

A. General Guidelines

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 must include the following:
 - i. an assessment of the characteristics and behavior of the aquifer at its most stressed time of the year which includes 2 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;
 - 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 recommend measures to protect them.
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.

B. Siting of Buildings and Structures

3. Dwelling units must be sited with provisions which allow for the placement of a gravity fed rainwater collection tank which collects rainwater from the roof leaders of the dwelling unit which capture the majority of the rainwater flows.

C. Form and exterior design

4. Dwelling units must be designed to maximize opportunities for rainwater catchment from all roof surfaces.

D. Specific features in the development

5. Impervious surfaces must be minimized. The use of impervious paved driveways shall be discouraged.
6. Where rainwater management is required, 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.

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

7. The RDN may require that all new dwelling units include an external rainwater harvesting system which includes the following:

- a. external equipment for collecting and distributing rainwater off of the dwelling unit roof;
 - b. a storage tank(s) with a minimum storage capacity of 18,000 litres which is designed for rainwater collection and is rated for potable use;
 - c. a pumping system;
 - d. an overflow handling system;
 - e. provisions and or the ability to add provisions at a later date to the rainwater harvesting system that facilitate future connection to the dwelling unit for non-potable use such as pipe fittings, screens, supplementary water connection and float switch to maintain a minimum water level, a backflow prevention system and other safety mechanisms to prevent cross contamination of the drinking water supply.
8. All external pipe, plumbing fixtures, and hose bibs where rainwater is used shall be clearly marked with "*Non-Potable Water Do Not Drink*".
 9. Although not a requirement of these Development Permit Area Guidelines, where external 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 to obtain the necessary building permit approvals.
 10. The RDN may require the applicant to install a groundwater monitoring device in at least one well within each proposed subdivision. The RDN may require an agreement be registered on title to allow the RDN to access the property to collect the data from the device.

DRAFT

North Cedar Improvement District

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District File: RDN re: OCP

November 19, 2010

Regional District of Nanaimo
Attention: Greg Keller
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2

Dear Mr. Keller:

RE: OCP Area "A" – Covenant and/or Development Permit

The Board of Trustees requested that I write to you, requesting that the RDN include in the OCP for Area "A" either a covenant and/or a development permit for the districts wells. We request that the covenant and/or development permit be specific to the properties surrounding the districts water source. We want the covenant and/or development permit to protect our water source and aquifer against activities which could reduce their suitability as sources of domestic water supply. These covenants and/or development permits will be specific to Wellhead Protection.

As part of this protection we request that all development within the Wellhead Protection Area be required to connect to a community sewer system. That no property owner be allowed to install and/or store any tanks or containers for large quantities of fuel for all future developments. That regular soil testing becomes mandatory on all properties that still use manure, fertilizer and pesticides to help maintain a balance between the nutrients crops require and the nitrates being leached into the aquifer.

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Looking forward to having the above included in your OCP for Area "A: Should you need any further information or have any concerns regarding our request, please do not hesitate to call.

Yours truly,



Heather Sarchuk
Administrator

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cc: Carol Mason
Joe Burnett Area A Director
Area A Advisory Committee

**A Shared Community Vision
Electoral Area 'A' Official Community Plan Review
Proposed Wellhead Protection Strategy**

The North Cedar Improvement District (NCID) is responsible for providing community water to lands located in Cedar and Cedar by the Sea in Electoral Area 'A' of the Regional District of Nanaimo. NCID extracts its water from community wells located on a property on York Road and a well located on property on Wilkinson Road. Through the Official Community Plan (OCP) review process an opportunity was identified to consider including a wellhead protection strategy in the draft Official Community Plan to assist the NCID and the community protect its water supply.

A letter dated November 19, 2010 was received from the NCID regarding wellhead protection. In summary, NCID has requested that the draft OCP include the following:

- i. a covenant and/or Development Permit Area for lands surrounding the District's Wells to protect the wells against activities which could reduce their suitability as sources of domestic water supply (ex: septic disposal fields in close proximity the wellhead);
- ii. a requirement that all development within the a given distance of the community wells be required to connect to a community sewer system;
- iii. a restriction on the installation and use of tanks which store large quantities of fuel; and,
- iv. a requirement for regular soil testing on all properties which use manure, fertilizers, and pesticides to help maintain a balance between the nutrients crops require and to ensure that these products and potential contaminants do not leach into the aquifer.

Given the limitations of an OCP as a policy document and local government jurisdiction, not all of the NCID's requests can be accommodated in the draft OCP. However, given the importance of wellhead protection, the following three part strategy for wellhead protection has been drafted for the Committee's consideration. If the Committee supports the following strategy, the draft OCP will be amended to include it prior to 1st and 2nd reading.

Part 1: Use of Development Permit Area

Both the Cedar Main Street and Nanaimo River Floodplain Development Permit Areas would be amended to include guidelines for environmental protection (aquifer protection) which apply to both single residential as well as multi residential, commercial, and mixed use.

1. The purpose of the DPA is to protect the aquifer from the potential impacts of new development. The DPA would require a report from a qualified professional on the measures required to protect the aquifer.
2. A Development Permit would be required for development activities within 90 metres of the NCID wells.
3. Low risk activities such as fence building, the construction of accessory buildings and structures, additions to buildings or structures, etc. would be exempt from obtaining a Development Permit.
4. The DPA could require the applicant to register a Section 219 covenant to ensure that future owners are aware of and follow the recommendations contained in the Hydrogeologist's report.

Part 2: Wellhead protection policies

1. The draft OCP would include a policy(s) that identifies wellhead protection as a community interest and would support the Provincial Subdivision Approving Officer to consider wellhead protection and the registration of a covenant at the time of subdivision to ensure that lands around the wellheads are protected and to reduce the risk of potential contamination.
2. The draft would include a policy applicable to lands within the NCID's wellhead protection area and/or lands adjacent to the wellheads which encourages the RDN to work with the NCID, developers, and property owners to consider:
 - i. connection to a community sewer system (if capacity is available)'
 - ii. upgrading existing type 1 systems to a system which produces high quality treated effluent; and/or,
 - iii. to develop and undertake routine maintenance of existing septic disposal systems to ensure their longevity and maximum potential.

Part 3: Policies which support the acquisition of lands surrounding community wells for wellhead protection

1. The OCP would support the use of a density bonus where additional density may be supported in exchange for land surrounding the community wells for wellhead protection provided the development is connected to community water and community sewer.
2. The OCP would also include a policy that supports the acquisition of land surrounding the community wells as a community amenity through the rezoning process or at the time of subdivision.

Procedural Notes:

Should the Committee support the proposed wellhead protection strategy, the OCP will be amended in preparation for 1st and 2nd reading. Following 1st and 2nd reading of the OCP adoption bylaw, there will be an opportunity to review and refine the proposed DPA guidelines and policies.