



Electoral Area 'H'  
Official Community Plan  
Bylaw No. xxx, 2017

**DRAFT Version 1.0 of Section 2 The Natural Environment**

**October 4, 2016**

Note to the reader:

This is an annotated draft. Explanatory notes are in the right side-bar. The draft includes the text of the current OCP with underline used to show proposed new text, and strikethrough used to show text proposed to be deleted.



## 2. The Natural Environment

Residents are drawn to Electoral Area 'H' for its rural characteristics enhanced by abundant natural features, the coastal area, numerous watercourses, streams, wetlands, lakes and areas of natural forest. The protection of these natural features is critically important to residents throughout the plan review process; therefore, this OCP contains 'Environmentally Sensitive Lands' Development Permit Areas. This plan also contains 'Hazard Lands' Development Permit Areas to protect the built environment from natural conditions, where appropriate.

*Text deleted not needed, DPA mentioned in later policy.*

The majority of the developed area in Electoral Area 'H' is within the Coastal Douglas Fir moist maritime biogeoclimatic sub-zone (CDFmm) which is limited to low elevations along southeastern Vancouver Island from Bowser to Victoria, the Gulf Islands south of Cortes Island, and a narrow strip along the Sunshine Coast. It is the smallest and most at-risk zone in British Columbia. Of all the zones in the province, the CDFmm zone has been most altered by human activities. Less than 1% of the CDFmm remains in old growth forests and 49% of the land base has been permanently converted by human activities.

*New. Text based on Coastal Douglas Fir Conservation Strategy, 2015*

~~The Environmental Features map establishes a 1000-metre buffer, illustrated on Map 2, along the foreshore of Electoral Area 'H'. This boundary has been established to recognize the sensitivity of the coastal region and underscore the importance of the foreshore and coastal waters to the residents of Area 'H'.~~

*Removed from this section to address public comments, and addressed more clearly in the Marine Environment section.*

In addition to the protection afforded through local government bylaws, the protection of environmentally sensitive features falls under the jurisdiction of federal, ~~and provincial, and local~~ governments. Fisheries and Oceans Canada and the Provincial Ministry of Forests, Lands Natural Resources Operations and Ministry of Environment are responsible for protecting fisheries and water resources through legislation such as the ***Fish Protection Act*** ~~***Riparian Areas Regulation***~~, the ***Water Sustainability Act***, and the ***Waste Management Act***.

*Updated Ministry and legislation names*

The natural environment of the Plan Area also includes areas subject to natural hazards such as ~~forest fire, flooding, mass movement of land, landslides and earthquakes.~~ floodplain, steep slopes, areas of active erosion, forest fire and earthquakes.

*Rewording to reflect best practices language*

The climate world wide is changing, and observations in this region over the past 100 years show that average annual temperature, average annual precipitation, and the surface temperature of the Strait of Georgia have all increased. There are many impacts of these changes that will affect the sensitive ecosystems, species at risk, natural hazards, and the people and businesses that rely on them. Some of the most significant impacts to be

*New*

expected include hotter, drier summers causing drought and increased risk of wildfire, and increasing frequency and severity of storms coupled with sea level rise, causing more significant and frequent flooding events. Decisions and plans made today should look to anticipate the future effects of climate change and adapt to, or mitigate them.

## 2.1 Sensitive Ecosystems ~~Environmentally Sensitive Areas~~

*Note on draft: this section merges the former “2.1 Environmentally Sensitive Areas” and “2.5 Protection of Wildlife and Native Plans” section to update language and reduce duplication.*

Only fragments of the rich mosaic of ecosystems in the coastal lowlands of east Vancouver Island and the Gulf Islands remains after over a century of logging and human activities. In the late 1990’s the Province of BC created a “Sensitive Ecosystem Inventory” of ecosystem remnants in the coastal lowlands of east Vancouver Island and the adjacent Gulf Islands. These sensitive ecosystems within the Plan Area, as well as location of known eagle nests and heron rookeries, are shown on Map 2.

*New. Updated to better explain where the sensitive ecosystem data comes from.*

~~Environmentally sensitive areas are areas of land and water that are sensitive to human interference. These include: streams, watercourses, sub-tidal zones, estuaries, wetlands, lands adjacent to water bodies, aquifers, and natural habitats. Environmentally sensitive areas within the Plan Area include, but are not limited to, the Big Qualicum River and Big Qualicum Fish Hatchery, Nile Creek, Thames Creek, Quadra Sands Aquifers, Deep Bay estuary, all streams and watercourses, and the marine foreshore out 1000 metres from Deep Bay Spit to the south east boundary of Electoral Area ‘H’.~~

*Deleted and replaced with text below using updated language.*

Sensitive ecosystems and their component plants and animals are in need of protection not only because they are rare, but also for the significant role they play in creating healthy and attractive communities for people. Wetlands purify drinking water and help provide protection from flooding. Forests clean the air, refresh the spirit and provide visual relief from urban settings. Riparian forests are cool, moist havens during hot, dry summers. Significant features in the Plan Area include the Deep Bay estuary, Thames and Nile Creeks and the Big Qualicum River. All coastal areas fronting the Strait or Georgia are important and sensitive ecosystems, and they are addressed specifically in section 2.4.

*Updated language from SEI pamphlet that accompanies the mapping project.*

There are two large areas of Crown land in the Plan Area set aside for protection of sensitive ecosystems:

*New, to address comments related to improving protection of environment. Will be added to the map.*

- Bowser Ecological Reserve established in 1996 under the *Ecological Reserves Act* protects a highly productive older forest and wetland ecosystem in a transition zone between the Coastal Douglas Fir and Coastal Western Hemlock biogeoclimatic zones.

- The Coastal Douglas Fir Land Use Order adopted in 2010 under the Land Act protects a large portion of Crown land between Bowser and Deep Bay to protect Coastal Douglas Fir biogeoclimatic zone plant communities including older forest, wetland, riparian, and second growth forest sensitive ecosystems.

Other areas are set aside for ecosystem protection as well as recreation, including provincial parks at Horne Lake and Spider Lake, Regional District parks, Federal Fisheries land holdings along the shore of the Big Qualicum River and at Horne Lake and, to a lesser extent, numerous small community parks that are oriented towards ~~greenbelt~~ trails or nature protection.

Additional areas of Crown land identified for future protection in the provincial Protected Areas Strategy include the Gainsburg Swamp and the unconfined aquifer on District Lot 86.

Protection of sensitive ecosystems on private land largely relies on stewardship by property owners.

Within the Plan Area, the location of known Great Blue Heron and Bald Eagle nests are shown on Map No. 2. They are protected from damage or destruction under the Wildlife Act. In addition, the Great Blue Heron is federally and provincially listed as a species of special concern meaning that it is not immediately threatened but is particularly susceptible to disturbance due to human activities or natural events.

Other plants, animals and ecosystems at risk are studied, inventoried and ranked as to their level of threat by the federal and provincial governments. They are not mapped in this OCP but may be identified at the site level and require consideration in development proposals.

This sensitive ecosystem data will continue to be refined as mapping data and other information becomes available. Changes to Map No. 2 may be undertaken to reflect changing on-site conditions or more comprehensive environmental assessments.

~~An inventory of environmentally sensitive features accumulated from various sources has been compiled based on the current available environmental data. The Official Community Plan designates streams (**Fisheries Act**), Eagle and Great Blue Heron nesting trees, steep slopes, floodplain areas, watercourses (Bylaw No. 500, 1987) and the entire coastline of Electoral Area 'H', as development permit area to allow for the evaluation of development proposals with the objective of protecting these features (see Appendix A – Development Permit Areas).~~

*Moved and revised from former section on Protection of Wildlife and Native Plants*

*Seeking input from Ministry of Environment on the Protected Areas Strategy for Vancouver Island and if it has been updated.*

*New to address public comments asking for more protection of eagle and heron nests.*

*This is covered by a policy.*

### SENSITIVE ECOSYSTEMS OBJECTIVES

1. ~~Identify sensitive ecosystems and wildlife habitat environmentally sensitive areas.~~ *Merged with objective from former s. 2.5*
2. Maintain a healthy environment and preserve and protect sensitive ecosystems and wildlife habitat environmentally sensitive areas. *Added text based on community input*
3. ~~Conserve and protect ground and surface water resources.~~ *Covered in separate section on freshwater*
4. *Support the establishment of new protected areas for wildlife and sensitive ecosystems.* *Revised from objectives from former s.2.5*
5. *Provide education about sensitive ecosystems and wildlife habitat and encourage sustainable land use practices* *New based on community input*

### SENSITIVE ECOSYSTEMS POLICIES

1. ~~All land or water identified on Map No 2, at the date of adoption of this plan are considered to be environmentally sensitive.~~ *Repeated below*
2. Streams (~~**Fisheries Act**~~), steep slopes, floodplain areas, watercourses, and Bald Eagle and Great Blue Heron nesting trees, (~~Bylaw No. 500, 1987~~) and the entire coastline of Electoral Area 'H', are designated as development permit areas to allow for the evaluation of development proposals with the objective of protecting these features (~~see Appendix A – Development Permit Areas~~). Selected features illustrated on Map 2 shall be designated Environmentally Sensitive Lands Development Permit Areas. *Moved from introduction to this section.*
3. Preserve sensitive ecosystem areas, their living resources, and connections between them in a natural condition and maintain these areas free of development and human activity to the maximum extent possible. *Reworded Freshwater Policy 3. From Green Bylaws Toolkit.*
4. The Regional District shall only support rezoning or amendment to the Official Community Plan to permit development on or near sensitive ecosystems or near eagle or heron nesting trees ~~lands considered environmentally sensitive~~ where the applicant or appropriate authority presents acceptable evidence that the proposed development will not adversely affect the environmentally sensitive areas, and that development design reflects best management practices. *Updated language from Green Bylaws Toolkit.*
5. Notwithstanding Policy 2.1.4 above, this Plan supports the Agricultural Land Commission's mandate of preserving and encouraging the development of Agricultural Land Reserve lands, and supports the

development of farmland in a manner that recognizes and protects environmentally sensitive features on these lands.

6. The Regional District shall support and encourage the retention, enhancement or development of wildlife corridors to ensure that safe and secure routes are available to wildlife in the Plan Area. *Moved from former section 2.5*
7. The Regional District shall support the identification and designation of areas for the protection of sensitive ecosystems ~~native flora and fauna~~ in perpetuity. In particular, the RDN shall support initiatives associated with the following areas: provincial protected areas, provincial parks, ecological reserves, fisheries reserves and hatcheries, wildlife refuge, waterfowl habitat, and RDN park land. *Moved from former section 2.5*
8. ~~Insofar as it lawfully can,~~ The Regional District supports the protection and conservation of the following priority areas:
  - a. Crown Land west of Deep Bay including Gainsburg Swamp and the unconfined aquifer on Crown Land in District Lot 86;
  - b. Proposed Protected Area expansion of Horne Lake Caves Provincial Park located at the west end of Horne Lake at the mouth of the Qualicum River tributary;
  - c. Ecological Reserve or park designation at Fletcher Creek over Crown Land described as Lot 36, District Lot 81, Newcastle Land District Plan 1937;
  - d. Expansion of Spider Lake Provincial Park to include Illusion Lake; and
  - e. Protection of Annie's Woods (*Lot 36, Plan 1967 DL 81, Newcastle Land District*), located on Crown Lands at Grovehill Road adjacent to the Island Highway through the establishment of an ecological reserve in recognition of the old growth forest values on site.
9. The Regional District will collaborate with other levels of government, non-governmental organizations, and neighbouring local governments in inventorying, mapping, and conserving sensitive ecosystems, including development of consistent approaches to shared watersheds. *New language. Recommended in Green Bylaws Toolkit.*
10. The Regional District encourages cluster forms of development to reduce the amount of land affected by residential growth when the permitted number of units is clustered on part of the site and the remaining area or adjacent important habitat is protected in its natural state, and will consider alternatives such as comprehensive development zones, density averaging, or other methods to achieve this purpose. A proposal for cluster development should clearly demonstrate and articulate how it satisfies principles of environmental, economic, and social development sustainability and meets the following conditions: *New language. Although not supported by all public input, this is an example of what a policy to support cluster housing could look like. This policy may better fit in the Growth and Development section, could be moved.*

- a. the total area of land to be subdivided, excluding undevelopable land such as land in the Agricultural Land Reserve, watercourses and leave areas, sensitive ecosystem slopes in excess of 3:1 (30%) divided by the number of lots to be created, is no greater than the density permitted under the zoning bylaw,
- b. the parcel configuration and sizes are adequate to accommodate buildings and structures appropriate to the intended use and in compliance with the zoning bylaw,
- c. a restrictive covenant is registered in the name of the Regional District of Nanaimo against the title to the land at the time of registration of the subdivision, prohibiting the further subdivision of the original parcel(s) under covenant,
- d. the Regional District approves a long-term management plan, including responsibilities and actions, for the future management of the remaining protected area.

### *Sensitive Ecosystems Advocacy Policies*

1. The Regional District shall encourage the Approving Officer to require protective covenants or the designation of Return to Crown along the bed of, and buffering riparian corridor of watercourses, streams, creeks, lakes and wetlands wherever development on adjacent land is proposed.
2. The habitat protection initiatives of BC Environment and the Federal Department of Fisheries, along rivers, streams, and wetland areas shall be strongly supported and complemented with Regional District park land and greenway protection initiatives.

## 2.2 Natural Hazard Areas

Natural hazard areas are sources of potentially dangerous chance events. Examples of natural hazards are: ~~forest fires, floods, mass movement of land, landslides and earthquakes.~~ floodplain, steep slopes, areas of active erosion, forest fire and earthquakes Natural hazard areas are often also areas of high environmental value. Known areas of potential hazard areas are identified on Map No. 2.

*New text to draw link between hazards and ecosystems which is mentioned in later policies and the DPA.*

Within the Plan Area many areas are subject to potential flooding. The lands surrounding river mouths and estuaries have the highest risk. Other areas with flood potential are isolated lowland areas and shore land adjoining watercourses, lakes, creeks, and wetlands. The Horne Lake area also faces the risk of potential flooding as the rate of water released from the Big Qualicum River Dam can modify the level of the lake significantly.

Low-lying coastal lands bordering the Strait of Georgia are expected to experience increasing flood risk with sea level rise and increasing frequency and severity of storms due to climate change. Flood risk for lands on the marine coast is different from that of freshwater bodies and streams, where flooding is caused by wave run-up at high tides during storm events, that is likely to recede relatively quickly and does not produce substantial flows that would cause erosion.

*New text re climate change and sea level rise*

The Plan Area contains a number of areas where mass movements of land are a possibility; including the Horne Lake road and Mount Mark slide areas. The highland and mountain areas are particularly susceptible to mass movements of land, such as rock falls and avalanches, due to the steepness of these areas. It is also important to note that the removal of vegetation from steep banks may destabilize the bank and consequently result in its failure.

~~Potential landslides~~ Steep Slopes along the marine coastline ~~and steep slopes~~ are a major concern within the Plan Area. Some areas along the ~~shore zone~~ marine coastline are straddling steep wave cut bluffs (with slopes between 30% and 60%) and are composed of unconsolidated sand. The threat of landslides is particularly concerning in areas where homes have been constructed near the edges or below these unstable slopes.

*Updates for clarity.*

Seismic activity is a distinct possibility within the Plan Area. Vancouver Island is classified as a Zone 3 area according to the provincial Seismic Zoning Map. This indicates that the area is at high risk for seismic activity. A major earthquake may result in serious damage to the Plan Area. Potential damage caused by seismic activity may be further exacerbated given that many buildings and structures within the Plan Area that may have been constructed on or adjacent to unstable slopes, and/or below Building Code standards.

~~Due to the vast forested areas in Electoral Area 'H' the potential for interface forest fires exists.~~ Between 2006 and 2007, Community Wildfire Protection Plans were developed for Bow Horne Bay Fire Service Area, Deep Bay Improvement District, and the Horne Lake area. There are a number of areas where extreme interface fire risk is identified. It is important that best practice interface fire building and landscaping techniques be encouraged to mitigate any loss of life, property and the environment as a result of forest fires.

*Revised to add reference to Community Wildfire Protection Plans.*

The hazard land mapping will continue to be refined as mapping data and other information becomes available. Changes to Map No. 2 may be undertaken to reflect changing on-site conditions or more comprehensive hazard assessments.



**NATURAL HAZARD AREAS OBJECTIVES**

1. *Protect* area residents from loss of property and personal injury.
2. ~~Identify, conserve, and protect~~ natural hazard areas. ~~and adjacent lands from damage due to development, subdivision or alteration of land.~~
3. Direct development away from natural hazard areas where possible, and where development does occur in or near a natural hazard area, ensure appropriate measures are taken to mitigate the impacts. *New. Meant to clarify the intent of deleted part of above objective.*
4. Mitigate and adapt to the impacts of climate change on hazardous conditions within the Plan Area *New*
5. Encourage best practice interface fire building and landscaping techniques by private property owners. *New*

**NATURAL HAZARD AREAS POLICIES**

1. ~~In order to protect property and human lives from hazardous conditions, Those areas indicated as Natural Hazards on Map No. 2 (at the date of adoption of this Plan) shall be designated a in the Hazard Lands Development Permit Area.~~ *Deleted portion not necessary as it flows from Objective 1.*
2. ~~The Regional District shall not consider support the development, subdivision or alteration of land in a natural hazard area unless the applicant provides evidence that measures can and will be taken to render the development capable of withstanding the effects of the hazard and to protect adjacent properties from possible impacts.~~ *Revised to simplify. Better for the DPA to contain further details.*
3. Hazard lands shall be designated as a development permit area to ensure that proposed development is reviewed by the appropriate professionals so that it is protected from hazardous conditions.
4. ~~The Regional District will require that a covenant under section 699 of the Local Government Act and section 219 of the Land Title Act be registered where a geotechnical report indicates that the land may only be used safely subject to the conditions contained in the report.~~ *Not needed as a policy in the OCP. Covered through subdivision and building permit.*
5. The Regional District will map low lying areas anticipated to be impacted by sea level rise, and consider adopting mitigation and adaptation measures. *New in response to public comments and best practices*
6. The Regional District will implement recommendations of Community Wildfire Protection Plans and update the Plans on an ongoing basis *New in response to public comments*

### Natural Hazards Advocacy Policies

7. Property owners will be encouraged to adopt best practice interface fire mitigation techniques such as vegetation management and use of fire-resistant building materials.

*New. At this time not recommending a regulatory approach through DPA.*

### 2.3 Freshwater Resources (Surface and Aquifer)

The Electoral Area 'H' Plan Area contains many streams, watercourses, wetlands, and aquifers. Each of these natural resources is worthy of protection through careful land use planning both for their importance in supporting human settlements in the area, and for their value as significant ecosystems. It is recognized that there may be many significant areas of freshwater groundwater that have not yet been identified, and consequently, identification of these special features is an ongoing process.

*Updated wording of this section, and added text to reflect current view of freshwater as having more value than just for human use. Check with Julie*

~~All watercourses, streams, lakes, swamps, other wetlands, and known aquifers in the Plan Area shall be identified as Environmentally Sensitive Features on Map No. 2. In addition, all known aquifers, swamps, wetlands, streams and watercourses subsequently identified through improved mapping techniques or that qualify by definition are designated as Development Permit Areas as shown on Map No. 7 of this OCP.~~

*Covered in policy*

The Big Qualicum River and its tributaries, which include Hunts Creek and Horne Lake, comprise the largest watershed in the Plan Area. Other watercourses within the Plan Area include Nile Creek, Thames Creek, Chef Creek, Fletcher Creek, and the Deep Bay Estuary area.

Spider and Illusion Lakes are part of an enclosed drainage system with no surface outflow streams. The enclosed nature of the drainage system makes both of these lakes susceptible to potential negative impacts caused by contaminated runoff and increased erosion. Best practice storm water management is essential to ensure that runoff does not impact the environmental integrity as well as the recreational appeal of these lakes.

Groundwater resources are particularly important to the Plan Area as residents rely on these resources for both domestic water and agricultural supplies. Three water Improvement Districts supply potable water to approximately 64% of dwellings, representing 1,540 connections in Electoral Area 'H' with the balance of parcels utilizing on-site wells. Given the Area's reliance on groundwater as the source for all potable water in the area, the potential impact of the increased demand or contamination placed on aquifers as a result of new development shall be considered when making any land use decisions for the Plan Area.

*Added updated number of connections and percentage.*

In certain locations, particularly in the central and eastern portions of the Plan Area, soils are thin and fractured bedrock is common. As a result, both surface and groundwater sources may be sporadic and unreliable. Plan Area residents wish to maintain the integrity of these resources through land use management.

The protection and sustainability of groundwater and surface water supplies are critical to maintaining the rural character of the Plan Area and protecting the natural environment.

### *Freshwater Objectives*

1. *Identify and protect* all freshwater ~~resources~~ sources and ecosystems to maintain their natural habitat, environmental quality and quantity, aesthetic appeal, and recreational value.
2. *Conserve, protect and enhance* the quality and quantity of freshwater sources for existing and future agricultural and domestic uses in cooperation with local and provincial water authorities and landowners.
3. *Recognize* that the quality and quantity of domestic water supply is essential and land development must be planned in a manner that minimizes impact on existing aquifers and groundwater sources

### *Freshwater Policies*

- ~~1. All streams and watercourses as defined in Bylaw No. 500 and/or the **Fish Protection Act Riparian Areas Regulations**, and/or the **Fisheries Act** in Electoral Area 'H', in addition to those shown on Map No. 2, are designated as Development Permit Areas and will be protected in accordance with the **Fish Protection Act** and the **Fisheries Act**.~~
2. Streams, lakes, wetlands and aquifer areas are designated as Development Permit Areas in accordance with Appendix A of this Plan.
- ~~3. It is the general policy of the Plan to support initiatives relating to the maintenance of environmentally sensitive areas that have been designated as development permit areas in their current undeveloped state.~~

*Combined with policy above and simplified.*

*This belongs in the Environmentally Sensitive Areas section so is moved there and re-worded.*

4. Prior to approving any rezoning to increase the density and intensity of land use on any property which may include environmentally sensitive groundwater resources, the Regional District shall require a hydro geologic impact review and/or assessment on the water supplies of adjacent properties and on any nearby surface water resources in accordance with the Board Policy on Groundwater – Application requirements for rezoning of un-serviced lands as amended from time to time. A qualified professional engineer or geoscientist, with proven knowledge and experience in groundwater management must certify, through a hydro geological impact assessment, assurance of the long term reliability of the water supply.
5. Prior to approving any rezoning ~~considering any development~~ in areas covered by any Electoral Area 'H' water utility, the RDN will require written confirmation from the water utility stating its ability to provide sufficient quantity and quality of potable water for the development. *Amended to clarify purpose*
6. Rezoning proposals to increase the density or intensity of land use on a property must include a stormwater management plan that demonstrates that impervious surfaces are minimized and that drainage that there is no increase to stormwater flowing onto adjacent lands. *Amended for clarity*
- ~~The Regional District may consider approving rezoning land development proposals only if there is a storm water management plan and assurance that storm water drainage from development does not increase the peak flow run off into adjacent areas.~~
7. Aquifer recharge areas should be protected, particularly those within the wellhead capture areas of the water improvement districts. The site of the now closed Bowser Seed Orchard should not have any new use that could contaminate the aquifer as it is within the recharge area of the nearby Bowser Waterworks wells. *New. Bowser Waterworks District Wellhead Protection Plan, 2015 identified Bowser Seed Orchard risk.*

#### *Freshwater Advocacy Policies*

8. The Regional District shall request that the Approving Officer require subdivisions to be designed to maintain the hydraulic regime of streams while providing sufficient drainage in a manner which does not interfere with groundwater recharge or allow the intrusion of erosion material into natural watercourses, streams, lakes, and wetlands.
9. The Regional District shall support and encourage the restoration and enhancement of streams and their riparian corridors wherever possible by community groups, corporate bodies or land owners. *Moved from former section 2.5*

## 2.4 Marine Environment Coastal Zone Management

~~The OCP provides guidelines for the management of the harbour and shore areas to complement Provincial management of Crown Foreshore resources and Federal Management of marine waters. The coastal zone marine coastline is one of the prime features of the natural environment a focal point of the Plan Area, representing a diverse ecosystem which is sensitive to human activity. Historically, the coastal zone marine coastline has been the focus of residential and tourist commercial development in the Plan Area.~~

*Updated section title to reflect current terminology and coastline mapping data.*

~~The majority of the marine coastline in the Plan Area is composed of sand and gravel. Except for the protected harbour of Deep Bay, the coastline is exposed to significant wave energy from prevailing winter storms from the southeast. This combination of sand and gravel beaches and high wave energy means the shoreline is actively changing; some areas are eroding while others are accreting, and backshore bluffs in some areas are The coastal zone also includes hazardous bluff shoreline susceptible to erosion and landslides. in some areas.~~

~~Estuaries are areas of high biodiversity as well as high energy, resulting in actively changing shorelines and flood risk. The lower reach of Nash Creek is a particularly notable environment where it parallels the shoreline before exiting into the Strait of Georgia and in doing so passes through several residential lots of relatively small size. Flood events in the past have been relieved by the creation of outflow weirs, but this area continues to be an active environment.~~

*New*

The marine environment of the Plan Area, both intertidal and subtidal, comprises habitats that ensure the existence of rich species diversity. Included are fish, birds, mammals, invertebrates, and many plant species, including eelgrass. This region is an important for herring spawning, is home to salmon enroute to their spawning sites in the Area's streams, and part of an Important Bird Area.

*To address the ambiguity around this 1000 m water areas in the current OCP, a new land use designation is proposed to be added to the OCP called "water"*

~~Historically, the coastal zone marine coastline has been the focus of residential and tourist commercial development in the Plan Area. Therefore the shore zone must be recognized as a finite resource. Policies should support the enhancement of the physical, recreational, and visual qualities of the area, while recognizing the relationship of upland foreshore land uses. To that end, the community has identified the area within 1000 metres from the foreshore as environmentally sensitive. This area extends from the Deep Bay Spit to the eastern boundary of Electoral Area 'H' along the entire coastal waterfront area.~~

The coastline of the Plan Area, particularly along the Deep Bay estuary, is capable of sustaining commercial shellfish aquaculture operations, including

oyster and other shellfish harvesting. The management of these resources is the joint responsibility of provincial and federal ministries.

The Deep Bay Harbour Authority under the authority of DFO Small Craft Harbour Division regulates the commercial and recreational use of the Harbour in coordination with Crown foreshore and marine waters legislation. The Deep Bay Harbour is the only natural Harbour in the Plan Area, and offers moorage to both sport and commercial fishing vessels and includes a commercial fish sales outlet/operation.

The province is responsible for the administration and allocation of leases respecting the aquatic crown foreshore portion of the shore zone, pursuant to the **Land Act**. The RDN has the jurisdiction to regulate the use of land and water surfaces through zoning.

The Ministry of Transportation is responsible for the management of beach access road rights-of-way. As these rights-of-way comprise a significant proportion of the public lands along the coastal shore zone, the Ministry of Transportation should also be involved in the coordinated and cooperative management of the shore zone.

#### MARINE ENVIRONMENT OBJECTIVES

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|--|--|
| 1. <i>Recognize</i> the foreshore, waterfront <u>and marine</u> areas as an integral part of the community, and as a major destination for leisure, commercial and recreational pursuits.  | <i>Amended to refer to the waters and not only coastline</i>                           |
| 2. <i>Support</i> the development of shellfish aquaculture <del>in appropriate locations on the Deep Bay Estuary and Baynes Sound foreshore in Electoral Area 'H', in a manner that does not conflict with existing residential and recreational uses of the coastal zone.</del> | <i>Policy strengthened to address public input to support the aquaculture industry</i> |
| <del>3. <i>Discourage</i> development, which would alienate the foreshore from public access or impact on the natural environment.</del><br><u>Protect the integrity of marine ecosystems and natural coastal processes.</u>   | <i>Replace with the similar objective worded differently. Also see next objective.</i> |
| 4. <u>Maintain and enhance public pedestrian access to and along the shoreline.</u>  | <i>New to address public input</i>   |
| 5. <i>Advocate</i> cooperation and coordination among agencies responsible for the use and management of marine foreshore and upland resources.  |  |
| 6. <i>Advance</i> public ownership and stewardship of the waterfront.  |  |

**MARINE ENVIRONMENT POLICIES**

1. The marine coastline of Electoral Area 'H' shall be designated a Development Permit Area. *Revised for consistency*
2. The Plan recognizes the existing shellfish aquaculture leases west of Deep Bay Harbour and east of Crome Point. All water lots leased for shellfish aquaculture purposes shall be zoned accordingly. Seafood processing on water lots shall not be permitted. *New text for clarity.*
3. The use of shoreline stabilization measures on Crown foreshore, in a manner that obstructs public access to and along public beaches or foreshore areas, shall not be supported. All works below the high water mark require Fisheries and Oceans Canada approval and Crown foreshore tenure from the Integrated Land Management Bureau. Where approval for Crown foreshore use is obtained, the RDN may support proposals for shoreline stabilization measures below the high water mark, provided they are designed to encourage public access along the coastline and do not have negative environmental impacts. Where an application is submitted for a foreshore or water lease and the proposal is referred to the Regional District, the RDN shall recommend to the agency that any structure or development be designed to permit public access and recreational activity along the foreshore. *Strengthened to address public comments about impediments to access along the beach. Also enables approval of green shores approaches that involve modification below the high water mark.*
4. The Regional District will only consider permitting structural modification of the shoreline, such as seawalls, where it can be demonstrated that such a modification is necessary to protect a permitted or existing use or structure and that a green shores (softer) approach to shoreline protection is not a practical alternative. In addition, the construction of shoreline stabilization measures including marine retaining walls must be in compliance with the RDN Marine Retaining Wall Policy, as amended or replaced from time to time. *New to address public concern around seawalls. Text from Green Bylaws Toolkit*
5. The integrity of marine ecosystems and natural coastal processes should be maintained by: *New, also to address public comments about concerns around sea walls, and the 100m protection zone whose purpose was previously undefined.*
  - a. discouraging uses that disrupt natural features and processes, and encouraging owners of shoreline properties to retain, wherever possible, natural vegetation and natural features on areas sloping towards the foreshore;
  - b. land use regulations that provide for waterfront developments to be setback sufficiently to allow for natural erosion and accretion processes, without endangering structures; and
  - c. promoting conservation of the marine environment below the high water mark except where aquaculture leases exist.

6. In order to maintain public beach road rights-of-way whether or not they are currently improved, encroachment onto them by adjacent private property owners is not supported, and approval of permits from Ministry of Transportation and Infrastructure to formalize the encroachment is not supported.

*New. Unsure if this is currently an issues in Area 'H' but has been in other areas of the RDN.*

#### *Marine Environment Advocacy Policies*

7. The Ministry of Transportation and Infrastructure shall be encouraged to foster the improvement of beach access road rights-of-way for public recreational use, beach access, or designation for park purposes where appropriate.
8. The Regional District shall encourage those who live and recreate on the foreshore and in the waters of the Plan Area to adopt environmentally responsible practices to protect these sensitive ecosystems. ~~the users of the shoreline and ocean to minimize the disturbance or pollution of marine and related terrestrial natural habitats.~~
9. The Ministry of Agriculture and Fisheries and Oceans Canada are encouraged to consult with local residents and the Regional District prior to issuing any new or amended licenses for seaweed harvesting on the foreshore of the Plan Area, and are encouraged to communicate with local residents and the Regional District about the terms of the licenses and ongoing scientific study of the sustainability of the fishery.

*Updated language*

*New in response to community input.*

*Note: with the new Fish and Seafood Act coming into force in 2017 the provincial responsibility will be moved to the Ministry of Forests, Lands and Natural Resources Operations*

#### 2.5 Protection of Wildlife and Native Plants