

Proposed Bay of Plenty Regional Policy Statement Section 32 report Water quantity



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Section 32 Report

Water Quantity

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1 Introduction

This report presents the evaluation of the Water Quantity topic of the proposed Regional Policy Statement (RPS) in accordance with Section 32 of the Resource Management Act 1991 (RMA). Section 32 states:

32 *Consideration of alternatives, benefits, and costs*

(1) *In achieving the purpose of this Act, before a proposed plan, proposed policy statement, change, or variation is publicly notified, a national policy statement or New Zealand coastal policy statement is notified under section 48, or a regulation is made, an evaluation must be carried out by —*

.....

(c) *the local authority, for a policy statement or a plan (except for plan changes that have been requested and the request accepted under clause 25(2)(b) of Part 2 of Schedule 1); or*

(3) *An evaluation must examine —*

(a) *the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and*

(b) *whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.*

....

(4) *For the purposes of [[the examinations referred to in subsections (3) and (3A), an evaluation must take into account —*

(a) *the benefits and costs of policies, rules, or other methods; and*

(b) *the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.*

(5) *The person required to carry out an evaluation under subsection (1) must prepare a report summarising the evaluation and giving reasons for that evaluation.*

(6) *The report must be available for public inspection at the same time as the document to which the report relates is publicly notified or the regulation is made.*

1.1 Structure of this report

Section 2 of this report outlines the identified regionally significant issues and the process of identification.

Section 3 outlines the appropriateness of Objective 31 in accordance with the purpose of the RMA.

Section 4 then evaluates the most appropriate policy and method options to achieve Objective 31. When evaluating the policy and method options, the range of options available is first discussed, and then each option is evaluated. There are four types of options discussed in each instance. These are:

These are:

(a) Broad direction to district and/or regional plans

This is where a policy directs that a change is to be made to a district and/or regional plan. The method then sets out when this change is to be undertaken.

(b) Specific direction to be given effect in regional and district plans and which consent authorities must have regard to

This is where a policy or method sets out a series of matters that are to be given considered. This may include decisions about preparing, varying, changing, or otherwise altering district and/or regional plans, resource consent decisions, or decisions on notice of requirements.

(c) Guiding actions

This is where a policy or a method outlines actions required to help achieve the objective of the Regional Policy Statement. These include:

- Provision of information or guidance
- Integrating management
- Identification or investigation

(d) Doing nothing

This will occur where no intervention, either directive or guiding will occur.

Determining the most appropriate policies and methods is based on an assessment of the effectiveness and efficiency of the policy and method options, and the risks of acting or not acting when there is uncertain or insufficient information.

Effectiveness is a measure of how successful a particular option is in achieving Objective 31 (desired environmental outcome). Effectiveness is a cumulative value, derived from the range of types and scope of influences or impacts of an intervention, towards achieving intended results and environmental outcomes. The effectiveness of an option is not able to be assessed as an absolute value. Rather, options are appraised as to whether they exhibit the qualities which contribute to 'effectiveness' and to what degree, and a determination is made as to the cumulative effect of the pertinent attributes in terms of high, medium or low "effectiveness".

When evaluating the efficiency of the policy and method options both the benefits (social, economic and environmental) and costs (social, economic and environmental) are discussed. Efficiency of the option is then evaluated as low, medium or high. *Figure 1* outlines how this assessment was undertaken.

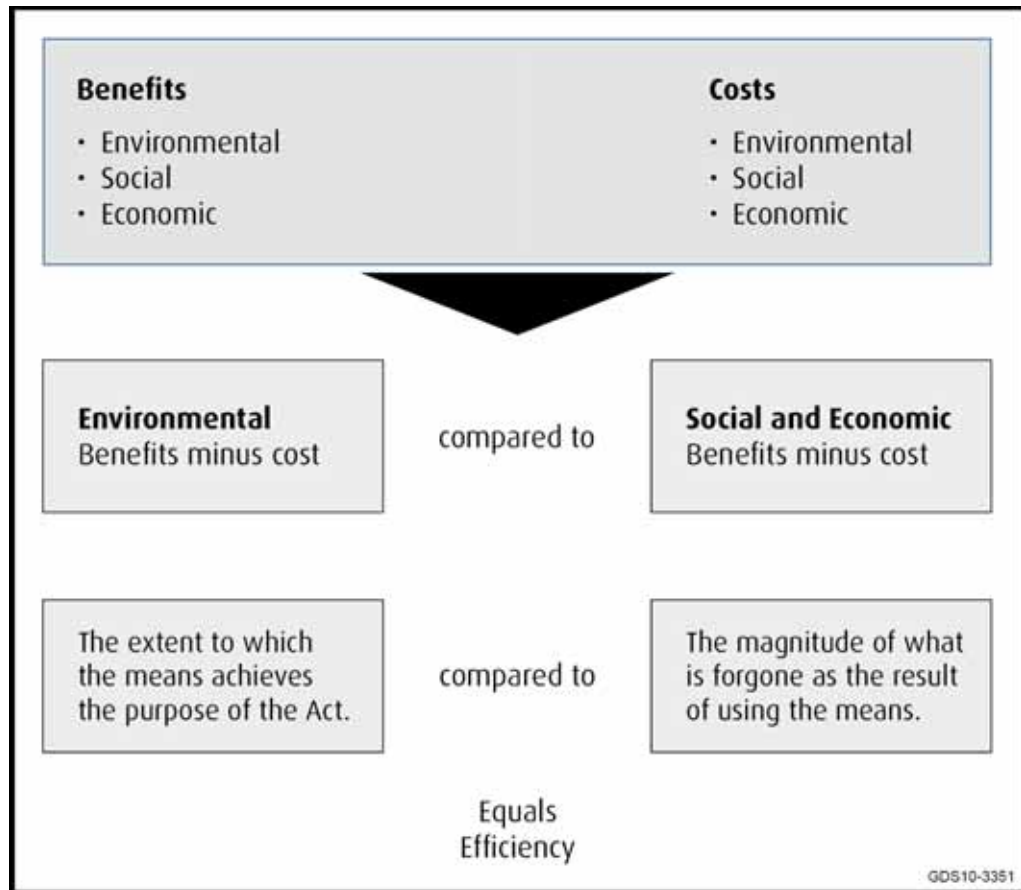


Figure 1 Deriving efficiency from benefits and costs.

The evaluation of 'efficiency' will result in either a positive or negative result in terms of efficiency. Alternatively, if efficiency is expressed as a cost/benefit ratio, it will be either greater than or less than 1. In the event the ratio is considered to be less than 1, the option can be considered efficient, in that the sum of the benefits outweigh the sum of the costs. In the event the ratio is deemed to be greater than 1, the option can be considered to be inefficient, in that the sum of the costs outweigh the sum of the benefits. It is important to note that in this evaluation of 'efficiency', absolute values for each of the variables considered pertinent (i.e. identified as either a cost or a benefit within the evaluation of the options) are not available. Rather, the analysis has endeavoured to present an accurate appraisal of the relative costs and benefits between the options, in order to determine which are efficient and which are not. A simple yes or no is used to differentiate the options as efficient or inefficient.

2 Regionally significant issues

In identifying the regionally significant issues around water quantity, the following information was evaluated:

- Criteria to ensure the issues were regionally significant (refer *Appendix 1* for a copy of the criteria)
- Bay Trends (2004) – Report on the state of the Bay of Plenty environment
- Stakeholder written comments/submissions on the Draft Regional Policy Statement
- The Next Bay of Plenty Regional Policy Statement: Issues and Options (2008)
- Monitoring and Evaluation of the Operative Bay of Plenty Regional Policy Statement (2008)
- Regional Water and Land Plan: Review of Chapter 5 (Water Quantity and Allocation) and Section 9.6 (Take and Use of Water) (2010)
- Water Use and Availability Assessment for the Western Bay of Plenty (2007).

The resulting issues recommended for inclusion in the proposed Regional Policy Statement on water quantity are:

Issue 1: Increasing pressure on finite water resources

There is increasing pressure on finite water resources. As populations grow the demand for water intensifies. The amount of water used by land use activities such as farm pasture irrigation and horticultural activities has also increased.

Issue 2: Competing demands

As groundwater and surface water become more limited the competition builds for this resource.

Issue 3: Over-abstraction

Over-abstraction is degrading some water resources. Adverse effects of over-abstraction can include reduced water quantity and quality, and degraded ecological, recreational and amenity values.

Issue 4: Inefficient use

The inefficient use of water arises where a greater volume of water is taken than that required to operate the use. It also occurs when an activity wastes water.

3 Extent to which Objective 31 is the most appropriate

The proposed water quantity objective is:

Objective 31: The quantity of available water:

- (a) meet the range of uses and values for which water is required
- (b) safeguard the life supporting capacity of water bodies
- (c) meet the reasonably foreseeable needs of future generations.

To follow is an outline of the extent to which Objective 31 is the most appropriate way to achieve the purpose of the RMA.

3.1 Objective 31

- **Pressure on water quantity:** Bay Trends (2004) reported that there is an ever growing demand for water, due to regional growth. Surface resources in particular are subject to significant pressure from people wanting to take and use water for land-based activities. As these surface water resources are becoming fully allocated, groundwater is also becoming an increasingly important source of supply.
- **RMA mandate for local authorities:** The relevant sub-sections of Section 30 of the RMA for Objective 31 include:
 - 30(1)(a) the establishment, implementation and review of objectives, policies, and methods to achieve integrated management of the natural and physical resources of the region.*
 - 30(1)(b) the preparation of the preparation of objectives and policies in relation to any actual or potential effects of the use, development, or protection of land which are of regional significance.*
 - 30(1)(c)(iii) the control of the use of land for the purpose of the maintenance of the quantity of water in water bodies and coastal water.*
 - 30(1)(e) the control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any water body, including—*
 - (i) the setting of any maximum or minimum levels or flows of water:*
 - (ii) the control of the range, or rate of change, of levels or flows of water:*
 - 30(1)(fa)(i) if appropriate, the establishment of rules in a regional plan to allocate any of the following...the taking or use of water (other than open coastal water).*
- **Central Government direction:**
 - The Proposed National Policy Statement for Freshwater Management (July 2008) is relevant providing national direction on freshwater management.
 - The Proposed National Environmental Standard on Ecological Flows and Water Levels: Discussion Document (March 2008) is relevant requiring enforcement of the same minimum standards for ecological flows and water levels.
 - The RMA (Water Metering) Regulations 2010 are relevant requiring measuring and reporting of all significant water takes.

- **Meets RMA requirements:** Objective 31 addresses issues 1 - 4 and the purpose of the RMA by promoting the protection of the life supporting capacity of water and promoting management of available water to meet the reasonably foreseeable needs of future generations. It also enables people to provide for their wellbeing through seeking that available water meets the range of uses and values. Particular matters (within Part II of the RMA) of relevance include:
 - 7(b) the efficient use and development of natural and physical resources.*
 - 7(d) intrinsic values of ecosystems.*
 - 7(f) maintenance and enhancement of the quality of the environment.*
 - 7(g) any finite characteristics of natural and physical resources.*
 - 7(i) the effects of climate change.*

Given the above, Objective 31 is the most appropriate for achieving the purpose of the RMA.

3.2 Analysis of the appropriateness of Objective 31

Table 1 assesses the appropriateness of Objective 31 for achieving the purpose of the RMA.

Table 1 Analysis of the appropriateness of Objective 31.

Final chosen objective	Other alternatives?	Reasons for the alternatives not being the most appropriate to achieve the RMA
<p>Objective 31: The quantity of available water:</p> <ul style="list-style-type: none"> (a) meet the range of uses and values for which water is required (b) safeguard the life supporting capacity of water bodies (c) meet the reasonably foreseeable needs of future generations 	<p>Alternative 1. No objective in the Regional Policy Statement. Water Quantity is left to be managed by the existing Regional Water and Land Plan provisions and territorial authorities.</p> <p>Alternative 2. Retain the existing objective in the Operative Regional Policy Statement which seeks.</p> <p><i>The efficient management of water-body levels and flows which enables people and communities to provide for their well-being, preserves the natural character of wetlands, lakes and rivers and their margins, and protects outstanding natural features, aquatic life and significant values.</i></p>	<p>Alternative 1 does not provide sufficient regional direction on managing the increasing pressures on finite water resources, competing demands, over-abstraction and inefficient use.</p> <p>A review of the Operative Regional Policy Statement identified that Alternative 2 does not specifically provide for the needs of future generations. Alternative 2 can also be more clearly laid out. Efficient management is considered to be a better course of action for achieving the desired outcome.</p>

4 Evaluation of policies and methods to achieve Objective 31

The appropriateness of the policies and methods to achieve Objective 31 are evaluated by looking at the effectiveness and the efficiency of the policy and method options and the risks of acting or not acting if there is uncertain or insufficient information.

4.1 Range of policy and method options considered

Objective 31 aims to ensure the quantity of available water:

- (a) meet the range of uses and values for which water is required
- (b) safeguard the life supporting capacity of water bodies
- (c) meet the reasonably foreseeable needs of future generations.

The focus of this section is to determine whether Objective 31 can be best achieved through broad direction to plans, through specific direction to plans and on matters to which regard is to be had when considering resource consent applications, by providing guidance, or by doing nothing.

4.1.1 Broad direction to district and/or regional plans

Option 1 – Direction to set and apply minimum flows and allocating limits for taking water

This option directs regional plans to establish and apply minimum flow requirements for surface water bodies and allocation limits for groundwater.

Option 2 – Direction to have regard to certain matters for water allocation

This option requires regional plans to have regard to a number of matters when allocating and reallocating water.

Option 3 – Direction to promote efficient use and water harvesting

This option requires regional plans to promote efficient use of water and enable harvesting of water.

Option 4 - Direction to ensure water availability

This option directs district plans to require applications for land use and/or subdivision consent to demonstrate that there is sufficient water available at the location to support the activity.

4.1.2 Specific direction to be given effect in regional and district plans and which consent authorities must have regard to

Option 5 - Direction to reduce water demand

This option requires district plans to require applications for land use and subdivision consent to consider alternative sources of water, water conservation measures and the benefits of water collection and reuse and/or recycling.

Option 6 - Direction to establish common expiry dates for the taking of water

This option directs regional plans to establish and implement common expiry dates for resource consents relating to the taking of surface and ground water within specified catchments.

Option 7 - Direction to review resource consents for the taking of water

This option requires regional plans to provide for the review of resource consent conditions for the taking of water.

Option 8 - Direction to manage water takes to ensure efficient use

This option requires the regional council to have regard to a number of important matters when considering an application for resource consent to take water.

4.1.3 Guiding actions

Option 9 – Research and monitor water allocation and abstraction

This option encourages the regional council to monitor:

- (a) The rate and/or quantity of water allocated;
- (b) The quantity of actual use;
- (c) The cumulative effects of water abstraction; and
- (d) Where necessary support research.

Option 10 - Prepare and provide information to reduce water demand

This option encourages the regional council to prepare and provide information to reduce water demand by:

- (a) Providing information to water suppliers and water users on how to conserve water and use it as efficiently as possible; and
- (b) Providing information about long term rainfall and drought predictions.

4.1.4 Doing nothing

Option 11 – No intervention

This option offers no intervention for the management of water quantity.

4.2 Evaluation as to the effectiveness and efficiency of the policy and method options to achieve Objective 31

Table 2 assesses the effectiveness and efficiency of the policy and method options for achieving Objective 31 by considering their environmental, economic and social benefits and costs.

Table 2 Evaluation as to the effectiveness and efficiency of the policy and method options to achieve Objective 31.

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
Broad direction to district and/or regional plans					
<p>Option 1</p> <p>Direction to set and apply minimum flows and allocating limits for taking water.</p>	<p>Increases certainty as to how the region will manage water quantity.</p> <p>Provides certainty to people about the amount of water that is available for use from surface water bodies and groundwater.</p> <p>Provides a consistent framework across the region.</p> <p>Provides clarity about the reasons for managing flows and limits.</p>	High	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Maintains cultural, recreational and amenity values of surface water bodies. ▪ Provides consistency in the way water is managed. ▪ Provides transparency as to what is required and the reasons for this. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Provides certainty about where water is available and therefore where development can occur. ▪ Ensures the economic value of the water is sustained. ▪ Reduces costs for consent applicant to determine flows and limits. 	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Increased conflict between competing demands. ▪ Disagreement between regional council and the community on the flows and limits set. ▪ The highest economic value may not necessarily be the best social use of the resource. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Increased compliance and consent costs for provisions. ▪ Costs associated with researching and determining the flows and limits. ▪ Costs of monitoring resources. 	Yes

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
			<ul style="list-style-type: none"> ▪ Leads to increased economic opportunities because more water is available for the applicant and others to use. <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ Safeguards the health of aquatic ecosystems. ▪ Provides greater certainty about the importance of these environmental values when managing water. ▪ Prevents contamination of aquifers by geothermal bore water intrusion and saltwater intrusion. ▪ Ensures a reliable and accessible amount of water is available. ▪ The flows and limits can be monitored and assessed. ▪ Allows adaptation to changing environmental circumstances. ▪ Ensures water is not over allocated. 	<ul style="list-style-type: none"> ▪ Foregoing costs to activities due to restrictions on water taken. ▪ Litigation costs. <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ The highest economic value may not necessarily be the best environmental use of the resource. 	

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
<p>Option 2</p> <p>Direction to have regard to certain matters for water allocation.</p>	<p>Increases certainty as to how the region will allocate water quantity.</p> <p>Sets out clear intent for water allocation.</p> <p>Provides a consistent framework across the region.</p>	<p>High</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Ensures fair and sustainable allocation of water for present and future generations. ▪ Provides greater certainty about important principles when allocating water. ▪ Provides consistency in the way water is managed. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Ensures the economic value of the water is sustained. ▪ Leads to increased economic opportunities because more water is available for the applicant and others to use. <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ Ensures a reliable and accessible amount of water is available. ▪ Allows adaptation to changing environmental circumstances. ▪ Ensures water is not over allocated. 	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Increased conflict between competing demands. ▪ Disagreement about these prioritised principles between regional council and the community. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Costs associated with research, consultation and determining and how to implement the principles. ▪ Foregoing costs to activities due to restrictions on water taken. ▪ Litigation costs. 	<p>Yes</p>

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
<p>Option 3</p> <p>Direction to promote efficient use and water harvesting.</p>	<p>Increases certainty as to how the region will manage water quantity.</p> <p>Provides a consistent framework across the region.</p>	<p>High</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Provides consistency in the way water is managed. ▪ Establishes clear intent of regulatory intervention. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Increases economic opportunities for water use because more water is available for others to use. <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ Safeguards the health of aquatic ecosystems. ▪ Ensures a reliable and accessible amount of water is available. 	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Disagreement between regional council and the community on the meaning of efficient use of water and water harvesting. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Increased compliance and consent costs for provisions. ▪ Costs associated with research, consultation and determining efficient use and water harvesting. ▪ Costs may be incurred in applying resources like advanced irrigation technology to ensure efficient use ▪ Litigation costs. 	<p>Yes</p>
<p>Option 4</p> <p>Direction to ensure water availability.</p>	<p>Increases certainty as to how the region will manage water quantity.</p> <p>Provides a consistent framework across the region.</p> <p>Shares responsibility of water management between local authorities.</p>	<p>High</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Provides opportunity to develop water management initiatives. ▪ Provides clarity to applicants on the importance of ensuring water is available before applying for consent. 	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Disagreement by the territorial authorities and the applicant that they should take responsibility. ▪ Disagreement between regional council and the applicant as to whether there is sufficient water at the location to support the activity. 	<p>Yes</p>

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
	Ensures that in the resource consent process, applicants demonstrate that sufficient water is available.		<u>Economic:</u> <ul style="list-style-type: none"> ▪ Avoids administration costs for regional council because activities that do not have sufficient water do not apply for consent. ▪ Avoids unnecessary application costs to the applicant when consent for the taking of water is unlikely to be granted. <u>Environmental:</u> <ul style="list-style-type: none"> ▪ Ensures a reliable and accessible amount of water is available. ▪ Ensures water is not over allocated. 	<u>Economic:</u> <ul style="list-style-type: none"> ▪ Increased district plan costs for introduced provisions. ▪ Increased applicant costs for additional information. ▪ Litigation costs. 	
Specific direction to be given effect in regional and district plans and which consent authorities must have regard to					
Option 5 Direction to reduce water demand.	Increases certainty as to how the region will manage water quantity. Provides a consistent framework across the region. Shares responsibility of water management between local authorities.	High	<u>Social:</u> <ul style="list-style-type: none"> ▪ Provides flexibility and opportunity to develop other water management initiatives. ▪ Provides consistency in the way water is managed. <u>Economic:</u> <ul style="list-style-type: none"> ▪ Increases economic opportunities for water use because more water is available for others to use. 	<u>Social:</u> <ul style="list-style-type: none"> ▪ Territorial authorities and the community disagree that they are given responsibility instead of regional council. <u>Economic:</u> <ul style="list-style-type: none"> ▪ Increased consent and application costs to adhere to provisions. ▪ Costs may be incurred in applying and implementing alternative resources. ▪ Litigation costs. 	Yes

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
			<u>Environmental:</u> <ul style="list-style-type: none"> ▪ Ensures a reliable and accessible amount of water is available. ▪ Allows groundwater resources to recharge and surface water bodies to maintain flows and levels. 		
<p>Option 6 Direction to establish common expiry dates for the taking of water.</p>	<p>Increases certainty as to how the region will manage water quantity. Provides a consistent framework across the region.</p>	<p>High</p>	<u>Social:</u> <ul style="list-style-type: none"> ▪ Ensures that the taking and use of water continues to be fair. ▪ Provides consistency in the way water is managed. ▪ Provides transparency as to what is required and the reasons for this. <u>Economic:</u> <ul style="list-style-type: none"> ▪ Maintains economic value of the water. <u>Environmental:</u> <ul style="list-style-type: none"> ▪ Ensures a reliable and accessible amount of water is available. ▪ Allows adaptation to changing environmental circumstances and advances in scientific and technical knowledge. 	<u>Social:</u> <ul style="list-style-type: none"> ▪ Discourages investment. ▪ Reduces certainty for the applicant. <u>Economic:</u> <ul style="list-style-type: none"> ▪ Increased application costs. ▪ Litigation costs. 	<p>Yes</p>

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
<p>Option 7 Direction to review resource consents for the taking of water.</p>	<p>Increases certainty as to how the region will manage water quantity. Provides a consistent framework across the region.</p>	<p>High</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Ensures fair, sustainable and efficient amount of water is available for use. ▪ Provides consistency in the way water is managed. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Maintains the economic value of the water. <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ Safeguards the health of aquatic ecosystems. ▪ Prevents contamination of aquifers by geothermal bore water intrusion and saltwater intrusion. ▪ Ensures a reliable and accessible amount of water is available. ▪ Allows adaptation to changing environmental circumstances. 	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Discourages investment. ▪ Reduces certainty for the applicant. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Increased administration costs for regional council. ▪ Litigation costs. 	<p>Yes</p>

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
<p>Option 8</p> <p>Direction to manage water takes to ensure efficient use.</p>	<p>Increases certainty as to how the region will manage water quantity.</p> <p>Provides a consistent framework across the region.</p> <p>Provides interim direction prior to changes being made to the Regional Water and Land Plan.</p> <p>Ensures that the applicant seeks an amount of water that is reasonably justified, water use is measured and reported on, and demonstrates that it will be used efficiently.</p>	<p>High</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Immediate benefit in matters advocated in resource consent processes. ▪ Provides greater clarity and certainty to the applicant and local authority about the matters that shall be given regard to when managing water. ▪ Provides consistency in the way water is managed. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Leads to increased economic opportunities because more water is available for the applicant and others to use. <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ Provides information on the actual amount of water taken which allows better assessment of how much water remains available to other users. ▪ Ensures a reliable and accessible amount of water is available because resource users are only granted the amount they actually need. 	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Discourages long term investment. ▪ Reduces certainty for the applicant and user. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Increased consent and compliance costs for regional council. ▪ Costs may be incurred in applying resources to measure and use water more efficiently. ▪ Costs to the applicant for the technical work to justify the amount of water sought. ▪ Litigation costs. 	<p>Yes</p>

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
Guiding actions					
<p>Option 9 Research and monitor water allocation and abstraction.</p>	<p>Allocates ownership of this task to regional council therefore greater probability of this occurring.</p> <p>Information sought can provide guidance for resource management decisions.</p>	<p>Med</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Provides certainty about the amount of water available. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Avoids costs associated with regulatory response. ▪ Reduces costs to applicant and community. ▪ Leads to increased economic opportunities there is a better knowledge of where water is available <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ Ensures reliable and accessible amount of water is available. ▪ Safeguards the health of aquatic ecosystems. ▪ Allows adaptation to changing environmental circumstances. 	<p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Costs to applicant and community for monitoring and research. 	<p>Yes</p>

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
<p>Option 10</p> <p>Prepare and provide information to reduce water demand.</p>	<p>Provides freedom and ownership to the individual and/or community.</p> <p>Allows for innovative approaches.</p> <p>Provides information to the community.</p>	<p>Med</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Reduces water demand. ▪ Solutions are flexible and best suited to the local environment. ▪ People are aware of the steps they can take to reduce water demand. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Avoids consent and compliance costs to local authorities. ▪ Increases resources and knowledge contributed. ▪ Increases other economic opportunities sought from water. <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ Ensures reliable and accessible amount of water is available. ▪ Safeguards the health of aquatic ecosystems. 	<p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Increasing costs to householders and ratepayers, depending upon the actions promoted. ▪ Costs to Regional Council for collating and providing information. 	<p>Yes</p>
<p>Doing nothing</p>					

Policy and method options	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
<p>Option 11 No intervention.</p>	<p>Uncertainty that responsibility will be taken. Uncertainty that the objective or issues will be addressed.</p>	<p>Low</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> ▪ Develops an alternative approach. <p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Avoids compliance and consent costs associated with implementing the policies and/or methods. 	<p><u>Economic:</u></p> <ul style="list-style-type: none"> ▪ Council taken to court for no action under the RMA. ▪ The issues continue and result in reduced economic opportunities. <p><u>Environmental:</u></p> <ul style="list-style-type: none"> ▪ Degrades aquatic ecosystem health. ▪ Water is over allocated. 	<p>No</p>

4.3 Results of evaluation as to the most appropriate policy and method options to achieve Objective 31

Table 3 summarises the effectiveness and efficiency of the policy and method options and outlines the selection of the most appropriate options to achieve Objective 31. The proposed policies and methods that reflect this selection are also listed.

Table 3 Results of evaluation as to the most appropriate policy and method options to achieve Objective 31.

Policy and method options	Effectiveness	Efficient?	Selected option(s)	Proposed policies and methods
Broad direction to district and/or regional plans				
Option 1 Direction to set and apply minimum flows and allocating limits for taking water	High	Yes	√	Policy WQ 2A, methods 2 and 32
Option 2 Direction to have regard to certain matters for water allocation	High	Yes	√	Policy WQ 3B and method 2
Option 3 Direction to promote efficient use and water harvesting	High	Yes	√	Policy WQ 1A, methods 2, 32 and 33
Option 4 Direction to ensure water availability	High	Yes	√	Policy WQ 6B, methods 3, 32 and 33
Specific direction to be given effect in regional and district plan and which consent authorities must have regard to				
Option 5 Direction to reduce water demand.	High	Yes	√	Policy WQ 7B, methods 3, 32 and 33
Option 6 Direction to establish common expiry dates for the taking of water	High	Yes	√	Policy WQ 4B, methods 3 and 32
Option 7 Direction to review resource consents for the taking of water	High	Yes	√	Policy WQ 5B, methods 3 and 32
Option 8 Direction to manage water takes to ensure efficient use	High	Yes	√	Policy WQ 8B, methods 3 and 32
Guiding actions				
Option 9 Research and monitor water allocation and abstraction	Medium	Yes	√	Method 32
Option 10 Prepare and provide information to reduce water demand	Medium	Yes	√	Method 33
Doing Nothing				
Option 11 Do nothing	Low	No	X	

4.4 Discussion of options

Having regard to the efficiency and effectiveness of the options, a combination of mainly directive and some guiding actions are appropriate to accomplish Objective 31 and therefore deal with the regionally significant issues related to water quantity.

Option 1 directs regional councils to set and apply minimum flows and allocation limits for water bodies in order to avoid adverse effects on the environmental values and health of the aquatic ecosystems. There may be cost implications such as conflict between competing demands for the water resource and financial/time costs associated with researching and determining the flows and limits. In the long term the benefits such as clarity about the reasons for managing flows and limits will outweigh these costs. This is particularly important as increasing demand is placed on the rivers and groundwater, and therefore this water may be at risk of being over allocated. Option 1 will also prove effective in achieving Objective 31 that seeks to safeguard the life supporting capacity of water bodies.

With the environmental values and ecosystem health protected through Option 1, Option 2 then follows on from this to guide allocation of the remaining available water. Option 2 establishes matters that are important for ensuring water is allocated in a fair, sustainable and efficient manner and therefore must be given regard to when allocating water.

Further direction to regional plans is provided in Options 3, 6, 7 and 8. These options are all assessed as effective and efficient. These options play a significant role in ensuring that:

- water continues to be used efficiently over time
- there is a reliable and accessible amount of water for now and the future
- the taking of water can be reassessed as new information about the quantity of available water and the quantity used is obtained.

Options 4 and 5 provide direction to district plans. Requiring district plans to encourage consideration of alternative sources of water will be effective at meeting the range of uses and values for which water is needed. Ensuring proposed locations can provide sufficient water supply will also assist in meeting the range of uses and values.

Options 9 and 10 are guiding actions considered effective and efficient to achieve Objective 31. Monitoring water allocation and use will lead to better informed decisions about water quantity management. Preparing and providing information to reduce water demand will enable greater freedom for the individual to decide the action best suited to their individual circumstances.

Option 11 is assessed as both ineffective and inefficient. Doing nothing is likely to result in unsustainable, unfair and inefficient use of available water.

4.5 Risks of acting or not acting if information is uncertain or insufficient

The information about water quantity for certain areas of the region is both certain and sufficient. Therefore no consideration as to the risk of acting or not acting is required.

It is also recognised that in other areas of the region there may be insufficient information about water quantity. For example, there is limited information about instream minimum flows for certain rivers.

Although information may be insufficient for certain parts of the region, Council is currently in the process of researching information and monitoring water quantity in order to address this concern.

With regards to this insufficient information, the risk of acting on the proposed provisions is that unnecessary costs may be incurred and potential economic opportunities may be lost. However, the risk of not acting is far more concerning. If no action is taken ramifications include water being over allocated and not used in an efficient way. For these reasons the proposed provisions are worthwhile and should be implemented despite the information being incomplete.

Appendix 1 – Criteria used to determine regionally significant issues

The criteria used for determining whether an issue was a resource management issue of regional significance were:

- The issue was a natural or physical resource management problem.
- The issue was to be of regional significance (see further criteria below).
- The issue was about achieving the purpose of the RMA.
- The issue did not “repeat” the RMA, the New Zealand Coastal Policy Statement, any other national policy, or another issue in the RPS.
- The issue was explained in the context of the Bay of Plenty region.

Regional significance was determined using the following criteria

- The issue concerns a resource which is regionally significant, and the issue requires integrated management at a regional level ; and
- There is a potential shortage of the resource and resultant allocation issues; or
- There is a significant level of conflict over the resource which is either occurring or is foreseeable over the next 10 years; or
- The resource is potentially subject to significant adverse effects at a regional level; or
- There are significant issues in terms of Part 2 of the RMA which are or are likely to arise at a regional scale (e.g. maintenance and enhancement of access along waterways); or
- The community has signalled that it regards a particular issue as being of regional significance; or
- The issue is one of national significance (e.g. preservation of natural character) and requires regional intervention; or
- The issue is one of district significance but requires regional intervention; or

The matter is one which a National Policy Statement or National Water Conservation Order requires to be addressed.

Appendix 2 – References

Aqualinc Research Limited (2007) Water Use and Availability Assessment for the Western Bay of Plenty.

Environment Bay of Plenty (2004) Bay Trends – Report on the state of the Bay of Plenty environment.

Environment Bay of Plenty (2010) Stakeholder written comments/submissions on the Draft Regional Policy Statement.

Environment Bay of Plenty (2008) The Next Bay of Plenty Regional Policy Statement: Issues and Options.

Environment Bay of Plenty (2008) Monitoring and Evaluation of the Operative Bay of Plenty Regional Policy Statement.

Opus International Consultants Limited (2010) Regional Water and Land Plan: Review of Chapter 5 (Water Quantity and Allocation) and Section 9.6 (Take and Use of Water).