

# **PART III: MANAGEMENT APPROACH**

*This Part sets out key elements of the approach taken in this Plan towards the sustainable management of Northland's land and water resources.*



## 5. MANAGEMENT APPROACH

### 5.1 INTRODUCTION

This section outlines the general approach taken in the Regional Water and Soil Plan to assist the Council:

1. To control point source discharges to land and water and to manage their effects on the environment;
2. To control land uses, and resulting non-point source discharges, for the purpose of soil conservation and the maintenance and enhancement of water quality and hazard mitigation;
3. To control the taking, use, damming, and diversion of water; and
4. To control the use and development of river and lake beds.

The methods include education, provision of information and advice, the use of industry based codes of practice or guidelines, rules and environmental standards, riparian management, the development and implementation of a comprehensive monitoring strategy and the preparation of regional plans for specific catchments.

### 5.2 EDUCATION, PROVISION OF INFORMATION AND ADVICE

Education is a key method. Without knowledge of the effects that their actions have on the environment, or the reasons why certain practices are being promoted, people may see no reason to change, especially if that change causes an inconvenience or has some financial costs associated with it. Provision of information complements education. Having recognised that their actions have an adverse effect, people need access to information or advice in order to make informed decisions on the best option to avoid, remedy or mitigate that effect.

This method requires considerable commitment from the Council and from the wider community. The Council recognises that education of resource users and provision of information will need to be carried out over the term of this Plan.

On an annual basis through the Council's annual plan process, education programmes will be prepared, based on priorities that arise from State of the Environment Monitoring reports, and on priorities put forward by the community. The Regional Council's Environmental Education Strategy will indicate long-term education directions.

Education will include school visits, seminars and field days and industry discussion group meetings, the production and circulation of pamphlets on specific topics, and the preparation of more comprehensive guidelines on matters such as efficient water use, waste treatment and disposal systems and best land management practices.

### 5.3 CODES OF PRACTICE AND GUIDELINES

Many industries have developed Codes of Practice for the range of activities that they undertake and are also reviewing them in light of the *Resource Management Act 1991*.

In this Plan, codes of practice and guidelines which are considered to be consistent with the Act have, where appropriate, been referred to as a means of achieving compliance with certain environmental standards. However, they have no legal status upon which to base enforcement action, unless they are included in this Plan as a rule. Compliance with the Code of Practice does not necessarily guarantee that the environmental standard will be met. Where standards are not met, the person or organisation undertaking the activity will still be required to take any further action that may be necessary.

### 5.4 RULES AND ENVIRONMENTAL STANDARDS

In the *Resource Management Act 1991*, there is a general presumption that:

- The use of the bed of the river or lake;
- The taking, use, damming or diverting of any water;
- The discharge of contaminants to land or water; or
- The discharge of water to water,

is not allowed unless it is permitted by a rule in a regional plan or is authorised by a resource consent.

Rules in this Plan therefore have three main functions:

1. To permit activities that the Regional Council believes can be carried out without a resource consent, provided the appropriate environmental standards set out in this Plan are complied with. The Council can then be satisfied that any adverse environmental effects will be minor.
2. To restrict activities where site specific environmental conditions are required to ensure the actual and potential adverse effects of the activity are avoided, remedied or mitigated.
3. To prevent activities occurring which would result in unacceptable adverse effects.

The actual and potential effects of many of these activities are dependent on numerous site specific factors, and consequently, broad environmental standards cannot be given.

For example, for discharges, matters such as the quantity of flow of the receiving water, the existing water quality, the location of the actual discharge point, the type of contaminants contained in the effluent, and the level of treatment of the effluent all have an impact on the effect of the discharge on the receiving water. On the other hand, there are numerous discharges, commonly to land, which can be adequately controlled by ensuring adequate separation distances from surface water or groundwater. Wherever possible, these discharges are permitted.

Similarly, the effects of large water takes or large dams are dependent on size of the resource, the aquatic habitats it supports, and the significance of those habitats, other existing authorised users and the existing quality of the water resources.

In contrast, land use activities under Section 9 of the Act are allowed without regulation in the Act, unless the activity contravenes a rule in a Regional or District Plan. However, diffuse runoff from agricultural land and sediment discharges from land disturbance activities can have adverse effects on water quality. Land disturbance activities may also contribute to the loss and degradation of soil resources and contribute to natural hazards. This Plan therefore contains rules to avoid or minimise the actual and potential effects of land use activities under the control of the Regional Council.

It should be noted that, even if a discharge permit has been obtained from the Regional Council, a resource consent may be required from the District Council for land use.

#### **5.4.1 New Activities**

Where a rule in this Plan allows an activity which was otherwise not allowed unless a resource consent was obtained, the activity may be undertaken in accordance with the rule if there are no submissions or appeals relating to that rule, or any appeals have been dismissed or withdrawn. Any new activity must comply with the rules in the Plan.

#### **5.4.2 Existing Activities**

Should the scale of the activity change, or should the activity be discontinued for more than six months, or should the activity no longer comply with the previous authorisation (such as a transitional regional rule), the activity would be required to comply with the rules in this Plan from the date the Plan was notified<sup>1</sup>.

### **5.5 WATER QUALITY GUIDELINES**

The use of Water Quality Guidelines within the Water Quality Management framework is one method of clearly stating the water quality that is expected to be achieved if water bodies are to be managed for the purposes set out in the Water Quality Management Objective in Section 7. They also provide a basis against which to measure the effectiveness of all other methods used in this Plan, as well as compliance with resource consents. The Water Quality Guidelines and their implementation are fully explained in Section 7.

### **5.6 RIPARIAN MANAGEMENT**

The Riparian Management Zone is a zone of varying width adjacent to a water body, which needs to be managed carefully to protect the water body from the adverse effects of the associated land use.

The width depends on a number of site specific factors. They include:

- Soil type (geology);

<sup>1</sup> Date of Notification of Plan 27 April 1995

- Slope;
- Length of slope;
- The wetness or drainage characteristics of the adjoining land;
- Width of the stream;
- Existing erosion features;
- The reason for riparian management (shading, prevention of nutrients or sediment entering the water, stream bank or channel stability).

Ideally the width should be determined on-site but for the purposes of this Plan, the width is to be determined using the criteria as shown in Figure 7. The maximum setback distance for any Riparian Management Zone is 20 metres.

Riparian management requires integrated management of the physical and biological processes that occur both on land and in the water. The following points provide a broad summary of the riparian management concepts:

1. A small appropriately managed riparian area can have a large impact on improving water quality.
2. Riparian management along small streams is generally more cost-effective than alongside large rivers. Extensive lowland swamp margins of water bodies are an exception to this rule. Management of smaller streams is essential to the management of larger lowland streams.
3. Vegetation is the most versatile riparian feature as it can modify, at the same time, light, temperature, nutrient and sediment regimes, and channel and bank stability.
4. Contaminant inputs are more effectively managed by targeting riparian management measures at major sources of contaminants within the catchment.
5. Wetlands associated with river systems provide buffer storage, remove nutrients and sediments and increase biodiversity.
6. The benefits of riparian management on the water quality and biodiversity of aquatic habitats are often not immediate and may take several years to become evident.

The main management methods are to plant and maintain trees and shrubs, to maintain a grass sward, to control stock or to protect wetlands. The most appropriate method depends on the desired outcome.

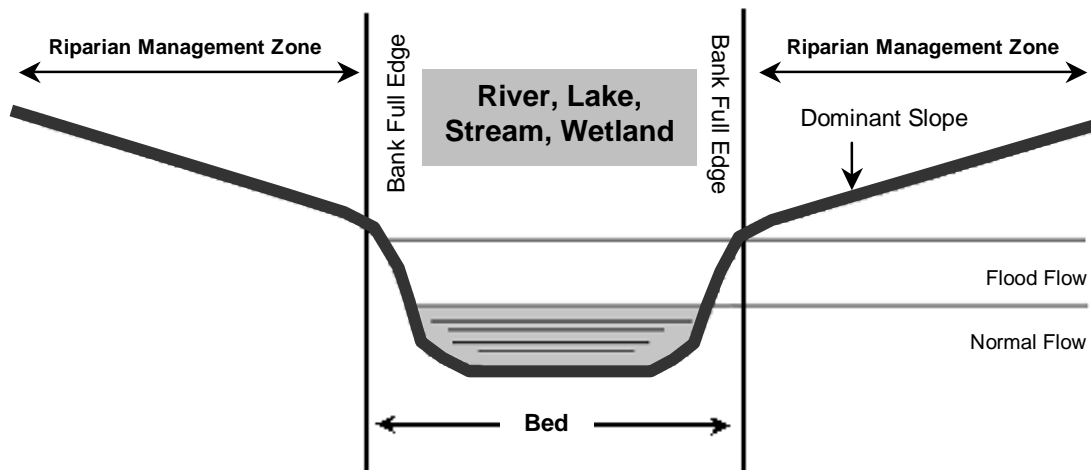
Riparian management is not the sole answer to improving and enhancing water quality. Wise land management practices which reduce the potential for surface runoff to pick up and carry sediment, nutrients and bacteria into water are also very important to improve water quality and should complement riparian management. The Riparian Management Zone is not the same as an esplanade reserve as it does not affect land ownership but defines an area where special management is required to safeguard water quality.

The Land Management Section of this Plan focuses the attention of land users on the Riparian Management Zone, and places extra controls on land disturbance activities within that area to avoid or minimise adverse effects.

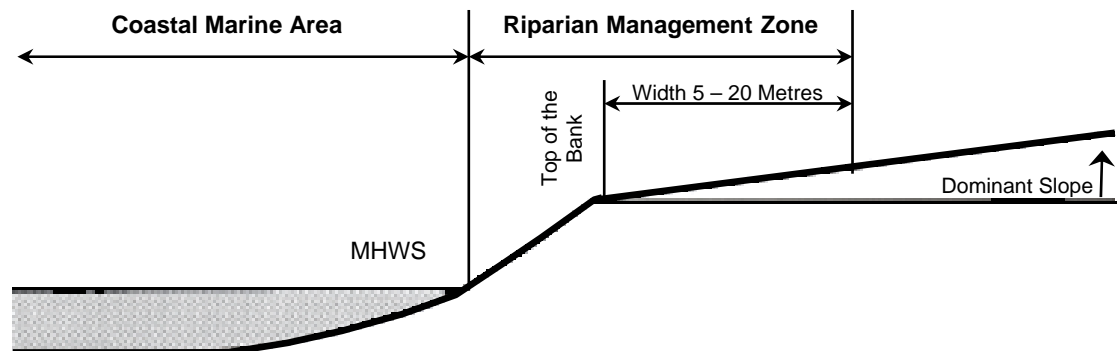
**FIGURE 7: RIPARIAN AND FOREDUNE MANAGEMENT ZONE**

- Note:**
- (i) Figures (7A) and (7B) define land adjacent to water bodies and the Coastal Marine Area except where that land comprises sand dunes.
  - (ii) Figure (7C) defines the Riparian Management Zone in relation to the foredune.
  - (iii) These figures are not to scale.
  - (iv) Contact the Council should you require any assistance with the practical application of these diagrams.

**FIGURE 7A: RIPARIAN MANAGEMENT ZONE**

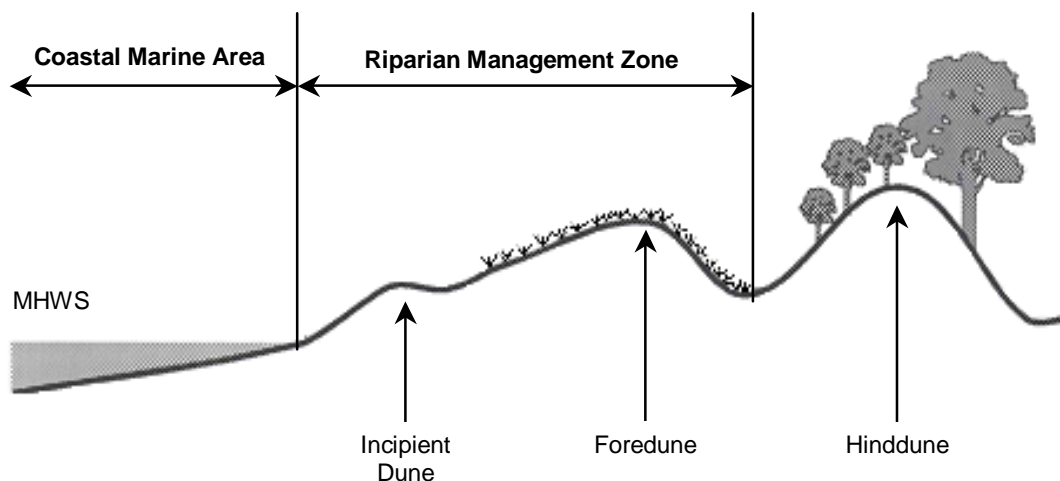


**FIGURE 7B: RELATIONSHIP BETWEEN THE RIPARIAN MANAGEMENT ZONE AND THE COASTAL MARINE AREA**



**Note:** If the top of the bank cannot be identified it should be taken from the beginning of the vegetated area.

**FIGURE 7C: RIPARIAN MANAGEMENT ZONE IN RELATION TO THE FOREDUNE**



The Riparian Management Zone is the land between the bed of the river, lake, or indigenous wetland or the Coastal Marine Area and a distance measured inland from the bank full edge of the water body or from the top of the bank adjacent to the Coastal Marine Area of:

- 5 metres where the dominant slope is less than 8 degrees.
- 10 metres where the dominant slope is between 8 – 15 degrees.
- 20 metres where the dominant slope is greater than 15 degrees.

Where the dominant slope is 0 degrees or less there shall be no Riparian Management Zone.

Notwithstanding the above where the land adjacent to the Coastal Marine Area is unvegetated or vegetated sand dunes, the Riparian Management Zone in this instance is the land between the Coastal Marine Area and the bottom of the leeward side of the foredune.

## 5.7 MINIMUM FLOWS

The maintenance of flows in a river is required to maintain the life supporting capacity of the water and related ecosystems. The setting of design minimum flows in Northland rivers is one of the key methods used in this Plan for avoiding adverse effects of the use and development of the surface water resources. Minimum flows will be based on research carried out in Northland by the Council and other organisations. Where justified, deviations from prescribed minimum flows should be allowed. The design minimum flows are considered to be conservative, given the current level of information regarding the effects of flow reduction on the habitats of aquatic fauna and water quality.

The philosophy of minimum flows is carried through into the management of the outstanding value rivers and flow sensitive river. The retention of greater than minimum flows in these rivers will be the key method of protecting the conservation, natural and cultural values associated with them.

## **5.8 INTEGRATED CATCHMENT MANAGEMENT**

The objectives and policies in this Plan seek to achieve integrated management of Northland's natural and physical resources. However, the effects of the use and development of resources may be more complex in certain catchments. Where complex inter-related effects exist, or there is significant conflict over the use, development and protection of a resource, a regional plan for that catchment to address those specific issues would more effectively achieve integrated management.

This Plan identifies criteria for preparing catchment specific regional plans.

## **5.9 BEST PRACTICABLE OPTION**

The Best Practicable Option (BPO) means the best method for preventing or minimising the adverse effects on the environment. The full definition is given in the Section 41. The use of the BPO either in a rule in a Regional Plan, or as a condition on a resource consent, first requires the consideration of alternative methods, and whether particular minimum standards could be set. This requirement is set out in ss.70(2), ss.108(2)(e) and ss.108(8) of the Act.

The adoption of the BPO as an approach to the management of discharges to water is appropriate in the following circumstances:

1. Where the discharge control technology is still evolving; or
2. Where the development of water quality standards to protect the receiving environment is not easily established or justified; or
3. Where the maintenance or enhancement of the existing water quality is desirable.

The BPO approach is principally used as an alternative to water quality standards given the time and research required to develop and apply scientifically credible and defensible standards for the protection of ecosystems, aesthetic and cultural values as well as human health. The use of the BPO approach is also integrally linked to the lack of water quality monitoring data available in Northland. As research into water quality standards which protect the environment progresses and water quality monitoring becomes more comprehensive, the BPO approach may be able to be replaced by more effects-based conditions.

In many cases, particularly where BPO is a condition on a permitted activity rule, the best practicable option may only require simple common sense precautions to be undertaken to achieve significant environmental protection. In other situations, the BPO requirement may mean additional control technology and management regimes. This will be determined on a case-by-case basis during the consent process, and in consultation with the applicant and affected parties.

## 5.10 MONITORING

Monitoring of the state of water bodies and of the extent and effects of land disturbance activities is important if understanding of natural processes and of the effects of activities on water quantity and quality and on natural hazards and soil conservation is to be enhanced, and if decisions are to be made on a sound basis.

Monitoring will be undertaken in this Plan for four reasons:

- To provide information on the changing state of the environment;
- To establish and confirm the actual effects of activities on the environment where there is a lack of knowledge about the likely effects of an activity;
- To ensure conditions of consent are complied with; and
- To detect activities being carried out without authorisation.

Baseline monitoring of the state of Northland's environment is important in order to establish trends and to link cause and effect.

The Council may undertake a range of different types of monitoring, including physiochemical and biological monitoring of water quality, measurement of changes in flows in streams and of water levels in lakes and wetlands, and the monitoring of the extent and types of land disturbance activities. Monitoring and review of conditions may be included in discharge and water permits and for land use consents.

Comprehensive state of the environment monitoring requires biological and physiochemical monitoring. The Council monitoring will be integrated with the monitoring of aspects of the environment undertaken by other agencies such as District Councils and the Department of Conservation.