

**APPENDIX C**

**PROVINCIAL POLICY DIRECTIVES CONCERNING WATERWAYS AND WETLANDS**

## **Policy Directive W.R. 95-01**

### **Policy for Land and Water Related Developments in Protected Public Water Supply Areas**

#### **Subject:**

Policy guidelines for land and water related developments in protected public water supply areas.

#### **1.0 OBJECTIVES**

The policy will establish a mechanism for issuing a certificate of environmental approval under Section 39 of the *Water Resources Act, SNL 2002 cW-4.01* for all development activities in a designated water supply area. The implementation of the policy guidelines will ensure sustainable development of natural resources without adversely affecting water quality.

#### **2.0 LEGISLATION**

*Water Resources Act, SNL 2002 cW-4.01, Section 39*

#### **3.0 POLICY**

The existing and proposed development activities in protected water supply areas will be subject to the following policy guidelines established under Section 39 of the Act.

#### **4.0 DEFINITIONS**

"Act" means the Water Resources Act, SNL 2002 cW-4.01.

"Development" means the carrying out of an activity or operation on, over, or under land or water for social or economic benefits, or the making of any change in the use of the intensity of use of any land, water, building or premises.

All other definitions appearing in the Act shall equally apply to this policy when employed herein.

#### **5.0 APPLICATION OF THE POLICY**

5.1 This policy shall apply to public water supply areas designated under Section 39 of the Act.

5.2 Existing resource development and other activities will be allowed to continue unless it is established that these are impairing water quality or have potential to impair water quality.

5.3 If it is established that a particular activity is a source of pollution, then appropriate measures as outlined in Sections 11, 12 and 13 of this policy directive will apply.

5.4 The Minister may require proponents of existing activities, which have potential to impair water quality, to obtain his/her approval.

5.5 No development shall be carried out in a designated area except in accordance with this policy.

5.6 No person shall carry out any development in a designated area without obtaining prior approval in writing from the Minister.

## **6.0 ACTIVITIES NOT PERMITTED IN A DESIGNATED AREA**

6.1 Placing, depositing or discharging or permitting the placing, depositing or discharging into a body of water any sewage, refuse, chemicals, municipal and industrial wastes or any other material which impairs or has potential to impair water quality.

6.2 Using an intake pond, lake or specified buffer zones for any activity detrimental to water quality and not permitted in the Act.

6.3 Using ice covered water body for transporting logs, riding skidoos/motor vehicles/all-terrain vehicles, leading of animals, or any other activity which impairs or has potential to impair water quality.

6.4 Using or operating existing facilities in such a manner which impairs or has potential to impair water quality.

6.5 Residential development (a sub-division of four or more lots), vehicle maintenance facilities, warehouses, service stations, industries, and chemicals and salt storage depots.

6.6 Storage and disposal of pesticides and manure, application of manure and chemicals in specified buffer zones, extensive land clearing, and peat land drainage without adequate treatment.

6.7 Clear cutting of forest in sensitive areas, establishment of camps and camp facilities, storage of chemicals, application of pesticides, drainage of peat land for afforestation, and application of toxic fire retardants.

6.8 Resorts, hotels/motels, and golf courses.

6.9 Activities, operations or facilities associated with aggregate extraction and mineral exploration such as work camps, vehicle parking and maintenance facilities, washing of aggregates, asphalt plants, discharge or deposit of waste material into a body of water, and significant disturbance to land for mineral exploration purposes.

6.10 Application of herbicides in the right-of-way, and use of chemically treated utility poles and other related structures.

6.11 Aquaculture development and associated activities having potential to impair water quality.

6.12 Processing and manufacturing plants having potential to impair water quality.

6.13 Cemetery, waste disposal facilities, and any other storage or disposal facilities that the Minister considers environmentally unacceptable.

## **7.0 ACTIVITIES REGULATED IN A DESIGNATED AREA**

In a designated area, no person shall undertake any of the following activities without obtaining prior written approval from the Minister:

7.1 Expansion and upgrading of the existing activities, operations or facilities.

7.2 Construction of residential, commercial, industrial and institutional facilities or any other related activity including land clearing or drainage, construction of access roads, servicing of lands for subsequent use, or extension and upgrading of existing buildings or facilities.

7.3 Development of farm lands for crop production, forage production, vegetable production, and blueberry and other fruit production.

7.4 Forest logging, resource road construction and use, stream crossing for controlled access, preparation of skid trails and landing areas, silvicultural activities, tree farming, and other environmentally acceptable forestry operations.

7.5 Recreational activities or facilities including cottage development, fishing, swimming, boating, hiking, camp grounds, or canoe routes, vacation or other camps, or recreational facilities.

7.6 Mineral exploration related activities and aggregate extraction, or any other construction activity incidental to mining and quarrying including access roads, stream crossings, land drainage with adequate treatment, land clearing and excavation.

7.7 Installation of storm or sanitary sewer pipelines, pipelines for transmission of water for hydroelectric generation, agriculture uses, or any other purposes.

7.8 Construction of roads, bridges, culverts, and other stream crossings, and installation of power and telecommunication transmission lines.

7.9 Modification to intake structures, pumphouse, reservoir, etc. will require approval under Section 37 of Act.

7.10 Any other development or activity which, in the opinion of the Minister, has caused impairment or has potential to impair water quality.

## **8.0 APPROVAL PROCESS**

8.1 The proponent shall submit a detailed development plan along with maps, drawings and specifications and other information as required by the Minister for approval.

8.2 The Minister may, on the recommendation of his/her officials, issue a certificate of approval for the proposed development on such terms and conditions as the Minister considers necessary to protect water quality.

8.3 The proponent shall obtain separate approvals from the Minister under Section 48 of the Act, for all permanent or temporary stream crossings or for alteration to bodies of water that may be necessary to carry out the approved development.

8.4 The proponent shall also obtain licences, permits or approvals under other acts and regulations as required prior to commencing the approved work.

8.5 The proponent of the approved development shall notify the municipal authority or the person responsible for the operation and maintenance of the waterworks by providing a copy of the approval issued under this policy before commencing the work.

8.6 The proponent shall maintain adequate liaison and consultation with the person or authority responsible for the operation and maintenance of the waterworks during the implementation and operation of the approved work.

8.7 The Minister may require the inspection of the approved development from time to time by his/her officials to ensure that the development is carried out in an environmentally acceptable manner and the proponent is complying with the terms and conditions of the approval.

8.8 The Minister may require a proponent to monitor water quality according to a monitoring program approved by the Minister in order to evaluate the impact of the approved development on public water supply.

8.9 The Minister encourages the departments and agencies responsible for resource management and affected by this policy to develop environmental protection guidelines for resource utilization in protected water supply areas, for compliance by proponents or developers.

## 9.0 BUFFER ZONES

9.1 The proponents shall provide the following widths of buffer zones along and around water bodies from the high water mark in a designated area:

<u>Water Body</u>	<u>Width of Buffer Zones</u>
Intake pond or lake	a minimum of 150 metres
River intake	a minimum of 150 metres for a distance of one (1) km upstream and 100 m downstream
Main river channel	a minimum of 75 metres
Major tributaries, lakes or ponds	a minimum of 50 metres
Other water bodies	a minimum of 30 metres

9.2 No development activity shall be permitted in buffer zones except those which are intended to promote vegetation.

## 10.0 RESPONSIBILITIES OF MUNICIPAL AUTHORITY

The municipal authority or person responsible for the operation and maintenance of a waterworks shall:

10.1 Ensure that no development activities are undertaken in a designated area without approval from the Minister.

10.2 Ensure that approved development activities are undertaken in strict compliance with the terms and conditions of the approval.

10.3 Where an approval or this policy is violated, serve a stopping order on the violator after obtaining prior approval from the Minister for stopping any work or operation either permanently or temporarily which is not carried out according to the terms and conditions of the approval and has impaired or has potential to impair water quality.

10.4 Request the Minister for the appointment of a Watershed Monitoring Committee and the development of a watershed management plan, if the designated area is under increasing pressure for multiple development activities.

### **11.0 CORRECTION OF HARMFUL CONDITIONS**

If the quality of water has been impaired by any activity, practice, or action taken deliberately, negligently or accidentally, the Minister may order the proponent

- i. to provide alternate water supply for the affected community for as long as is necessary to restore the existing water supply system;
- ii. to restore the water quality to its original condition; or
- iii. to take necessary measures including the removal of facilities, undertakings, cabins, etc. and to rehabilitate the affected area at his/her expense in order to rectify the water pollution related problems.

### **12.0 CERTAIN POWERS OF THE MINISTER**

#### **(A) Cancellation of Approval**

The Minister may revoke an approval:

12.1 For failure of the proponent of any development or activity to comply with the terms and conditions stipulated in the approval.

12.2 Where the approval was issued in error on the basis of incorrect or incomplete information.

12.3 Where the approved activities or operations are causing or have potential to cause impairment of water quality for reasons not anticipated at the time the approval was issued.

#### **(B) Changing Boundaries**

The Minister may change the boundaries of a designated area either to enlarge or reduce its size.

### **13.0 OFFENCE**

A person who undertakes any development or activity in a designated area without prior written approval from the Minister is guilty of an offence under the Act.

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## **Policy Directive W.R. 96-01**

### **Policy for Flood Plain Management**

#### **1.0 INTRODUCTION**

Land use within flood plains involves trade-offs between flood risk and development. Flood risk takes the form of danger to health and safety, financial costs associated with property damage and degradation of water resources and the environment. Some factors associated with flood risk such as flow velocity, upstream inundation, erosion potential or environmental impacts may be severe. Consequently, new land development should therefore be restricted or prohibited. However, where conditions are not as severe, some types of development and land use may occur safely provided certain terms and conditions apply.

#### **2.0 OBJECTIVES**

- to prevent loss of human life and avoid personal hardships,
- to minimize flood damage to properties, infrastructure and the environment,
- to restrict activities which would degrade water resources,
- to maintain the natural capability of waterways to convey flood flows,
- to minimize disruption of transportation, social and business activity, and,
- to minimize costs to the taxpayers of Newfoundland and Labrador.

The unwise development of land in flood plains has historically taken place in many areas of the province probably due to a natural tendency for settlers to utilize land that is near bodies of water. Unfortunately, the potential for flooding is often recognized only after it is too late. The basic operating premise of this policy is that these problems will not materialize if development takes place in a manner that does not place it at any risk of flooding.

The policy will address Crown land, developed land and undeveloped land. Where lands that are subject to periodic flooding are still directly owned by the Crown, those lands will not be transferred to private developers or municipalities. However, where land is already alienated, it is necessary to determine the risk of flooding and to discourage potential development by planning, zoning regulations and by removing any economic advantages or subsidies that would otherwise encourage such development. Finally, where development has already taken place or cannot be avoided, policy is intended to minimize potential flood damage by ensuring that flood proofing measures are implemented and that the development does not further exacerbate the flooding problem by impeding flows or by unduly constricting the flow channel. The policy also takes climate change into consideration.

#### **3.0 BACKGROUND**

##### **Canada - Newfoundland Flood Damage Reduction Program**

Under the Canada - Newfoundland Flood Damage Reduction Program, both governments agreed that public funds would not be used or provided for development projects in flood risk areas. To identify these areas, hydrotechnical studies were carried out for 37 communities in the province. Without

exception, the main recommendation in each study was that the implementation of proper flood plain management policies would minimize flood risk.

#### 4.0 LEGISLATION

*Water Resources Act*, SNL 2002 cW-4.01, ("the Act") sections 30, 32, 33, 34, 35, 48, 64 and 90, the *Lands Act* SNL1991 CHAPTER 36 Section 7.

### 5.0 DEFINITIONS

Body of Water	(Statutory definition from the Act) "body of water" means a surface or subterranean source of fresh or salt water within the jurisdiction of the province, whether that source usually contains liquid or frozen water or not, and includes water above the bed of the sea that is within the jurisdiction of the province, a river, stream, brook, creek, watercourse, lake, pond, spring, lagoon, ravine, gully, canal, wetland and other flowing or standing water and the land usually or at any time occupied by that body of water;
Flood Plain	An area adjacent to a lake, river, seashore etc. which is inundated or covered with water on average at least once in 100 years. Note that a flood plain is considered to be an integral part of a body of water as defined above because it includes "the land usually or at a time occupied by that body of water" and "whether that source usually contains water or not".
Designated Area	A specific flood plain in a community for which a hydrotechnical study has determined the extent of flooding and for which flood risk maps are available. The designation is in accordance with the Canada - Newfoundland Flood Damage Reduction Program Agreements.
Floodway	The portion of a flood plain where the most frequent flooding occurs and where the flow of water is fastest. This area is determined on the basis of the 1 in 20 year (1:20) return period flood.
Floodway Fringe	The portion of a flood plain where less frequent flooding occurs and where the flow of water is considered to be tranquil. This area is where flooding occurs up to 1 in 100 years (1:100) on average.
Climate Change Flood Zone	Based on extension of the floodway fringe, this is the area which is likely to be impacted due to the latest forecasted affects of climate change.
Other Flood Risk Area	An area where flooding is known or has some probability to occur due to unique or unusual circumstances such as areas subject to shoreline recession, areas downstream of dams or areas adjacent to watercourses potentially prone to ice jams.
Flood Control Area	An area that is subject to periodic flooding which has been designated (by the Department) a control area in order to reduce the risks to public health and safety and property damages. This area shall normally be treated as a floodway zone (1:20), unless otherwise determined by the Department.
Buffer Zone	A zone of land that is in its natural state and that is intended to separate developed areas from bodies of water to provide basic protection of water resources. This zone may coincide with a Crown land reservation of a shoreline as prescribed by Section 7(1) of the <i>Lands Act</i> . In the absence of specific setback requirements (depending on the activity) the buffer is taken to be 15 metres measured from the high water mark which in turn is understood to be the 1 in 100 year (1:100) high water mark or the Climate Change Flood Zone, where they have been identified.
Coastal Area	The interface or transition area where the land meets the sea/ocean or large inland lakes. The coastal area can be flooded due to storm surges, high tides or waves, erosion, rising sea level, or reclaimed land.

## 6.0 POLICIES

### 6.01 Development Requires Written Approval

Development in a designated flood risk area, development in a flood plain and development in a climate change flood zone shall be subject to the prior written approval of the Minister of Environment and Conservation (the “Minister”) in accordance with the *Act*.

### 6.02 Project Categories

In general, it is the policy of the Department of Municipal Affairs and Environment (“the Department”) that flood plains and the buffer zone be preserved and left in their natural state. Recognizing that this is an ideal that would hinder significant benefits that could be derived from certain development in a flood plain and outweigh all risk of loss, damage or peril, this policy for flood plain management views any application to avail of land in flood risk areas in decreasing order of preference. These preferences are referred to hereafter as project categories.

1. **Temporary alterations** in a buffer zone, a climate change flood zone, a designated floodway fringe, a flood plain, a designated floodway, and lastly, the body of water itself.
2. **Non-structural uses** such as open space recreation, pasture, and wildlife habitat enhancement.
3. **Structures related to use of water resources** such as wharves, slipways, boathouses, pumping stations, storm or sewerage discharges.
4. **Minor structural or other projects** where only soil disturbance is involved such as constructed trails, pipelines, transmissions lines, roads, etc., assuming there will be no change in the grade of the land.
5. **Other structures not used primarily for residential**, commercial, industrial or institutional purposes where there will be a change in grade but not a building.
6. **Industrial uses related to the marine shipping** or fishing industries.
7. **Other industrial and commercial** development.
8. **Institutional** developments such as hospitals, senior citizens homes, homes for special care or schools where flooding could pose a significant threat should evacuation become necessary.
9. **Residential and other institutional** development.

### 6.03 Hydraulic Structures

A special class of structures which includes most hydraulic structures such as dams, bridges, causeways, dykes, canals etc., are by their own needs and characteristics constructed in buffer zones and flood plains and consequently, no preference can be assigned. However, such structures are the subject of the *Act* and every effort must be made to ensure that such structures do not adversely affect the capability of the body of water to convey flow. In the case of dams, new areas of flooding and the impact of that flooding must be fully assessed by the proponent.

## 6.04 Project Classifications

Table 1 below indicates whether not project categories are permitted in each of the defined flood plains.

Category	Where Flood Plains are Designated			
	All Flood Plains	Floodway (1:20 year Zone)	Floodway Fringe (1:100 year Zone)	Climate Change Flood Zone
<b>Temporary alterations</b>	Permitted	Permitted	Permitted	Permitted
<b>Non-structural uses</b>	Permitted	Permitted	Permitted	Permitted
<b>Structures related to use of water resources</b>	Permitted	Permitted	Permitted	Permitted
<b>Minor structural or other projects</b>	Permitted	Permitted with conditions*	Permitted with conditions*	Permitted with conditions*
<b>Other structures not used primarily for residential</b>	Permitted with conditions*	Permitted with conditions*	Permitted with conditions*	Permitted with conditions*
<b>Industrial Uses related to shipping (marine only)</b>	Permitted with conditions*	Permitted with conditions*	Permitted with conditions*	Permitted with conditions*
<b>Other industrial and commercial</b>	Not Permitted	Permitted with conditions**	Permitted with conditions*	Permitted with conditions*
<b>Institutional</b>	Not Permitted	Not Permitted	Not Permitted	Not Permitted
<b>Residential and other institutional</b>	Not Permitted	Not Permitted	Permitted with conditions*	Permitted with conditions*
<b>Hydraulic Structures</b>	Permitted	Permitted	Permitted	Permitted

\* - See Section 6.05 for special terms and conditions related to necessary flood proofing measures.

\*\* - See Section 6.06 for special terms and conditions related to necessary flood proofing measures.

Note: All permits contain standard terms and conditions.

## **6.05 Projects Permitted Where Flood Plains Are Designated**

In Table 1 where projects may be permitted with conditions, the following conditions will apply:

- i. the ground floor elevation of the structure is higher than the 1:100 year flood level and the climate change flood zone (where designated), and,
- ii. the structure will not interfere with the flow of water or displace water such that it creates a worse flooding situation for other properties, and,
- iii. the structure and the associated utilities must be designed and constructed in accordance with the approved flood proofing guidelines of the Department and entrances and exits from the building can be safely used without hindrance in the event of a flood, and,
- iv. the proposed use of the facility and site will not involve any storage of pollutants such as fuels, chemicals, pesticides etc., and,
- v. additional conditions which may be appropriate for specific projects and included in a permit issued under Section 48 of the Act.

## **6.06 Projects Permitted in Coastal Floodway Where Flood Plains Are Designated**

In order to accommodate tourism activities in coastal areas, such as eateries, attractions, tourist information booths, tour headquarters etc., in Table 1 if the floodway (1:20 year zone) flooding in a coastal community is primarily due to backwater effects of the ocean and extreme high tides and consequently the flow velocities in the floodway are low, the following conditions will apply:

- i. only a tourism related structure and the associated utilities are permitted. The tourism related structures and the associated utilities does not include accommodations such as motels or hotels, and,
- ii. the tourism related structure and the associated utilities would not be eligible for flood disaster compensation, and,
- iii. the ground floor elevation of the structure is higher than the 1:100 year flood level and the climate change flood zone (where designated), and,
- iv. the structure will not interfere with the flow of water or displace water such that it creates a worse flooding situation for other properties, and,
- v. the structure and the associated utilities must be designed and constructed in accordance with the approved flood proofing guidelines of the Department and entrances and exits from the building can be safely used without hindrance in the event of a flood, and,
- vi. the proposed use of the facility and site will not involve any storage of pollutants such as fuels, chemicals, pesticides etc., and,
- vii. additional conditions which may be appropriate for specific projects and included in a permit issued under Section 48 of the Act.

## **6.07 Additions and Modifications to Existing Development**

Additions, modifications, enhancements and improvements to existing structures where there is an increase in the floor area within the flood plain, will be assessed for suitability in the same way as the project category as a whole.

### **6.08 Use of Flood Risk Mapping in Municipal Plans**

Where flood risk mapping has been prepared for a community (or any city, town or area) the information in the flood risk maps must be incorporated in the Municipal Plan (if one exists) and the flood risk areas must be zoned so as to permit only those project categories specified by this policy. In the absence of official flood risk mapping, communities will be encouraged to determine flood risk areas in accordance with this Department's standard hydrotechnical methods for delineating flood risk zones and to zone those lands in accordance with this policy. Failing this, communities will be encouraged to at least make provisions in planning documents for minimum setbacks from watercourses to provide some margin of safety and to recognize potential flood susceptibility.

### **6.09 Eligibility for Flood Disaster Assistance**

Any vulnerable development placed in a flood plain or designated flood risk area after the designation and not in conformance with this policy or without approval as required by this policy, would not be eligible for flood disaster compensation if such a program of compensation were to become available through government. This policy provision does not apply to any development lawfully established in a flood plain prior to designation.

### **6.10 Use of Flood Disaster Compensation**

In the event that compensation by government is awarded to flood victims, it will be the policy of this Department to encourage victims to apply the compensation towards relocating rather than replacing or repairing damaged property in situ. If it is deemed acceptable by this Department to repair or replace damaged property in flood risk areas, then it will be required that the compensation be used firstly for appropriate flood proofing measures.

### **6.11 Flood Insurance**

Persons living or carrying out business in flood risk areas may not be able to purchase flood insurance and if available it may be very expensive. It is therefore recommended that those who are located in flood risk areas carry out flood proofing measures and have an emergency plan available.

### **6.12 Flood Control Projects**

Proposals for flood control measures such as construction of dykes, river diversions, retaining walls or flood control dams will only be considered where the alternative with the highest benefit/cost ratio is recommended. Alternatives considered may also include possible compensation for flood victims or the cost of relocating the inhabitants of the flood risk areas or maintaining the status quo.

After flood controls have been implemented, flood risk designations shall remain in effect until such time as new hydrotechnical studies have been undertaken and new flood risk areas delineated (in accordance with the Departments standards).

### **6.13 Role of Water Resources Management Division**

The Water Resources Management Division of this Department will continue as the lead agency with respect to flood plain management. This role will include but is not limited to:

- i. Evaluating all applications for approval under section 48 of the *Act* and making the appropriate recommendations in accordance with this policy.
- ii. Carrying out hydrotechnical studies, flood risk analyses and mapping to the extent possible with limited funds provided.
- iii. Continuing to monitor areas of flood risk such as Badger, Deer Lake and Steady Brook to provide flood warning and flood status reports.
- iv. Providing to the public information, data, maps, guidelines for flood proofing and other materials that will be useful in reducing flood damage.
- v. Providing technical expertise and assisting Fire and Emergency Services – Newfoundland and Labrador in the event of a flood emergency.
- vi. Continue with the ability to forecast flooding using computer models and real time data.

### **6.14 Offences**

A municipal authority or person that unlawfully alters a body of water by carrying out any development in a designated flood risk area or a flood plain without written approval from the Minister, thereby violates section 48 of the *Act* and commits an offence contrary to section 90 of the *Act*.

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## **Policy Directive W.R. 97-1**

### **Policy for Development in Shore Water Zones**

#### **1.0 INTRODUCTION**

The shore water zone is the interface between land and water, and includes the land along the edge of an ocean, or a fresh water body. The shore water zone owes its unique ecological attributes to the area encompassing both the land draining into the water body and the water body itself. Unplanned and imprudent development on shore water zones, including infilling and waste disposal, may have detrimental effects on water quality, water quantity, and on terrestrial and aquatic life and habitat. Human impacts on salt water shore zones, caused by, for example, untreated sewage disposal, surface runoff from urban and industrial sites, etc., has led to closures of bays to aquaculture and shellfish harvesting. The economic impacts of environmental damage of fresh water shore zones include loss of recreational opportunities, depreciation of land values, etc. Shore water zones are also areas that are subject to flooding, with possible adverse impacts on life and property along the zones.

#### **2.0 OBJECTIVES**

This policy will establish the criteria for issuing a permit under Section 48 of the *Water Resources Act, SNL 2002 cW-4.01*, for all development activities in and affecting shore water zones. The objective of the policy is to permit developments of shore water zones such that potential economic losses and impacts on water quantity, water quality, and terrestrial and aquatic habitats and life are minimized.

#### **3.0 LEGISLATION**

*Water Resources Act, SNL 2002 cW-4.01*, ("the Act") sections 30, 48 and 64

#### **4.0 DEFINITIONS**

##### **Body of Water**

(Statutory definition from the Act) "body of water" means a surface or subterranean source of fresh or salt water within the jurisdiction of the province, whether that source usually contains liquid or frozen water or not, and includes water above the bed of the sea that is within the jurisdiction of the province, a river, stream, brook, creek, watercourse, lake, pond, spring, lagoon, ravine, gully, canal, wetland and other flowing or standing water and the land occupied by that body of water

##### **Shore Water Zone**

"Shore Water Zone" means the land that is intermittently occupied by water as a result of the naturally fluctuating surface water level in a body of water which can be either a fresh or salt water body and, in either case, the low water mark and high water mark of the water body defining the edges of the shore water zone.

##### **Development**

"Development" means the carrying out of an activity or operation which includes construction of wharves, moorings, jetties, other docking facilities, marinas, boathouses, etc., mechanical disturbance of the land, infilling, drainage, dredging, channelization, erosion control works, and removal of vegetation on shore water zones for social or economic benefits, or any change in the use or the intensity of use of any shore water zone.

## **5.0 POLICIES**

### **5.1 High Water Level of a Water Body**

The high water level of a water body is taken to be the 1:100 year return period water level. For a fresh water body, this level includes water levels caused strictly by storm runoff or hydraulic effects of ice or both. In marine situations, the level must include maximum waves, wind setup, storm surge, and ultimate mean sea levels under current global climatic forecasts for a 1:100 year design.

### **5.2 Developments Not Permitted**

5.2.1 Infilling, drainage, dredging, channelization, or removal of surface or underwater vegetation on or along shore water zones which could aggravate flooding problems will not be permitted.

5.2.2 Infilling, drainage, dredging, channelization, or removal of surface or underwater vegetation on or along shore water zones which have unmitigable adverse water quality impacts on the shore water zones will not be permitted.

5.2.3 Infilling, drainage, dredging, channelization, or removal of surface or underwater vegetation on or along shore water zones which have significant impacts on water circulation patterns within the shore water zones or on sediment deposition or accretion or removal rates along the shore water zones will not be permitted.

5.2.4 Placing, depositing or discharging into shore water zones of any raw sewage, refuse, municipal and industrial wastes, fuel or fuel containers, pesticides, herbicides or other chemicals or their containers, or any other material which impairs or has the potential to impair the water quality of the shore water zones will not be permitted.

5.2.5 Construction of extensive paved surfaces along a shore water zone which changes the intrinsic character of the shore water zone will not be permitted.

### **5.3 Developments Requiring Written Permission**

The following developments on or along shore water zones will be permitted subject to the prior written permission of the Minister of Environment and Climate Change (the "Minister") in accordance with the Act:

5.3.1 Limited removal of surface vegetation cover for the construction of marinas, boathouses, jetties, wharves, moorings, and other docking facilities.

5.3.2 Construction of marinas, boathouses, jetties, wharves, moorings and other docking facilities which would require only minor disturbances to water circulation patterns within the shore water zone and which have limited impacts on sediment deposition or accretion rates along the shore water zone.

5.3.3 Extension and upgrading of existing buildings, structures and facilities within shore water zone areas.

5.3.4 Development related to recreational activities including the setting up of camp grounds, permanent and semi-permanent facilities, etc., along shore water zones.

#### **5.4 Implementation of Mitigative Measures**

All developments which are permitted within shore water zones and which could result in potentially adverse changes to water quantity or water quality of the shore water zone will require the implementation of mitigative measures to be specified in the terms and conditions for the environmental approval.

#### **5.5 Restoration Measures**

The terms and conditions of the environmental approval will specify the restoration measures to be implemented upon cessation of activities or abandonment of facilities on shore water zones.

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## **Policy Directive W.R. 97-2**

### **Policy for Development in Wetlands**

#### **1.0 INTRODUCTION**

Wetlands, which include bogs, fens, marsh, swamps, and shallow water, collect and store runoff, moderate and attenuate downstream flood flows, reduce downstream flooding and erosion, clean and purify water, recharge groundwater zones, and provide unique habitat for plants and animals. The wetlands of Newfoundland and Labrador are increasingly being altered from their natural state to support alternative land uses such as agriculture, urbanization, industrial development, and recreation. Unplanned and imprudent development of wetlands, including drainage, infilling, and channelization, have detrimental effects on the wetlands' and downstream water quality and water quantity, and on terrestrial and aquatic habitat, life, flora and fauna. The potential consequences of impacts on water resources include structural damage to bridges and culverts from increased flood flows; river bed erosion causing siltation; and detrimental impacts on fish resources, drinking water quality and recreational uses of water bodies.

The problem facing wetland management is that the ecological and socio-economic benefits of these ecosystems are usually not directly measurable and in many instances are not recognized until it is too late. The extensive nature of wetlands, peatlands in particular, in this province means that there is room for more developments to occur to meet social and economic needs, as long as hydrologic and environmental impacts are minimized.

#### **2.0 OBJECTIVES**

This policy will establish the criteria for issuing a permit under Section 48 of the *Water Resources Act*, SNL 2002 cW-4.011, for all development activities in and affecting wetlands. The objective of the policy is to permit developments in wetlands which do not adversely affect the water quantity, water quality, hydrologic characteristics or functions, and terrestrial and aquatic habitats of the wetlands.

#### **3.0 LEGISLATION**

**Water Resources Act**, SNL 2002 cW-4.01, ("the Act") sections 30, 48 and 64

#### **4.0 DEFINITIONS**

##### **Body of Water**

(Statutory definition from the Act) "body of water" means a surface or subterranean source of fresh or salt water within the jurisdiction of the province, whether that source usually contains liquid or frozen water or not, and includes water above the bed of the sea that is within the jurisdiction of the province, a river, stream, brook, creek, watercourse, lake, pond, spring, lagoon, ravine, gully, canal, wetland and other flowing or standing water and the land occupied by that body of water

##### **Wetland**

(Statutory definition from the Act) "wetland" means land that has the water table at, near or above the land surface and includes bogs, fens, marshes, swamps and other shallow open water areas

## **Wetland development**

"Wetland development" means the carrying out of an activity or operation which includes the construction of ditches, mechanical disturbance of the ground, alteration of normal water level fluctuations, infilling, drainage, dredging, channelization, and removal of vegetation cover and/or organic matter on a wetland for social or economic benefits, or the making of any change in the use or the intensity of use of any wetland which affects its hydrologic characteristics or functions.

## **5.0 POLICIES**

### **5.1 Developments Not Permitted**

5.5.1 Infilling, drainage, dredging, channelization, removal of vegetation cover or removal of soil or organic cover of wetlands which could aggravate flooding problems or have unmitigable adverse water quality or water quantity or hydrologic impacts will not be permitted.

5.5.2 Developments of wetlands which are located within the recharge zones of domestic, municipal or private groundwater wells will not be permitted.

5.5.3 Placing, depositing or discharging any raw sewage, refuse, municipal and industrial wastes, fuel or fuel containers, pesticides, herbicides or other chemicals or their containers, or any other material which impairs or has the potential to impair the water quality of wetlands will not be permitted.

### **5.2 Developments Requiring Written Permission**

The following developments affecting wetlands will be permitted subject to the prior written permission of the Minister of Environment and Climate Change (the "Minister") in accordance with the Act:

5.2.1 Removal of the surface vegetation cover of wetlands for extraction of peat, or for preparing the area for agricultural or forestry activities.

5.2.2 Construction of ditches, tile fields and other types of flow conveyances to drain wetlands for extraction of peat, or for preparing the area for agricultural or forestry operations.

5.2.3 Removal of the top soil or organic cover of wetlands for use as horticultural or fuel peat, or for preparing the area for agricultural or forestry activities.

5.2.4 Infilling, dredging, or any other disturbance of wetlands for the construction of permanent or temporary roads, bridges, culverts, trails, power and telecommunication transmission lines, pipelines, etc., through wetlands which would necessitate only minor disturbances to the vegetation and organic cover, the flow drainage pattern of the area and ground slope.

5.2.5 Infilling, dredging or other disturbance of wetlands for the construction of residential, commercial, industrial and institutional facilities or extension and upgrading of existing buildings and facilities within wetland areas.

5.2.6 Development related to recreational activities including the setting up of camp grounds, permanent and semi-permanent facilities, etc., on wetland areas.

5.2.7 Construction of flow control structures to alter the normal water level fluctuations of wetlands for the purposes of enhancing the quality or quantity of fish and other wildlife habitat.

### **5.3 Implementation of Mitigative Measures**

All uses and developments of wetlands resulting in potentially adverse changes to water quantity or water quality or hydrologic characteristics or functions of the wetlands will require the implementation of mitigative measures to be specified in the terms and conditions for the environmental approval.

### **5.4 Restoration Measures**

The terms and conditions of the environmental approval will specify the restoration measures to be implemented upon cessation of activities or abandonment of facilities on wetland areas.

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