

**Regional District of Nanaimo
Growth Management Plan Review**

**Review of Goal 4 - Environmental Protection
Phase 1 Report**

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Review of Goal 4 - Environmental Protection

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APPENDICES

Appendix A: Environmental Protection - Changes in Legislation, Policies and RDN Initiatives since 1997

Appendix B: Growth Management Plan Review -Environmental Protection Workshop, September 24, 2001

Appendix C: Growth Management Plan Review -Environmental Protection Workshop, September 27, 2001

EXECUTIVE SUMMARY

As part of its Growth Management Plan Review, the Regional District of Nanaimo (RDN) commissioned a review of new information and initiatives that can enhance the achievement of the Plan's goal of environmental protection (Goal 4). The main elements of the project are:

- A review of new legislation that has been passed and new programs initiated since the Plan was adopted that pertain to environmental protection efforts in the RDN.
- Two workshops to solicit opinions and ideas from RDN staff, relevant government agencies and nongovernment interest groups regarding the role of the RDN in environmental protection and the environmental policies in the Growth Management Plan.
- Based on the above, conclusions and recommendations regarding revisions to Goal 4 and its policies to enhance environmental protection under the Growth Management Plan.

Legislative changes and new programs: Since the Plan was adopted in 1997, several changes have been made to provincial legislation and provincial or federal programs that affect environmental protection in the RDN. These include:

- Amendments to the *Local Government Act* in 1997 and 2001 to strengthen the capacity of certain land use management tools to protect the environment.
- Adoption of the *Fish Protection Act* in 1997 and the *Streamside Protection Regulation* in 2001, which require local governments to adopt provisions in land use bylaws to protect streamside areas within the next 5 years.
- Publication of the "Sensitive Ecosystem Inventory of East Vancouver Island and Gulf Islands" in 2000, which identifies areas of environmental sensitivity and rarity and measures to protect them.
- "Environmental Objectives, Best Management Practices and Requirements for Land Developments" released by the Ministry of Water, Land and Air Protection in March 2001, to assist local governments in the environmental review of land development proposals.
- The development of an Agricultural Watercourse Maintenance Guide to provide for adequate drainage and irrigation of productive agricultural lands while protecting valuable fishery resources.

The RDN also initiated several programs to enhance environmental protection, including:

- An "RDN Environmentally Sensitive Areas Atlas", and its ongoing refinement in response to planning and development priorities.
- The designation of environmentally sensitive areas and watercourses as Development Permit Areas in local official community plans throughout the Regional District.
- An Intergovernmental Partnership Agreement signed in 2000 with the regional offices of the Ministry of Water, Land and Air Protection and Fisheries and Oceans Canada; its objective is to provide a more cooperative framework and efficient delivery of services in environmental permitting and protection.
- The completion of a Liquid Waste Management Plan in 1998, which sets out long term planning and policy direction for liquid waste (sewage) management.
- Partnership in a Stormwater Management Planning pilot project with federal and provincial environmental agencies.

Workshops: Twenty-nine participants from 13 government agencies attended a workshop on September 24, 2001. Twenty-one representatives from 19 local organizations attended a workshop on September 27, 2001. The workshops had the common goal of reviewing existing and future environmental protection measures in the Regional District, but from different perspectives: from a technical and administrative level with other government agencies; and from a philosophical perspective with stewardship groups, community associations and the development community. Some common themes that emerged from both workshops were:

- Recognizing that protecting the environment is not merely a matter of protecting special sites or preventing pollution, but is an integral part of sustaining our economy, communities and life support systems.
- Taking a holistic, ecosystem-based approach to environmental protection, using watersheds as the basic unit for addressing land and water-based issues.
- Linking environmental protection to the other goals of the GMP.
- Reducing overlap, clarifying roles, and generally improving coordination among orders of government in land and resource use approvals.
- Defining "development" clearly, and explaining the limits in the RDN's jurisdiction in addressing all aspects of land use, particularly with respect to the Agricultural Land Reserve (ALR) and Forest Land Reserve (FLR).
- Addressing parks and trail corridors in the Growth Management Plan (GMP) but clarifying their role in protecting the environment.
- Strengthening public education and information around environmental stewardship, and working with landowners to achieve environmental protection that benefits both them and the public interest.

Recommendations: The report concludes with a series of recommendations for enhancing environmental protection in the Growth Management Plan, organized under four headings.

Regarding The Goal 4 statement:

1. Emphasize the significance of the environment to the overall sustainability of the region, and as an integral component of the future growth and development if the region.
2. Recognise the need to take an integrated, ecosystem-based approach to environmental matters; the Goal statement should recognize the need to protect natural *systems* and their functions.
3. Address coordination broadly to include not just government agencies but all landowners, and land and water users in the region. Emphasize particularly coordination with the three First Nations in the Region.

Regarding Goal 4 policies collectively:

4. Make implementation an integral part of each policy statement.
5. Address land and water aspects from a watershed basis.
6. Address all aspects of environmental "protection", including regulation but also acquisition, information and education, providing incentives and supporting volunteerism.
7. Strengthen the linkages and cross-references among goals.
8. Be clear about what the RDN has jurisdiction over regarding the environment.

Suggested new or enhanced topics to address under the Plan::

9. Growth limits and carrying capacity
10. Parks and open space
11. Waste management
12. Stormwater management
13. Aggregates management
14. Agricultural and Forest Land Reserves
15. Water conservation.

Finally, a series of recommendations ("shoulds") and suggestions ("coulds") are made regarding ***individual policies and guidelines under Goal 4.***

1. Purpose of this Report

As part of its Growth Management Plan Review, the Regional District of Nanaimo (RDN) commissioned a review of new information and initiatives that can enhance the achievement of the Plan's goal of environmental protection (Goal 4). The objectives of this review are:

- To review new legislation that has been passed and new programs initiated since the Plan was adopted in 1997 that pertain to environmental protection efforts in the RDN.
- To solicit opinions and recommendations from RDN staff, relevant government agencies and nongovernment interest groups regarding the role of the RDN in environmental protection, and the policies in Goal 4 and environmentally-related aspects of other goals in the Growth Management Plan.
- Based on the above, to make recommendations regarding revisions to Goal 4 and its policies that would enhance environmental protection under the Growth Management Plan.

2. Project Method

The project tasks consisted of the following:

- Compile and summarize changes to provincial legislation, particularly the *Local Government Act* and the *Fish Protection Act* and its *Streamside Protection Regulation*, for their implications for environmental protection in the RDN.
- Compile and summarize RDN initiatives since 1997 that pertain to environmental protection. This includes the adoption of new bylaws, updates to official community plans, the Parks System Plan, ongoing development of liquid and solid waste management programs, and recent stormwater management initiatives.
- Assess Goal 4 and its policies with members of RDN staff in light of the above initiatives and their experience with implementing the Plan's current policies.
- Collaborate with staff on generating maps that display environmentally significant characteristics in the regional district, and the land use designations pertaining to their protection. These were used to assist the discussion of Goal 4.
- Identify potential participants, develop working material, and facilitate two workshops to discuss the RDN's role in environmental protection and assess Goal 4 and its policies. The first workshop involved representatives of pertinent government agencies; the second workshop involved representatives of local environmental groups, community associations and the development community.
 - Compile and synthesise the results of the workshops.
- Based on all of the above, prepare conclusions and recommendations regarding revisions to Goal 4 and its policies, and to other goals of the Growth Management Plan as they may apply to environmental protection.
- Review the report and its recommendations with the RDN's Interagency Advisory Committee, and incorporate their comments.

3. Recent Changes to Legislative and Policy Tools for Environmental Protection

This part begins with background information on the environmental mandate of growth management planning (section 3.1) and a synopsis of the main legislative tools available to the RDN for environmental protection (section 3.2). This provides the context for discussing the recent changes to these tools and their application in the RDN (section 3.3 and Appendix A).

3.1 The Growth Management Plan and its Role in Environmental Protection

Provincial context: According to B.C.'s *Local Government Act* (section 849), the purpose of a regional growth strategy is “to promote human settlement that is socially, economically and environmentally healthy and that makes efficient use of public facilities and services, land and resources.” With respect to the environment, the Act states that a growth management strategy must address future environmental objectives and actions that provide for “parks and natural areas” for the projected populations. It also identifies a series of provincial goals that regional growth strategies should work toward, several of which pertain specifically to the environment:

- Protect environmentally sensitive areas.
- Reduce and prevent air land and water pollution.
- Protect the quality and quantity of ground water and surface water.
- Minimize the risks associated with natural hazards.
- Preserve, create and link urban and rural open space including parks and recreation areas.
- Plan for energy supply and promote efficient use, conservation and alternative forms of energy.

RDN context: The Growth Management Plan is a twenty five-year plan that commits the Regional District and its member municipalities to common objectives regarding land use, development and servicing. Environmental protection is one of the eight goals of the RDN's Growth Management Plan and a key component of its overall desired future, as articulated in the Plan's vision statement.

Goal 4 contains policies with *specific* reference to environmental protection. These policies currently focus on:

- supporting the development of an open space protection program;
- promoting development decisions that are based on the ecological character of the land;
- establishing a regional system of connected trails, greenways and natural corridors;
- developing ground and surface water supply and quality measures; and
- discouraging the development of the remaining natural coastal zone segments.

Other goals in the Plan include policies and guidelines that give effect to environmental sustainability. For example, policies under Goal 1 aim to contain urban development, thereby protecting resource lands and natural areas. Goal 2 policies focus development in nodes so less land is used for development and people can live closer to key services and not have to drive as much. Goal 5 policies support alternative modes of transportation that have less impact on air and land.

3.2 The Main Legislative Tools Regarding Environmental Protection

The powers of local governments are set out in the *Local Government Act* (formerly the Municipal Act). Under that Act, environmental matters are related mostly to the powers that local governments are given regarding land use planning and management. These tools include:

- **Official community plans (OCP)** – can provide policy direction on goals, objectives and measures for environmental protection.

- **Development permit areas (DPA)** – can be established under an OCP to regulate development for the purpose of “protection of the natural environment, its ecosystems and biological diversity”. DPAs can also be established to protect development from hazardous conditions (e.g., flooding, hazardous slopes).
- **Zoning** – a local government can designate lands to specified uses and set certain limits (such as setbacks from streams) on land uses.
- **Subdivision approval** – can ensure that works and services conducted as part of subdivision are carried out in an environmentally friendly manner, and the “public interest” in the environment is protected.
- **Covenants** – can establish conditions of land use as part of a development approval.

There are other bylaw-making powers that can relate to environmental matters, such as the authority to protect trees, manage stream flows to prevent flooding, and regulate the deposit and removal of soil and gravel.

3.3 Recent Changes Regarding the Legislative Tools

Appendix A provides a detailed synopsis of recent changes to legislation and new programs and activities that affect environmental protection in the RDN. The following highlights the major changes since 1997.

Provincial and federal initiatives: Since 1997 when the RDN adopted its Growth Management Plan, changes in provincial legislation and programs have affected the role of local governments in the environmental realm:

- Amendments were made to the **Local Government Act** in 1997 and 2001 to land use planning and regulatory tools to strengthen their capacity in environmental protection. This included enhancing the designation of development permit areas, authorising local governments to take development permit security deposits to correct environmental damage, and allowing local governments to set requirements for drainage management and regulate impervious surfaces.
- The **Fish Protection Act** was passed in 1997, and the **Streamside Protection Regulation** was enacted under this Act in 2001. This Regulation requires local governments to adopt provisions in their land use bylaws to protect streams and streamside areas within the next 5 years. Implementation of the Regulation is currently under review by the recently elected government.
- The “**Sensitive Ecosystem Inventory of East Vancouver Island and Gulf Islands**” was completed by federal and provincial environmental agencies and released in 2000. It includes a Conservation Manual that provides descriptions and management recommendations for each of the ecosystems contained in the Inventory. Together, the inventory and manual act as a guide to the areas of particular environmental sensitivity and how they should be protected.
- The Vancouver Island regional office of the Ministry of Water, Land and Air Protection (formerly Environment, Lands and Parks) released “**Environmental Objectives, Best Management Practices and Requirements for Land Developments**” in March 2001. This manual is aimed to provide local governments with a consistent, proactive response in the environmental review of land development and management proposals.
- A **Partnership Committee on Agriculture and the Environment** was struck in 1998, with membership from provincial and federal agriculture, fisheries and environment agencies as well as representatives of municipal and agriculture interests (see Appendix A). The committee has developed an Agricultural Watercourse Maintenance Guide that aims to provide for adequate drainage and irrigation of productive agricultural lands while protecting valuable fishery resources. The guide is intended to provide farmers and local governments with direction on how to proceed with maintenance works under various conditions. Work to refine the Guide is ongoing.

RDN initiatives: The RDN has already applied many of these new tools in its bylaws and planning processes, and has undertaken several other initiatives that affect environmental protection in the region:

- In partnership with Ministry of Water, Land and Air Protection (MWLAP), the Canadian Wildlife Service and Fisheries and Oceans Canada (DFO), the RDN developed an "**Environmentally Sensitive Areas Atlas**". It overlays data about watercourses and environmentally sensitive areas on air photo and cadastral (property line) maps to produce a series of maps that identifies these areas for planning and development purposes. Since its first release in 1998, RDN staff and federal agencies have been field checking and updating the information in response to planning and development priorities.
- Environmentally sensitive areas and watercourses have been designated as **environmental development permit areas** (DPAs) as part of updates to local official community plans throughout the Regional District. These DPAs designations are intended to provide direction and conditions for development to occur in ways that avoid or mitigate impacts on environmental functions and features. While restrictions on extent or types of land uses may result, the intent is not to prohibit development in these areas.
- The RDN signed a **Memorandum of Understanding** in 2000 with the regional offices of the MWLAP and DFO regarding an intergovernmental partnership agreement for the protection of the environment. Its purpose is to:
 - "develop and implement a new collaborative process for the efficient delivery of services in the areas of environmental permitting and protection";
 - "build a more cooperative framework to support the protection of designated aquatic, fish and wildlife habitats, and enhance water management and pollution prevention activities"; and
 - recognize the RDN's authority "to assess and determine environmental impacts associated with the development of land within the RDN".
- The RDN's **Liquid Waste Management Plan** was completed in 1998 and approved by the Minister of WLAP in early 1999. It sets out long term planning and policy direction for liquid waste (sewage) and stormwater management.
- In partnership with MWLAP and the federal Georgia Basin Ecosystem Initiative, the RDN is involved in a **Stormwater Management Planning pilot project** to develop a guide for creating stormwater management plans that would be provincially applicable, and develop a pilot plan for the RDN.

4. Results of the Workshops

Two workshops were held to solicit opinions and ideas on the role of the RDN in environmental protection and the policies contained in the Growth Management Plan. The workshops had the common goal of reviewing existing and future environmental protection measures in the Regional District, but from somewhat different perspectives: from a technical and administrative level with other government agencies; and from more general, philosophical perspective with stewardship groups, community associations and the development community.

4.1 Workshop with Government Agencies - September 24, 2001

29 participants from 13 agencies attended a workshop on September 24, 2001 (see Appendix B). The purpose of the workshop was to:

- a) Discuss and clarify the regional perspective on environmental protection; what role does, and should, the RDN and the Growth Management Plan play in environmental protection in the Region?
- b) Review the Plan's current environmental protection policies and proposed revisions to them.

A set of suggested policy topics or "themes" that could be addressed in the Plan, and very preliminary revisions to the Goal 4 policies, formed the basis of the review. Highlights of the conclusions and recommendations from that review follow; *please refer to Appendix B for a complete listing of comments.*

- "Growth" throughout the Plan should be defined and discussed in the context of regional sustainability. What does growth mean: population growth, economic growth, resource use growth, and quality of life growth?
- A broad vision of environmental sustainability should be developed, rather than focusing on the protection of specific environmental features. The linkages to human health should be shown.
- The policies should be stated from a RDN perspective; i.e., what the objectives of the RDN are and what the RDN and member municipalities will do to achieve them. The policies should not propose to commit senior agencies or First Nations to specific objectives or actions, as they may conflict with the mandates of these agencies or be perceived as fettering their discretion. Instead, a general statement regarding partnerships with other orders of government to achieve environmental goals should preface the policies.
- "Development" needs to be defined, and the forms of development that the RDN can and cannot regulate clarified.
- "Protection" should be considered to include not just land use regulation but also acquisition, incentives and volunteerism. Terms such as "protect", "preserve", "maintain", and "promote" should be used consistently.
- The level of public support for the existing policies or for new directions in environmental protection should be determined before new or revised policies are drafted. However, based on new thinking and the initiatives taken since the Growth Management Plan was adopted in 1997, participants recommended the following topics be addressed in the Plan:
 - Intergovernmental coordination (including, in particular, First Nations involvement).
 - Watershed-based planning (an integrated ecological approach to land use planning based on watersheds).
 - Climate change (as the context for addressing air quality).
 - Species at risk/biodiversity.
 - Water conservation.
 - Groundwater management (as it can be related to land use planning and management).
 - Energy conservation.

- Aggregates management (indicating the RDN's interest despite limited jurisdiction).
- ALR/FLR (recognizing the RDN's interests, though limited jurisdiction)
- Solid waste and liquid waste management.
- Landowner partnerships.
- Parks (the role of the RDN's Parks Plan in growth management should be addressed elsewhere in the Plan, and cross referenced in Goal 4 as one means of environmental protection).

4.2 Workshop with Non-governmental Organizations - September 27, 2001

21 representatives from 19 local organizations attended a workshop on September 27, 2001 (see Appendix C). The purpose of the workshop was to:

- a) Provide an overview of the RDN's Growth Management Plan (GMP), its Goal 4 "Environmental Protection", and the GMP Review Project.
- b) Seek the views of the participants on the role of the Regional District of Nanaimo in environmental protection.
- c) Obtain their opinions and ideas on the policies in Goal 4.

The overview of the GMP, the GMP Monitoring Report for 2000, and the Environmentally Sensitive Areas Atlas generated considerable discussion about the RDN's role in environmental matters. The remainder of the agenda was facilitated by two worksheets that asked questions about topic areas on which the RDN should focus its resources, and the level of support for the Goal 4 policies. The following highlights some of the key points raised during the discussion and in the worksheet responses. *Please refer to Appendix C for a complete listing and to capture the flavor of the responses.*

Worksheet 1: "Should the Regional District be more active in environmental protection? In what areas should the Regional District be more/less active than it is now?"

- All but one response indicated that the RDN should be more active in environmental protection. However, some participants thought that they knew too little about what the RDN does, and has jurisdiction to do, in the environmental field to understand what "more active" means.
- Some participants expressed frustration over the lack of coordination among federal, provincial and local governments in the environmental arena. Several felt that no levels of government were very effective in protecting the environment.
- Protection of streams/aquatic habitat, terrestrial ecosystems, groundwater and coastal areas received highest ratings as areas in which the RDN should focus. However, almost all participants found it difficult to "rate" the topic areas presented in the worksheet. They saw many, if not all the topic areas were interconnected, and that no one area could be treated in isolation.
- Virtually all participants urged the RDN to take a holistic, ecosystem-based perspective in addressing the environment. Planning and regulation on the basis of watersheds was strongly supported. Watersheds were seen as the common denominator for protecting aquatic and terrestrial ESAs, maintaining surface water quality and quantity, protecting groundwater and coastal areas, and managing liquid and solid waste.
- There was considerable discussion over how "protected" status was represented in the material presented. It was pointed out that because development permit areas (DPA) have no effect on forestry and farming, that to show the streams in ALR and FLR areas as "protected" by a DPA designation is misleading.

Worksheet 2: "Please indicate the extent to which you agree or disagree that the policy and guideline statements currently contained in Goal 4 should be retained in the Growth Management Plan. Are there additional policies or guidelines that you would like to recommend for consideration as the Growth Management Plan is updated? Do you have any comments on other goals that relate to the environmental protection goal)? Any suggestions for improvement to other areas of the Growth Management Plan (GMP) to ensure consistency with your views on environmental protection?"

- Limiting growth and determining the environment's carrying capacity to support human population were issues that participants wished to see addressed in the GMP.
- Implementation was viewed as a key element. The policies need to identify who is doing what to achieve the policy. Otherwise, the policies are only (as one respondent put it) "philosophical motherhood statements". Questions were also raised about the resources to achieve these policies.
- Watershed-based approaches to addressing aquatic and terrestrial habitat protection, surface water and groundwater quality and quantity were emphasized.
- Park designation as an indicator of, and means for, environmental protection was questioned. Some felt it was difficult (or impossible) to reconcile the recreational role of parks and trailways with a conservation mandate.
- More comprehensive measurement and reporting of air quality, and strengthening the link between nodal development, reduced vehicle use and better air quality were accentuated.
- Greater public education of their role in environmental protection, using a range of methods and media, was seen as a priority.
- Some participants expressed concern about the effect of policies regarding watercourse, ESA and coastal area protection on individual owner rights. One respondent noted that "the public cannot expect individuals to bear the cost of down zoning, or encumbering their land without compensation". In the discussion, some other participants argued that owners need to be aware and accept the limitations of owning environmentally sensitive or significant lands when they purchase them.
- One participant questioned the "rigidity" of the urban containment boundary, opining that a more flexible approach could address some current environmental problems such as improved septic systems as an alternative to the costs of connecting to a sewage system or siting more treatment facilities.
- Concern was also expressed over balancing increased environmental protection with supporting development, business and achieving the other goals of the GMP.

5. Conclusions and Recommendations

Several parallel themes were expressed in both workshops regarding potential revisions to the Growth Management Plan:

- Recognizing that protecting the environment is not merely a matter of protecting special sites or preventing pollution, but is an integral part of sustaining our economy, communities and life support systems.
- Taking a holistic, ecosystem-based approach to environmental protection, using watersheds as the basic unit for addressing land and water-based issues.
- Linking environmental protection to the other goals of the GMP.
- Reducing overlap, clarifying roles, and generally improving coordination among orders of government in land and resource use approvals.
- Defining "development" clearly, and explaining the limits in the RDN's jurisdiction in addressing all aspects of land use, particularly with respect to the Agricultural Land Reserve (ALR) and Forest Land Reserve (FLR).
- Addressing parks and trail corridors in the Growth Management Plan (GMP) but clarifying their role in protecting the environment.
- Strengthening public education and information around environmental stewardship, and working with landowners to achieve environmental protection that benefits both them and the public interest.

There are also legislative changes and new initiatives since the Plan was adopted in 1997 that should be taken into account in its update. These include:

- Amendments to official community plans that reflect environmental protection goals,
- New directions regarding stormwater and runoff management,
- The use of development approval information in impact assessments,
- The use of security and landscaping requirements in the interests of restoration and replanting,
- Meeting the intent of the Fish Protection Act and Streamside Protection Regulation,
- Ongoing refinement of the RDN Environmental Sensitive Area Atlas and its database,
- The evolving role of intergovernmental and private-public sector partnership agreements, and
- Continued developments in liquid and solid waste management.

The results from the workshops, along with recognition of the changes since 1997 form the basis of the following recommendations regarding Goal 4 of the Growth Management Plan.

5.1 Recommendations

5.1.1 Goal 4 - General

The following recommendations relate to the "philosophy" expressed in the Goal 4 statement and its subtext.

1. **Emphasize the significance of the environment to the overall sustainability of the region.** Too often, the environment is viewed as an impediment to economic activity; the fundamental role that the environment plays in supporting economic and social well-being is forgotten. The following quote provides an apt perspective:

"While living systems are the source of such desired materials as wood, fish and food, of utmost importance are the services that they offer, services that are far more critical to human prosperity than are nonrenewable resources... A healthy environment automatically supplies not only clean air and water, rainfall, ocean productivity, fertile soil, and watershed resilience but also such less appreciated functions as waste processing, buffering against the extremes of weather, and regeneration of the atmosphere."¹

As our "green infrastructure", the environment should be presented as an integral component of the future growth and development of the region.

2. **Recognise the need to take an integrated, ecosystem-based approach to environmental matters.** It is easy to become focused on specific environmental issues such as ESAs or ground water or air quality. Workshop participants, however, emphasised getting away from "compartmentalising" aspects of the environment, and rather treating the environment as a system. The Goal statement should recognize the need to protect natural *systems* and their functions.
3. **Address coordination broadly.** Goal 4 now states: "*The Growth Management Plan calls for coordinated efforts to protect and restore the environment*". This implies coordination primarily among federal, provincial and local government agencies. However, Goal 4 should indicate that environmental protection requires coordinated action on the part of not just governments but all landowners, and land and water users in the region.

It should particularly emphasize coordination and collaboration with the three First Nations in the Region, as they have significant historical, political and philosophical roles in environmental protection and sustainability.

5.1.2 Goal 4 Policies - general

The following recommendations relate to the policies under Goal 4 collectively.

4. **Make implementation an integral part of each policy statement.** State the policy objective, but also how the RDN and member municipalities intend to achieve the objective. For examples, "will do's" are now included in the subtext of policy statements. Some of these could be incorporated as sub-points of the policy statements, which would then provide better direction to staff and the public regarding actions to take, as well as provide indicators of implementation of the Growth Management Plan.
5. **Address land and water aspects from a watershed basis.** This does not mean "watershed planning" but rather recognising the role that watersheds play as an ecological unit in community plans, servicing plans, stormwater management and regulating future development.
6. **Address all aspects of environmental "protection".** As was pointed out at a workshop, "protection" is not just better regulation but also encompasses acquisition, information and education, providing incentives and supporting volunteerism. Policies under Goal 4 should address all of these aspects of protection. For example:
 - Regulation: In the last 5 years, the RDN and member municipalities have established a variety of Development Permit Areas (DPA) in official community plans to protect environmental features. This should be recognized in the Growth Management Plan. However, there are misperceptions about what DPAs mean by way of regulating versus prohibiting land use activities within DPA designated areas. The flexibility

¹ P.Hawken, A. Lovins and L.Hunter Lovins. 1999. *Natural Capitalism. Creating the next industrial revolution.* Little, Brown and Co. p.3

of this tool, as well as its limitations (e.g., respecting its applicability to land uses on ALR and FLR lands) should be explained in any policy supporting its continued application.

- Incentives: Landowners and developers often view many environmental protection measures as removing their land use rights or devaluing their property. It is important to clarify the flexibility of many regulatory tools, such as DPAs. It is also important to provide incentives to encourage land development design that takes ecosystems and ecological features into account. Examples might be policies to support density bonusing, "green space" (clustered) development or density transfers under Goal 2 or 4.
 - Acquisition: The Plan should be explicit about the RDN's policy regarding acquiring environmentally important areas and corridors as parks, and the role of the regional park system in environmental management; see recommendation #10 regarding parks and open space.
 - Information, education and volunteerism: The RDN should consider developing policies regarding cooperation with and support for stewardship groups. A key area of coordination with the non-profit sector can be in developing landowner contact programs and public information and education.
7. **Strengthen the linkages and cross-references among goals.** Documents like the Growth Management Plan are often written in "pieces" by different authors versed in their particular field, but with limited awareness of the other parts. Several topics identified at the workshops as needing more attention in Goal 4 are already addressed in other goals; e.g., liquid waste management and water conservation are covered in Goal 7. The environmental significance of these policies could be reinforced in these other goals, and the reference to them strengthened in Goal 4. Similarly, discussion of topics like air quality in Goal 4 could be reinforced by making the connections to vehicle use reduction in Goal 5 and nodal development in Goal 2.
8. **Be clear about what the RDN has jurisdiction over regarding the environment.** The limits of existing or proposed regulatory measures, such as the use of development permit areas in ALR and FLR lands, needs to be apparent to all readers of the Plan.

5.1.3 Goal 4 - New or Enhanced Topics

The following recommendations address specific topics that were raised in the workshops as requiring attention in the Growth Management Plan.

9. **Growth limits and carrying capacity:** consider defining "growth" in Section II of the Plan in terms of population, economic, land use, and quality of life. Consider expanding on the discussion on page 18 regarding "Growth cannot continue indefinitely" and "Growth can be used to improve RDN communities". There is reference to "in the long term, a steady state (rather than growth dependent) model will need to be adopted in the RDN and globally". What would this look like from a RDN perspective? Starting to create a picture can begin the process of making it happen.
10. **Parks and open space:** The role of parks and the RDN Park System Plan needs to be addressed in the Plan, but under a goal that addresses community sustainability and liveability. Incorporating it under Goal 4 alone confuses the dual role of parks as environmental protection measures and places of public enjoyment and recreation.

However, there are significant linkages that should be made with Goal 4, in terms of using parks as a protection tool. The RDN Park System Plan contains several significant environmentally related elements. These include:

- Regional Parks: "provide representation of the 4 distinct landscapes of the region... to accommodate the enjoyment and appreciation of the sites in a manner which assures their natural qualities are unimpaired".
- "Greenbelts": "to secure and protect for all time regionally significant components of open space, productive or threatened habitat and sensitive landscape features which contribute to the inherent liveability of the region and the protection of its natural resources and landscape character. Human access may be possible in some cases where natural resources are not disturbed. Greenbelts which provide for human use are referred to as Greenways."

Support for these elements needs to be verified in the Growth Management Plan. It should also recognize the balance needed between meeting recreational needs and protecting ecological features and functions.

11. **Waste management:** Policies regarding liquid waste management are already incorporated in Goal 7. A new policy regarding solid waste management could also be established under Goal 7 to be consistent with the relationship to efficient servicing. Alternatively, a general "waste management" policy could be inserted with solid and liquid components. In either case, Goal 7 could reinforce the role that these activities play in protecting the environment and as key components of the Region's "green infrastructure"; Goal 4 could then make reference to Goal 7 on these topics.
12. **Stormwater management:** This topic should be incorporated in Goal 4 due to its obvious tie to watershed-based planning and strong linkage with aquatic habitat protection and flood hazard management. A policy should refer to the RDN's work in piloting a regional stormwater management plan.
13. **Aggregates management:** The RDN has limited jurisdiction in this area. However, a policy could indicate the RDN's interest in collaborating with the Ministry of Energy and Mines on aggregates management in the interest of environmental protection. It may be most appropriate to cover this under Goal 8 regarding intergovernmental cooperation.
14. **Agricultural and Forest Land Reserves:** The RDN has little jurisdiction over forestry and farming activities, and hence, has considerably less authority over land uses in the ALR and FLR as compared to settlement areas. This should be clarified in the Plan. Much of what the RDN may wish to accomplish by way of environmental protection would require the cooperation of the Agricultural and Forest Land Reserve Commission. It may be more appropriate to cover this under Goal 8 regarding intergovernmental cooperation.
15. **Water conservation:** Policy 7E under Goal 7 already addresses water conservation. A linkage should be made to Goal 4.

5.1.4 Goal 4 Policies - specific

The following recommendations ("shoulds") and suggestions ("coulds") relate to individual policies and guidelines currently under Goal 4.

"4A: A program of open space protection will be developed by local, regional and senior governments, including implementation of the Regional Parks System Plan."

16. This mixes the dual role of parks and open spaces for recreation and environmental protection; see recommendation 10 regarding parks and open space.

The subtext also refers to the preparation of bylaws and other regulations for environmental protection. This is a subject area that deserves its own policy. This policy should recognize the ongoing work of the RDN and member municipalities in introducing environmental protection measures in their bylaws and processes, and set objectives for addressing additional measures based on existing or new authorities under provincial legislation.

"4B. The RDN and local jurisdictions will base development and open space protection decisions on the ecological character of the land."

17. The subtext focuses on the preparation of an inventory of ESAs and its use in planning, acquisition and development design. This should be updated to recognize the Atlas that has been developed and the ongoing work to refine and apply it in plans and development reviews. How the Atlas will be used in land use decision making should be stated within the policy statement rather than just the subtext.

"4C. A system of interconnected trails, greenways, and natural corridors capable of sustaining or enhancing native plant and animal species will be established regionally."

18. As with policy 4A, recreation is being imixed with environmental protection without clarifying when this is appropriate. A policy regarding the use of greenbelts/greenways as an environmental protection tool should be combined with parks and open space. See recommendation 10 above regarding parks and open space.

"4D. Measures to protect the supply and quality of surface and groundwater will be developed and implemented in each jurisdiction."

19. This policy could focus on watershed-based approaches to planning and development, and the RDN's efforts in this regard in stormwater management planning. What the RDN intends to do with respect to groundwater could be addressed here, to emphasize the connection to surface waters, or in a separate policy with linkages to surface water protection. It should clarify that the RDN's role lies primarily in regulating land uses that may impact groundwater quality. However, good information about the location and extent of groundwater resources is vital to making informed land use decisions. Good information about groundwater was obtained as part of the development of the zoning bylaw for Electoral Area F; a similar process should be considered for other "priority" areas. Most of the expertise and resources to inventory groundwater lies with the Province. The GMP policy could indicate how the RDN proposes to work with the Province to improve groundwater inventory and management in priority settlement areas.

"4E. Development of remaining natural segments of the coastal zone will be discouraged."

20. This policy could be stated in the affirmative, and the means of achieving the protection of coastal areas included; e.g., by establishing DPAs, zones or some form of regulation over residential, commercial and industrial development.

"4F. Floodplains and other aquatic features will be protected or restored to a natural condition."

21. The subtext focuses on preventing the filling of floodplains, wetlands, streams, etc. This should be linked to watershed-based planning and development, and clarify the measures that will be taken or are ongoing. The RDN should also clarify its role with respect to restoration. Is it an active role (i.e., undertake restoration projects); a regulatory role (i.e., require restoration as mitigation or compensation measures under development approvals); or support role (i.e., support volunteer groups with the provision of information, support letters for funding, matching funds, etc.)?

Guideline "4.1 Environmental reviews should be required for all projects with potential to negatively affect ecologically significant areas, the coastal zone or environmental quality."

22. This should be amended to reflect the RDN's adoption of a Development Approval Information and Assessment Bylaw and its application. Adopting consistent requirements across local jurisdictions should remain an objective. Consider "elevating" this guideline to a policy, or part of a policy regarding land use decision-making.

Guideline "4.2 Air quality should be protected by enacting measures to reduce automobile travel and to minimize emission pollutants from industry and other sources."

23. Given the attention air quality received in the workshops, this guideline could be "elevated" to a policy, with linkages made to Goals 2 and 5. Such a policy should clarify that the authority to regulate air emissions lies with the provincial or federal government, and that the RDN's role in this respect is only advisory to these agencies. However, the RDN plays indirect but supportive roles in the following ways:
- by promoting "nodal" land use patterns that can reduce the need to use a vehicle to access jobs and services (Goal 2).
 - by planning and promoting transit and other "green" transportation modes (Goal 5).

- by regulating burning to reduce air-borne particulates (an aspect of the RDN's role in waste management).
- by urging the Province to improve monitoring and reporting of air quality indicators in the Region.

A policy on air quality should also make reference to climate change and the national and provincial goals of reducing greenhouse gases, and to human health, particularly the significance of particulates in respiratory problems.

Guideline "4.3 Emphasize the use of native plant species for all new public area landscaping and restoration work."

24. Adding "as appropriate" has been suggested, since native species may not always be appropriate in limited spaces or adaptable to urban situations.

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APPENDICES