erection of a dwelling unit(s).

EXEMPTIONS:

The following activities are exempt from requiring a development permit:

1. Subdivision of land which results in three or fewer lots and the parcel proposed to be subdivided has not been subdivided within the past five years.
2. Land alteration.
3. Construction of a dwelling unit or subdivision of land where each dwelling unit has an approved connection to a community water system.
4. Construction and/or alteration of accessory buildings, agricultural buildings, structures and fencing.
5. Construction or renovation to commercial, institutional, recreational, and industrial buildings.
6. All additions or alterations to an existing dwelling unit.
7. The replacement or reconstruction of an existing dwelling unit with another dwelling unit within the same basic footprint.
8. Construction of a secondary suite.
9. Construction of a dwelling unit where the applicant demonstrates that there is:
 - a. A well that existed prior to July 26, 2011 which produces a minimum of 3.5 m³ per day year round that will be connected to the proposed dwelling unit;
 - b. an existing (prior to July 26, 2011) water license with capacity to satisfy at least 30% of total household water use for a 90 day period; or
 - c. a valid approved source of water which is not groundwater that is currently in use and has adequate capacity to satisfy at least 30% of total household water use for a 90 day period.



10. Construction of a dwelling unit where the dwelling unit:

- a. Is not to be connected to a groundwater source; and,
- b. Is entirely serviced with water through stored and treated rain water which meets or exceeds Canadian Drinking Water Standards.

Note: for exemption 10 above, prior to the issuance of a building permit, a report from an Engineer or other qualified professional may be required to satisfy the RDN that the proposed rainwater system has adequate capacity to meet the year round water demands of the dwelling unit being proposed and that the water will be stored and treated to Canadian drinking water standards.

GUIDELINES:

A. For subdivision, the following guidelines apply:

1. Where property is proposed to be subdivided and more than three parcels, including the remainder (if applicable) are proposed, the RDN shall require the applicant to supply a report prepared by a professional Hydrogeologist or engineer registered in the province of British Columbia and experienced in hydrogeological investigations which includes the following:
 - i. An assessment of the characteristics and behavior of the aquifer at its most stressed time of the year which includes two cross sections which define the groundwater body and determine where the water comes from. The assessment must also examine the location of proposed wells and their interaction with the Yellow Point Aquifer;
 - ii. The results and professional interpretation of a minimum 72 hour pumping test to occur in at least one location within the lands being subdivided or a greater number as recommended by a professional hydrogeologist or engineer based on the scale of development and aquifer characteristics;
 - iii. An assessment of seasonal water table fluctuations and the ability of the Yellow Point aquifer to provide a sustainable water supply which satisfies the additional groundwater demand without impacting adjacent rural properties or restricting or limiting the availability of water supply for agricultural irrigation;
 - iv. An assessment of the potential for salt water intrusion as a result of the proposed water extraction which is required to service the proposed development; and,
 - v. Identification of key recharge points located on the subject property and recommended measures to protect them.
 - vi. Recommendations to address the impacts on groundwater quality and quantity identified through the assessments outlined in sections 1.i – v.

The RDN shall require the applicant to implement the report's recommendations in the proposed development and the recommendations shall become conditions of the development permit.

2. The RDN may require, at the applicant's expense, and to the satisfaction of the RDN, a Section 219 Covenant registering the Hydrogeologist's and/or engineer's report on the title of the subject property.
3. The RDN may require the applicant to install a groundwater monitoring device in at least one well within the proposed subdivision. The RDN may require an agreement



be registered on title to allow the RDN to access the property to collect data from the device

4. Where rainwater management is recommended by the report identified in Guideline 1 above, rainwater must be retained on-site and managed using methods such as vegetated swales, rain gardens, or other methods which allow rainwater to return to the ground.

B. For the construction of a dwelling unit the following guidelines apply:

Siting of Buildings and Structures

1. Dwelling units must be sited to allow for the optimal placement of a gravity fed rainwater collection tank which collects rainwater from the roof leaders of the dwelling unit which captures the majority of the rainwater flows.
2. Water storage tanks should be sited in the least obtrusive way possible from the neighboring properties.
3. A site plan should be provided illustrating the location of the proposed water storage tank(s) in relation to the proposed dwelling unit and adjacent property lines. The site plan should illustrate the rainwater harvesting system components and may be prepared by the applicant provided it is drawn to scale and is legible.

Form and exterior design

4. Dwelling units should be designed to optimize opportunities for rainwater capture for the intended use and corresponding cistern volume.
5. Roof surface materials should be selected to accommodate the type of rainwater harvesting system being proposed.

Specific features in the development

6. Impervious surfaces should be minimized. The use of impervious paved driveways is discouraged.

Machinery, equipment, and systems external to buildings and other structures

7. The RDN shall require that all new dwelling units include a rainwater harvesting system which is designed to satisfy a minimum of 30% of the total household water use (indoor and outdoor) for a minimum of 90 consecutive precipitation free days.



8. Rainwater harvesting systems should target a minimum rainwater storage tank volume of 18, 181 litres (4,000 Imperial Gallons). Larger tank sizes are also supported. This figure was derived based on the following information and calculation:

- Average total household water use the RDN is 704 litres per day
- 30% of the total household water use is for outdoor non-potable use
- Storage must satisfy 100% of outdoor watering needs for a 90 day period

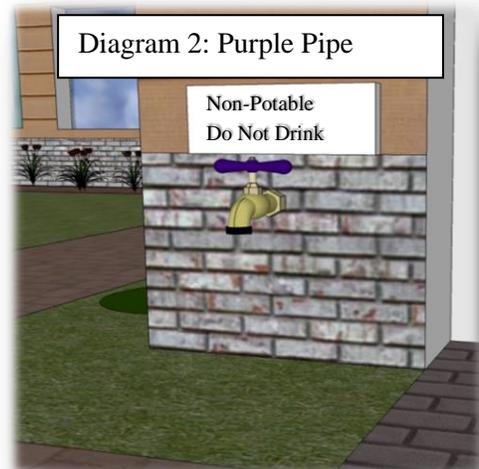
Minimum tank volume is calculated as follows:

Average household use per day \times 0.3 \times 90 days = minimum water storage tank volume

$$704 \text{ litres} \times \frac{30}{100} \times 90 \text{ days} = 19,008 \text{ litres}$$

A minimum volume of 19,008 litres (4,181 Imperial Gallons) does not correspond well to existing cistern sizes. Staff is proposing that this figure be reduced to 18, 184 litres (4,000 Imperial Gallons) to reflect typical cistern sizes and configurations. This minimum volume could be met using a number of different tank types, sizes, and configurations.

9. Notwithstanding Guideline 8 above, a water storage tank with a lesser volume may be supported where an assessment of total household water use (indoor and outdoor) prepared by a registered plumber, accredited rainwater harvesting professional, or Engineer is provided, and the applicant is proposing to satisfy a minimum of 30% of total household use for a minimum of 90 consecutive precipitation free days with a rainwater harvesting system.



10. Rainwater harvesting systems may, at the applicant's discretion, be designed for non-potable outdoor use, non-potable indoor use, or potable drinking water use. The design of such systems must reflect their intended use.
11. The rainwater harvesting system design must, at minimum, consider and include the following components:
- i. Roofing materials that are appropriate for the type of rainwater harvesting system being proposed.
 - ii. Gutters, downspouts, and transport piping to move the rainwater collected on the roof towards the water storage tank and beyond to its end use.
 - iii. Debris removal, filters, and first flush diverter sized and designed to accommodate the proposed rainwater harvesting system.
 - iv. Provisions for tank overflow



- v. A water storage tank(s) rated for potable use while it is strongly recommended that all other components be rated for potable use.
 - vi. A pumping system to move the rainwater and distribution system
 - vii. Rainwater filtration, purification, and disinfection (in the case of potable systems).
12. Rainwater harvesting systems should be designed to facilitate additional storage volume and future connection to the dwelling unit.
13. All external pipe, plumbing fixtures, and hose bibs where rainwater is used shall be clearly marked with “*Non-Potable Water Do Not Drink*” as shown in Diagram 2 at right.
14. Although not a requirement of these Development Permit Area Guidelines, where non-potable rainwater harvesting equipment is required, the RDN shall encourage the applicant to install dedicated plumbing lines within proposed dwelling units to make use of stored rainwater for flushing toilets and other non-potable uses. The RDN shall assist the applicant in obtaining the necessary building permit approvals.

Definitions:

Total household water use means the sum total of all water use in a household during a typical hot dry summer day including gardens and lawns, baths and showers, kitchen (dishwasher, etc.), toilet flushing, laundry, car washing, drinking, property maintenance, and other outdoor uses.

