

Comprehensive Stormwater Consent & Catchment Management Plans – Where do they fit in?

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ABSTRACT

The Resource Management Act (RMA) came into effect in 1991, with the purpose being “to promote the sustainable management of natural and physical resources”, such as Land and Water.

The Bay of Plenty Regional Stormwater Strategy was published in 2005 as a collaborative approach between the Regional and District Councils within the Bay of Plenty to better manage urban stormwater and improve the water quality of discharges into streams, rivers, Tauranga Harbour and Maketu Estuary. Actions sought within the strategy included Territorial Authorities obtaining Comprehensive Stormwater Consents (CSC) for urban areas in each district.

Western Bay of Plenty District Council (WBOPDC) has decided to split its District into three distinct areas in line with its water supply zones including the Western, Central and Eastern catchments. Catchment Management Plans (CMP) are being prepared for each area.

Despite the good intent of the RMA framework, the structure of planning services required to gain CSCs has put limitations onto WBOPDC’s ability to manage their stormwater system efficiently and within the existing planning heart - the District Plan.

This paper will discuss the pro and cons as well as financial implications for WBOPDC.

KEYWORDS

Resource Management Act, Comprehensive Stormwater Consent, Catchment Management Plan

PRESENTER PROFILE

Kathy studied Civil Engineering in Germany and is a MIPENZ and CPEng. She is also the Civil Team Leader of CPG’s Tauranga Branch.

Kathy joined CPG (formerly Duffill Watts) in 2006 and has been actively involved in Local Government agencies AMP processes ever since. Through her longstanding involvements with WBOPDC, Kathy has developed an owner’s attitude to the management of stormwater.

Ulrich, born and bred in Germany, graduated in Civil Engineering in 1987. In the following 19 years until 2006 he contributed and gathered his experience in a wide variety of engineering fields.

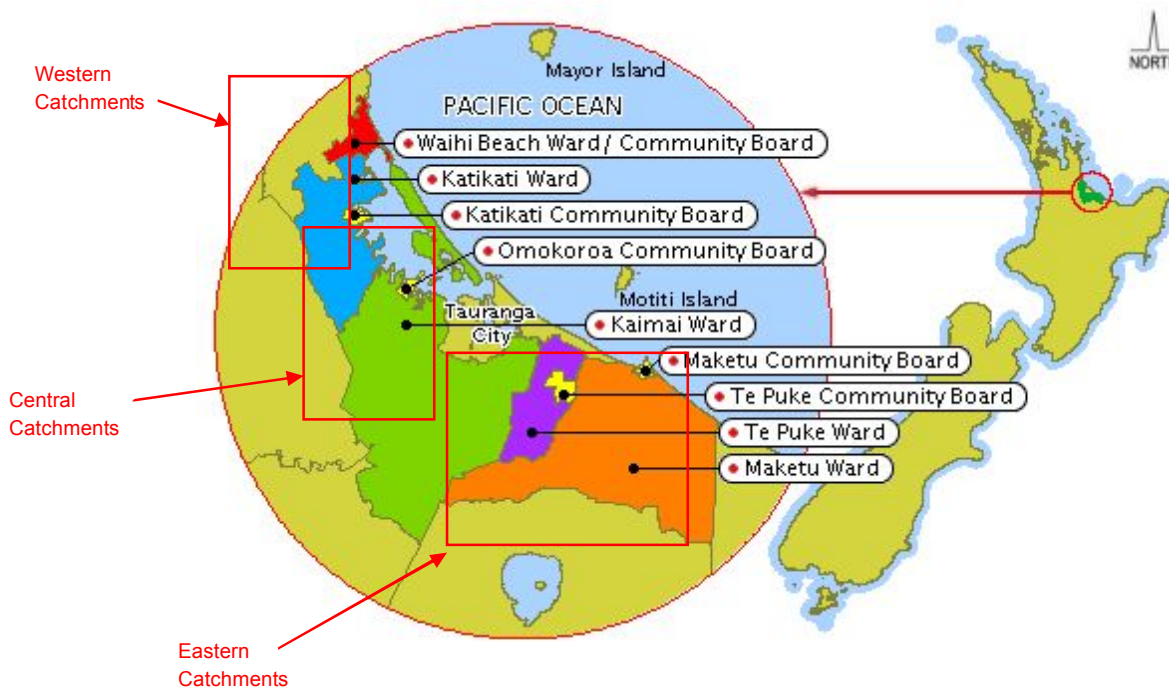
Since he and his wife moved to New Zealand in 2006 his focus was mainly on asset management of stormwater, wastewater and water supply - at first with Duffill Watts (now CPG) and since 2008 with Western Bay of Plenty District Council as Utilities Asset Manager. Environment and sustainability are matters of high concern to him.

1 INTRODUCTION

The Western Bay of Plenty District covers a geographic area of 2,117km² (211,700 hectares), which incorporates coastal, rural and urban areas, with an average density of 19.9 people per km² (Tauranga Aotearoa, Statistics New Zealand, Census 2006).

There are thirteen identified urban areas within the Western Bay of Plenty District for which the Comprehensive Stormwater Consents were sought to cover. This includes four large communities; Waihi Beach, Katikati, Omokoroa and Te Puke and nine areas classed as small settlements; Tanners Point, Tuapiro, Ongare Point, Te Kauri Village, Te Puna West, Minden, Paengaroa, Maketu (including Little Waihi) and Pukehina.

Figure 1: Overview of the Western Bay of Plenty District
(Source: CPG CMP WSZ1, 2012)



The Omokoroa Catchment with its clear definition through the structure plan has been granted a comprehensive consent (RC 61768) in 2003/2004.

The remaining catchments are sought to be covered by 3 Comprehensive Stormwater Consents (Western, Central and Eastern catchments). The application is for the discharge of stormwater from multiple locations in the Western Bay of Plenty, any associated land disturbing activities and activities within the Coastal Marine Area and/or Watercourse, and the consents required for any maintenance activities.

There are over 100 stormwater related consents that have been granted to WBOPDC by Bay of Plenty Regional Council (BOPRC) throughout the District. All responsibilities for consents will be surrendered in terms of Section 138 of the RMA, at such time as the Comprehensive Stormwater Consents are granted.

2 THE CATCHMENT MANAGEMENT PLAN PROCESS

2.1 OVERVIEW OF THE CMP PROCESS

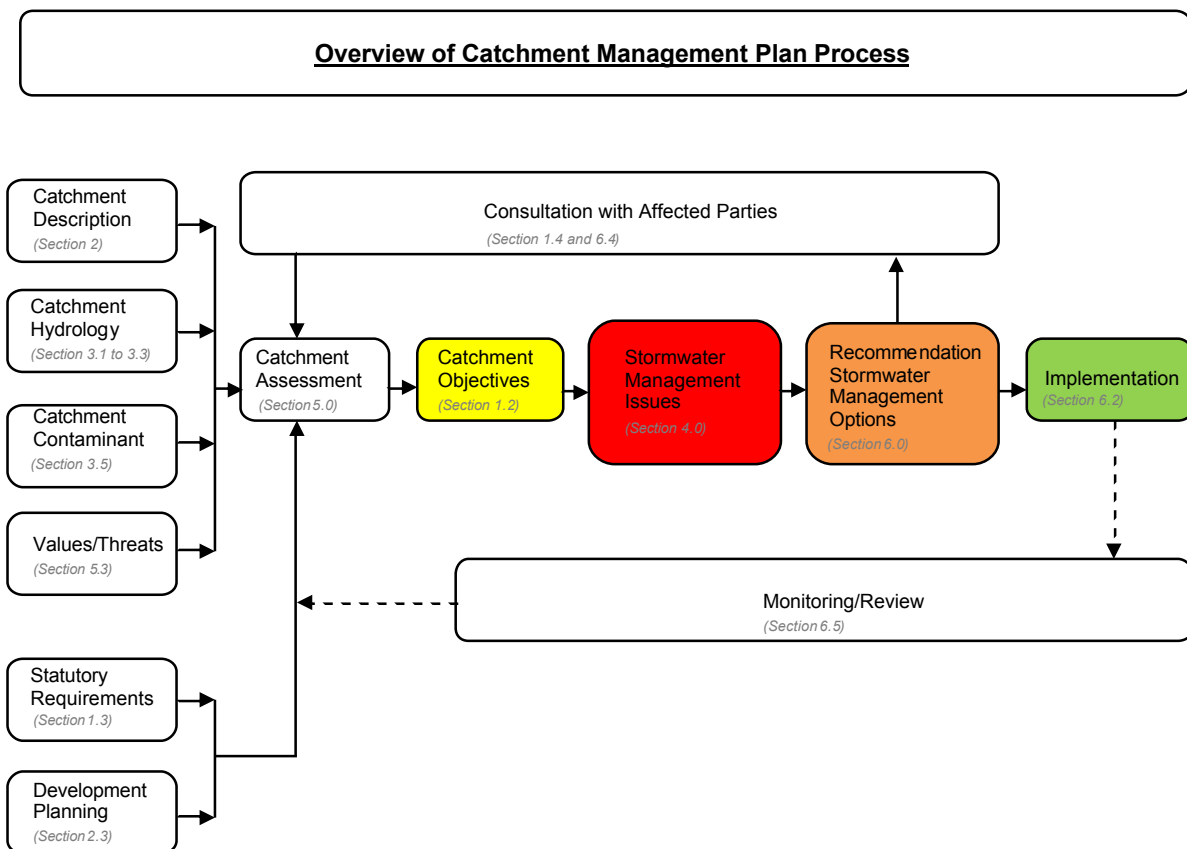
Figure 2 shows an overview of the planning process undertaken for the preparation of the CMPs.

Sound strategies for catchment management require relevant information about the natural attributes, infrastructure developments, social, cultural and ecological needs, human impacts, issues and economic development in a catchment.

The process of collating, processing and interpreting such information in a stormwater-related context is the so called catchment assessment.

Throughout the CMPs we have shown “where we want to be” (Catchment Objectives), “where we are at” (Stormwater Management Issues), “how we want to get there” (Recommendations) and “what measures will be put in place to ensure that we are making progress” (Monitoring/Review).

Figure 2: Overview of CMP Process (Source: CPG CMP WSZ1, 2012)

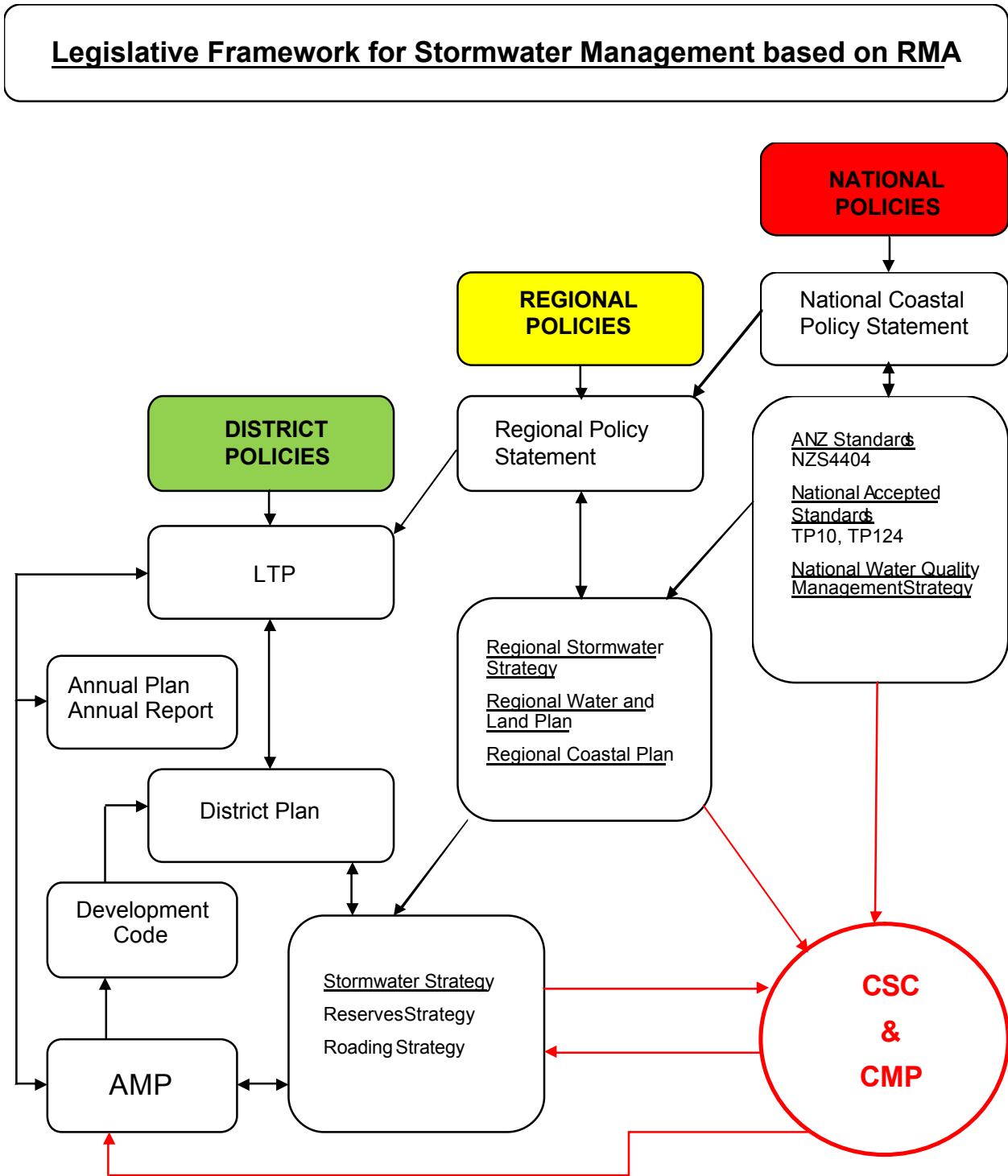


2.2 LEGISLATIVE BACKGROUND

The Bay of Plenty Regional Stormwater Strategy was published in 2005 as a collaborative approach between the Regional and District Councils within the Bay of Plenty to better manage urban stormwater in the district and improve the water quality of discharges into streams, rivers, Tauranga Harbour and Maketu Estuary. Actions within the strategy include Territorial Authorities obtaining CSCs for urban areas in each district.

The legislative framework for stormwater management and its connection to the CMP are shown in the figure below.

Figure 3: Legislative Framework (Source: CPG CMP WSZ1, 2012)



The CSC and CMP's are effectively an Asset Management Tool, which will not only have an impact on the Councils Engineering department and how they will better manage stormwater and minimise its impact on the environment, but also on Councils Policy department, who will have to accommodate the requirements in their strategies and provide bylaws.

An overview of responsibilities determined by legislation is shown in Table 1.

Table 1: Overview of Responsibilities (Source: CPG CMP WSZ1, 2012)

	Responsibility	How
Bay of Plenty Regional Council	Fresh water and coastal discharges (quality/quantity), structures, water diversion etc	Regional Water and Land Plan, Regional Coastal Plan, Drainage Schemes
	Flood Management	Drainage Schemes
	Encourage TA's to take integrated approach to stormwater management	Advocacy, Regional Policy Statement
	Establish Urban Limits	Regional Policy Statement
	Pollution Prevention and Compliance (especially on Industrial premises)	Regional Water and Land Plan, Regional Coastal Plan,
District Council	Land use Management	District Plan, Code of Practice
	Subdivision design	District Plan, Code of Practice, Structure Plans
	Infrastructure ownership	TA responsibility, asset management plans,
	Flood Hazard Management	District Plans, Processing Building Consents

The legislative background and relevant sections of policy statements and plans are described in detail in the CMPs.

2.3 STUDY AREA

The areas to be covered in the Western Catchment Management Plans and associated Comprehensive Stormwater Consent are as following:

- WSZ1: Catchment Waihi Beach
- WSZ2: Catchment Small Coastal Communities
 - Tanners Point
 - Tuapiro
 - Ongare Point
 - Te Kauri Village
- WSZ3: Catchment Katikati

The limits of the catchment for which the CSC is sought are the existing urban areas defined through the District Plan and the Urban Limits defined through Change No. 2 to the Bay of Plenty Regional Policy Statement. This approach has been chosen to allow for the predicted growth of the area.

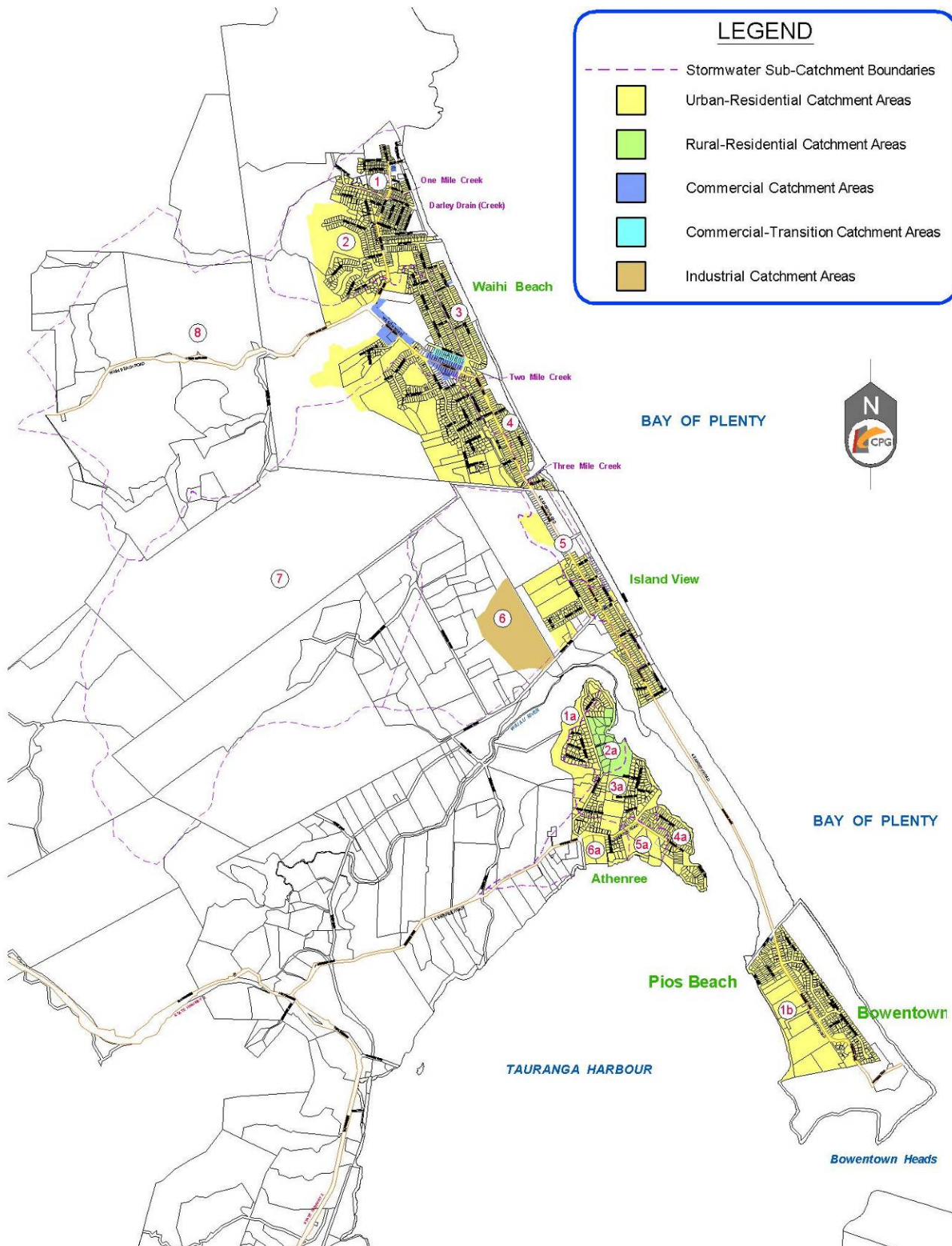
For the purpose of this paper we will be using Waihi Beach as an example to show what difficulties WBOPDC faces during the planning and implementing of the CMPs.

Waihi Beach, which includes Island View, Pios Shores, Bowentown and Athenree, covers over 3,645ha of land.

The Waihi Beach catchment area is divided into a number of significant subcatchments, with each typically large rural area draining through the coastal residential development. Historically there have been major flooding problems together with coastal erosion problems in and around Waihi Beach.

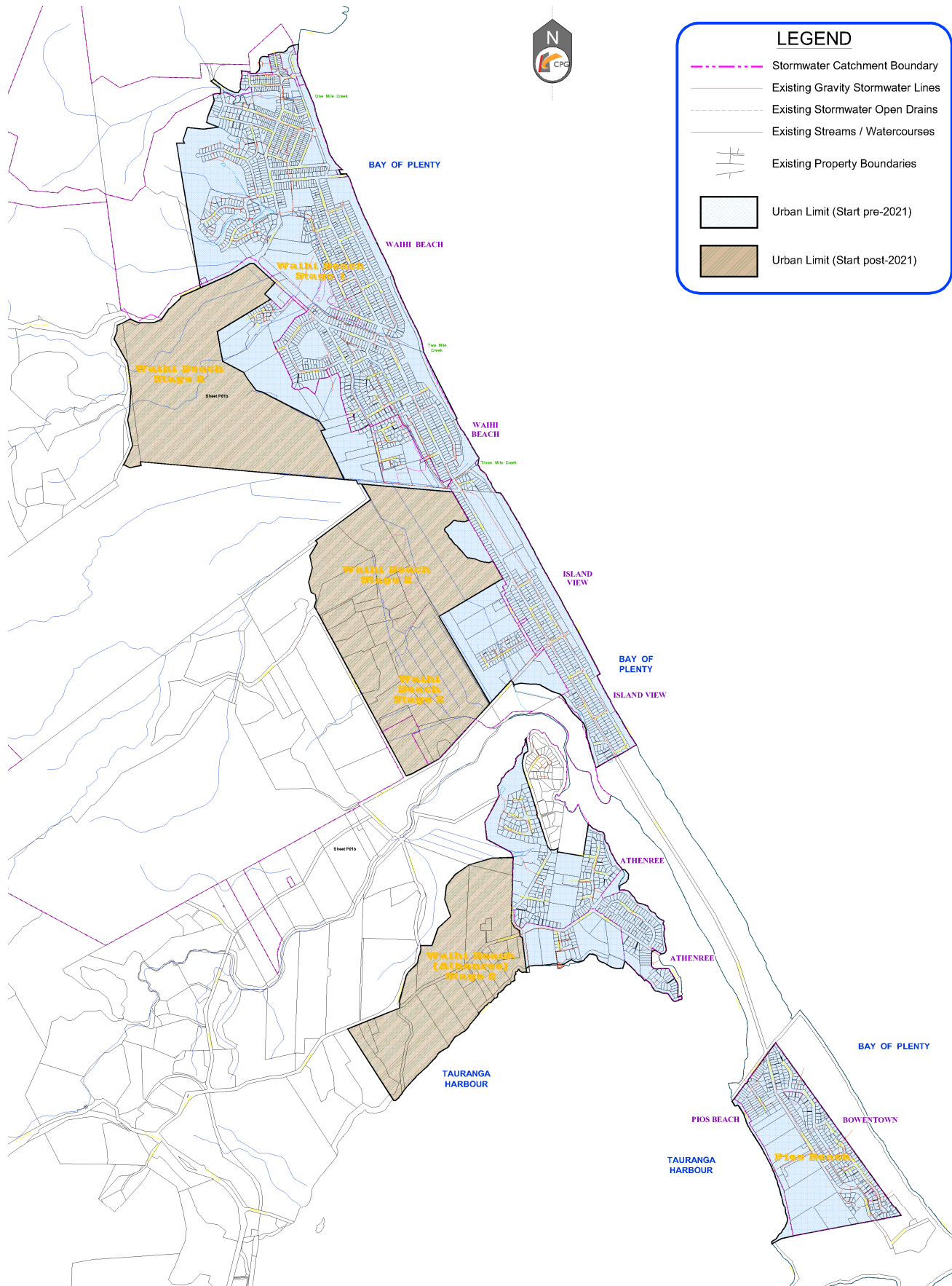
Figure 4 shows the extent of the subcatchment area as well as the zoning of the catchment area defined in the District Plan Maps.

Figure 4: Catchment and Land-use (Source: CPG CMP WSZ1, 2012)



The Urban Limits in Waihi Beach, one of three major Urban Growth Nodes within WBOPDC, are shown in Figure 5.

Figure 5: Urban Limits (Source: CPG CMP WSZ1, 2012)



2.4 EXISTING INFORMATION

Both private residents and local authorities have established WBOPDC's stormwater systems progressively, since urban communities developed in the District over the last century. As requirements have become stricter and the District has developed, some of these existing systems now do not meet WBOPDC's agreed Level of Service (LOS) set out in the existing planning heart - the District Plan.

WBOPDC has been addressing stormwater quantity related problems as part of their asset management planning process and their maintenance programme since the application for Renewal of Stormwater Discharge Consents was lodged in March 2001.

Investigation in the hydrological performance of the stormwater system and determination of flood levels have been undertaken by generating event driven catchment models, and verifying the results with historical service requests from the public. The Tonkin and Taylor Ltd Waihi Beach Residential Area Stormwater Study (T&T 2001) focused on the current system capacities, effects of infill subdivision on stormwater flows and flooding. The study ultimately developed a prioritised upgrade programme, which had been included in the Asset Management Plan (AMP) and consequently the Long Term Plan (LTP). However, these models were based on WBOPDC's LOS and Code of Practice current at the time, which required the primary system to be designed to a 20% Annual Exceedance Probability (AEP) for primary flow paths and 2% AEP for secondary flow paths. In addition the previous analysis for the urban areas used rainfall charts which did not include any adjustments for the predicted effects of Global Warming.

WBOPDC has been managing stormwater quality related problems by passive source control and active maintenance planning. There are only a few formal stormwater treatment devices (e.g. ponds, swales) established within the catchment. WBOPDC's maintenance contracts set out the requirements for stormwater quality management within the District. All contracts are performance based, with scheduled inspections and response to issues raised by the public through service requests.

2.5 STORMWATER QUALITY MONITORING

2.5.1 MONITORING REQUIREMENTS

It is understood that most of the urban stormwater discharges within the district are from stormwater catchments that are unlikely to result in significant effects in the receiving environment and do not warrant intensive sampling at this time.

Discussions with the BOPRC in relation to the monitoring to support the CSC application have been undertaken and the following requirements have been agreed upon:

- In each of WBOPDC's urban growth nodes (Waihi Beach, Katikati and Te Puke) the watercourse which receives most of the stormwater and/or the poorest quality of stormwater (e.g. from industrial or commercial use, high traffic volumes and/or dense residential areas) shall be chosen and justification for choosing the particular watercourse as being the worst case scenario shall be provided.
- One upstream and one downstream sediment sample shall be taken during late summer and during winter and the samples shall be analysed for the six most common metals (Zinc, Copper, Chromium, Lead, Nickel, Arsenic) and total hydrocarbons.
- A Benthic Invertebrate Community Assessment shall be undertaken of samples taken at the same locations as the sediment samples above. Benthic invertebrate (incl. insects, worms and molluscs) are a key part of a stream ecosystem. Monitoring their presence and health is a powerful tool to assess background water quality.

- Three rounds of initial “first flush” sampling of key stormwater discharges points (outlets) shall be undertaken, coupled with a desktop assessment of the likely stormwater contaminant levels from within each of the key stormwater subcatchments in order to identify discharges of potential concerns to the receiving environments.
- Any other supporting information from other sources such as compliance monitoring results, fish surveys, environmental assessments etc. shall be provided.

2.5.2 WORST CASE SCENARIO FOR MONITORING

Two Mile Creek being the worst case scenario for the Waihi Beach catchment has been selected as the watercourse to be monitored. The stream discharges directly to the sea over Waihi Beach and receives the most stormwater runoff (quantity) and has the most potential sources of contamination (quality) from the existing urban area.

Two Mile Creek in Waihi Beach is a highly modified soft bottom stream draining a predominantly rural 525 ha catchment. Most of the stream has been channelised and in the lower reaches the stream’s course is constrained by flood protection structures. Approximately 21 ha of the lower stream catchment are zoned residential and commercial.

The stormwater subcatchment sampled within Two Mile Creek is 4 ha in size and comprises a mixture of residential and commercial land use. The upstream and downstream sediment and benthic invertebrate sample points as well as the predominant stormwater outfall point are shown on the plan below.

*Figure 6: Predominant Subcatchment and Stormwater Outfall
(Source: CPG CMP WSZ1, 2012)*

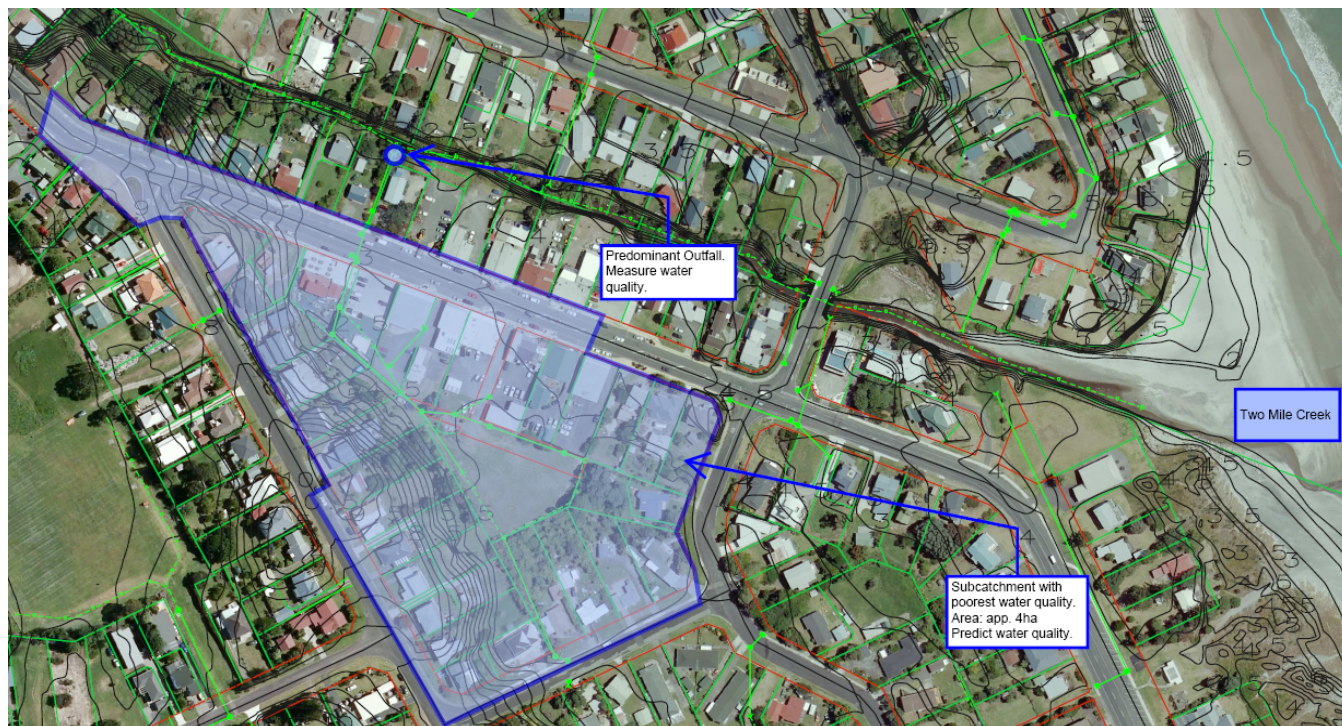


Figure 7: Sample Points (Source: CPG CMP WSZ1, 2012)



2.5.3 DIFFICULTIES DURING THE MONITORING PROCESS

The sediment sampling and the Benthic Invertebrate Community Assessment have been undertaken without any difficulties.

However, for the initial "first flush" sampling, the following limitations on the monitoring event set by BOPRC caused problems.

- The storm is preceded by at least 72 hours of no measurable rainfall.
- The storm is classified as a Quality Event (e.g. the intensity of the storm is at least one third of a 2 year 24 hour rainfall). For the Tauranga region the storm needs to exceed a depth of 33.4mm within 24 hours.
- The storm results in a stormwater discharge to the receiving environment for at least 6 hours.
- The sampling should take place preferably within the first 30 minutes, but no later than one hour, of the storm discharge in order to obtain the maximum concentration of pollutants.

The sample location in Waihi Beach is circa 56km northwest of Tauranga, with a predicted travel time of 54 minutes. Two sample sites are located in Katikati, which lies circa 37km northwest of Tauranga and requires roughly 34 minutes of travel time. Another two sample sites were identified in Te Puke, which lies circa 25km to the east of Tauranga and requires a predicted travel time of 28 minutes.

Considering the geographical and logistical constraints, sampling in a timely and safe manner was impossible. In addition to the above, sampling could only be undertaken during daylight to minimise potential Health and Safety risks.

Predicted rainfall intensity forecasts were used to select storm events meeting the required criteria.

These limitations meant that the three rounds of initial “first flush” sampling took over a year to complete.

2.5.4 MONITORING RESULTS

Sediment samples have shown that all sediment metal and metalloid concentrations in Two Mile Creek were below the guidelines, and concentrations were similar downstream of the urbanised portion of Two Mile Creek compared to the rural portion of the catchment upstream. These results indicate that stormwater discharges from the residential and commercial areas were not influencing sediment quality in Two Mile Creek at the time of the survey.

Water quality samples have revealed low dissolved oxygen levels in the stream and high water temperatures, particularly during the low flow periods during summer months. The effect can be understood as a consequence of the occurred encroachment into the natural riparian zones. As a result there are high levels of algal growth and the stream has limited ability to support water quality sensitive benthic macro invertebrates and native fish that require low water temperatures and high dissolved oxygen concentrations.

The assessment of the stormwater, sampled during the recorded storm events, revealed that metal concentrations in the stormwater were acceptable, with the only exception being elevated levels of zinc in two samples, which most likely originated from weathering of roofing and cladding material and from the wear of car tyres. Overall the results indicate that the predominant discharge to Two Mile Creek was not having a significant effect on downstream metals concentrations.

2.6 CONSULTATION

Recently Council has undertaken in-depth consultation with key stakeholders and the public through the development of their strategies and policies, e.g. Community Plans, Structure Plans, District Plans, LTP (2009-2019) and Annual Plan. Most of these plans address stormwater issues in parts.

However, as part of the CMP process WBOPDC is seeking to provide for cultural, social, economic and environmental well-being of their respective communities in the present and for the future.

The first phase of the consultation process involves informing stakeholders that we are preparing the CMP for the purpose of applying for the CSC and seeking their initial feedback to assist us in developing a draft plan.

During the consultation process WBOPDC provides the facts enclosed in the CMP and associated CSC and is listening to the views of affected parties. This first phase of the consultation started in August 2010 with a presentation to the Māori Forum.

During this presentation the questions “Where the CSC and CMP’s fit into the overall Catchment Management, taking into account that WBOPDC only addresses the urban portion of the catchment?” and “What financial implications this would have to the communities?” were raised by Tangata Whenua Representatives and the Councillors.

A second presentation to the Māori Forum was held in April 2011, including a clarification on the standing of the CMP/CSC in the relation to the overall catchment approach by the Regional Council. Meetings with the community were held in August/September 2011. Further information was distributed to Māori forum members and community boards. A summary document for the western catchments has been prepared and has been made available on WBOPDC’s homepage (<http://www.westernbay.govt.nz/Major-Projects/>).

The second phase of the consultation process involves assessing the feedback from the consultation in the first phase, to finalise the draft plan and the submission of the CSC application.

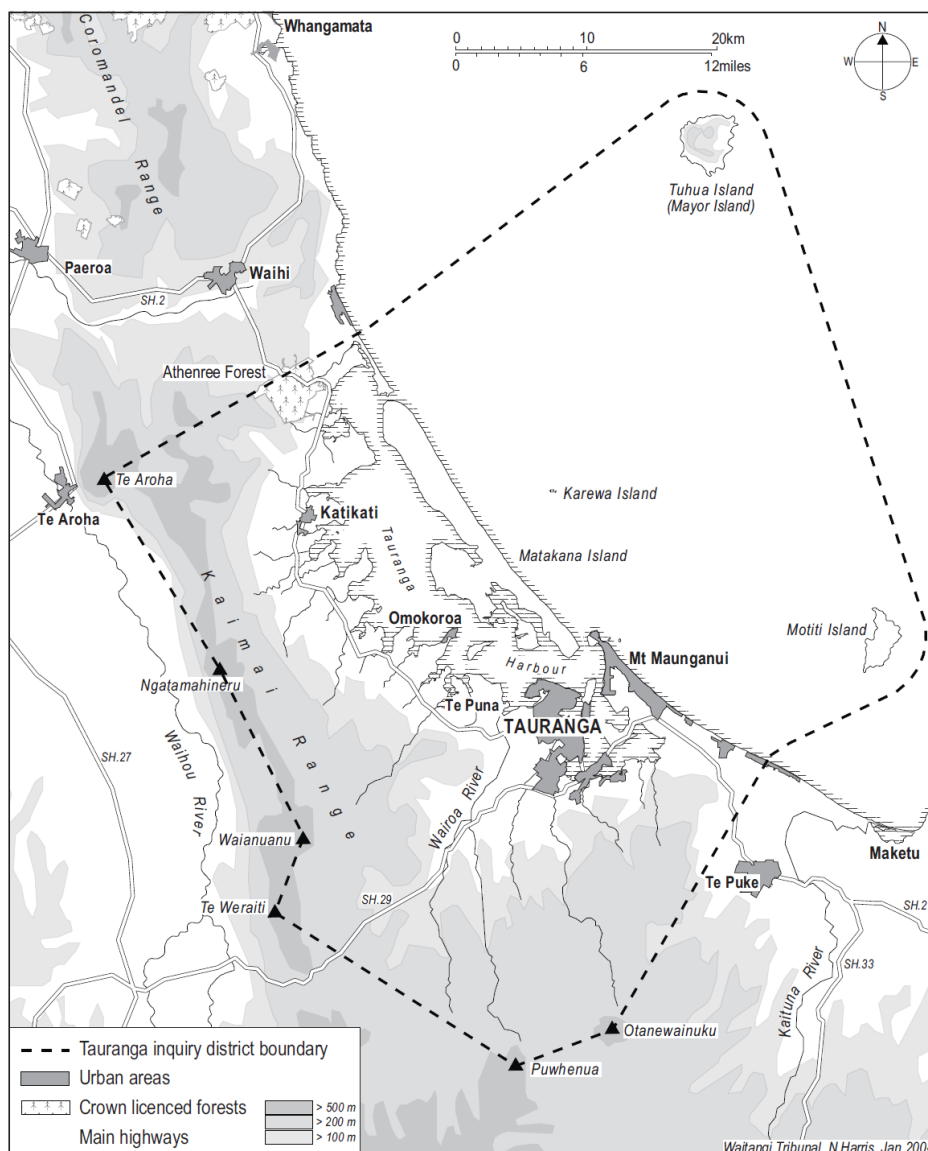
The third phase involves statutory public notification of the draft plan, pre-hearing meetings and hearings.

2.6.1 TANGATA WHENUA INTERESTS

Māori perspective

The study areas fall mainly within the boundaries of the Tauranga Moana inquiry district as indicated below.

Figure 8: Tauranga Moana Inquiry District Boundaries
(Source: Waitangi Tribunal, 2010)



Tauranga Moana is an ultimate taonga for the tangata whenua and viewed as a significant treasure by the other diverse communities of Tauranga City and the Western Bay of Plenty Region.

The Treaty of Waitangi and the RMA require Local Government to take into account the unique role and distinct cultural beliefs and traditions of Māori.

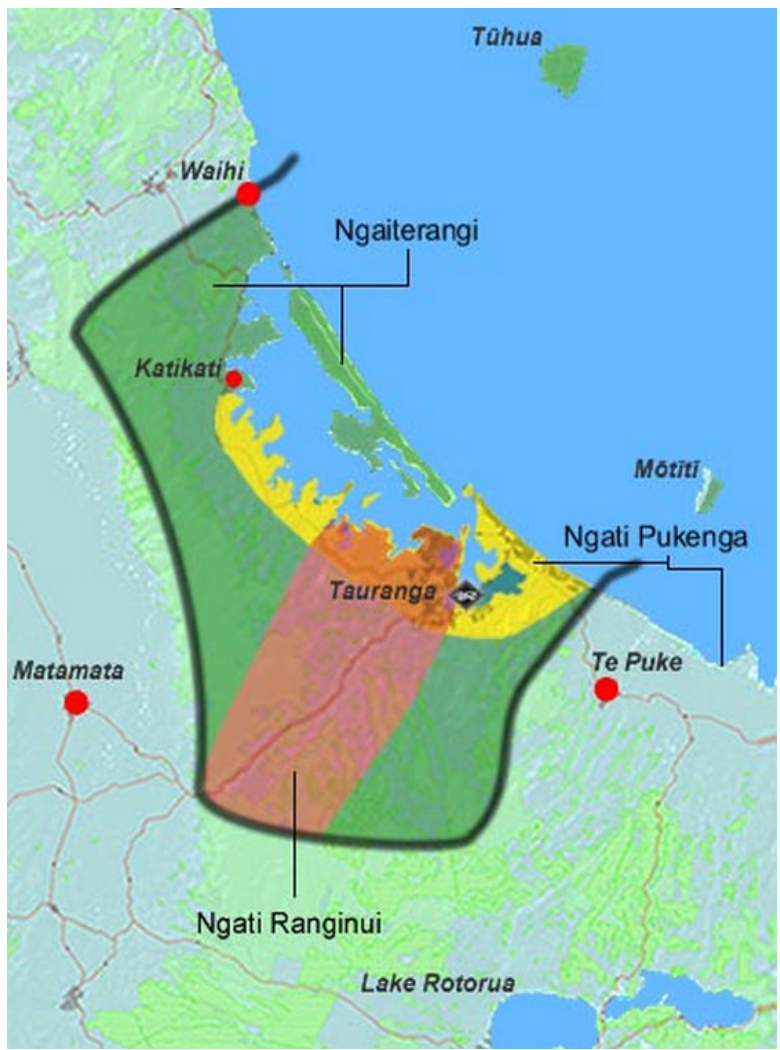
Section 5 of the RMA is to “promote the sustainable management of natural and physical resources”. Contained in Sections 6, 7 and 8 of the RMA are the Principles which support the achievement of the purpose. Within the Principles are specific provisions and directives to decision makers to consider matters and outcomes of importance to Māori cultural views and beliefs. While the weight to be applied to the previous sections varies, the requirement to consider these sections is mandatory.

Personal health and the health of the iwi are often considered by Māori to be closely linked to the health of their water bodies.

WBOPDC sees the Treaty Principle of ‘He here kia mohio’ – Cooperation and Consultation as their duty and works with tangata whenua groups who claim manawhenua status within the catchment area. Council is obliged under the RMA to consult in an open, timely and meaningful way with those groups, and has a policy of promoting meaningful partnership arrangements and processes with the local iwi.

Figure 9 shows individual iwi rohe (tribal areas) within Tauranga Moana. These iwi have declared a level of mana whenua / kaitiakitanga in the Western Bay and have shown particular interest in RMA matters if they impact on those areas.

Figure 9: Iwi rohe (Source: Te Puni Kōkiri, Ministry of Māori Development, 2012)



Māori view water and other natural resources as taonga (treasures) with spiritual and metaphysical properties. These spiritual values are bound together within the mauri that empowers all living things, and is fundamental to the mana (lifeblood) of iwi, hapu and whanau.

Significance of Water

Water is the basis of life. Waiora is defined as waters of life, the purest form of fresh water, which gives and sustains life.

Collecting kaimoana (food from the sea) and fishing in freshwater environments is a significant part of Māori culture.

For Māori, freshwater is a taonga of enormous value. Tikanga Māori, defined in the RMA as 'Māori customary values and practices', is the source of the essential relationship between Māori and their waterways. WaterSafe (2009) states 'Māori view rivers as the veins and water as the blood of Papatūānuku (the earth mother)'. Rivers wash away all impurity on its cleansing path towards the sea and keep the land healthy, which is important for kai collection and production. In Māori culture rain represents the tears of Ranginui (the sky father), which shows his love to Papatūānuku.

These beliefs show that the importance of water for Māori is both physical and spiritual and the two are greatly connected.

Māori, who are identified as tiaki (guardians), see their responsibilities to protect the integrity of valued freshwater resources.

The anger, pain and sorrow many Māori individuals and communities feel due to the current state of New Zealand's freshwater resources is one of the most consistent themes to emerge from the consultation process (Manatū Mō Te Taiao, Ministry for the Environment, 2005). Particularly the effect of river pollution, which is associated with food contamination and poor health of their people, is seen as a major source of unhappiness.

Key cultural concerns regarding stormwater discharge

From discussion with local iwi we have gained valuable knowledge regarding the cultural concerns associated with stormwater discharges.

For Māori rain is a taonga, which sustains life. However, at the point of contact with Papatūānuku some rain water streams will become polluted from the existing land uses in the area. Such stormwater contributes to the degradation of water quality in the Tauranga Harbour as receiving environment, which in turn impacts on kaimoana (loss of food source) and mana (fear to swim/bath). Local iwi feel their obligation as kaitiaki is to manage the harbour and provide for their children and children's children.

Their major concerns are adverse effects on the water quality from changes in land use and how pollution is prevented. They would like to see pollution prevention criteria established for industrial land use.

Specific long and short term objectives for stormwater management in addressing these concerns have been identified in the CMPs. WBOPDC seeks the sharing of information on tangata whenua values and views to allow informed decision-making in respect to the management of stormwater.

3 THE LEVEL OF SERVICE AND FINANCIAL DEBATE

Information gained during the consultation process and changes proposed to the current stormwater management procedures will be implemented in the next LTP process, which will have a major impact on Council's Level of Service and associated financial implications.

In the following chapters we have outlined the difficulties WBOPDC is currently facing to give a better understanding of what the potential impact of such changes could be.

3.1 STORMWATER OUTCOMES

“Outcomes” are what Council wants to achieve in the long term. The following stormwater outcomes have been agreed with the community. They are based on the LTP strategic perspective “Building Communities.” (WBOPDC LTP, 2009)

Table 2: Councils Stormwater Outcomes (Source: WBOPDC LTP, 2009)

Council Outcome	Description	Achieving Outcomes
Outcome 1 (BCST1):	Stormwater systems in Urban Growth Nodes are progressively upgraded to comply with adopted structure plans.	<p>1.1 Works to achieve the higher levels of service set out in the structure plans for Growth Nodes will be carried.</p> <p><i>Councils Role: Lead</i></p> <p>1.2 Development of structure plans will consider alternative methods of management and disposal of stormwater.</p> <p><i>Councils Role: Lead</i></p>
Outcome 2 (BCST2):	Existing Stormwater systems in Small Settlements are progressively upgraded to provide a minimum level of service.	<p>2.1 In providing a minimum level of service, alternative stormwater management approaches may be undertaken. This will include cost benefit analysis of the various approaches and investigations into the management methodologies whereby water is viewed as a resource.</p> <p><i>Councils Role: Lead</i></p>
Outcome 3 (BCST3):	Urban Development is avoided in flood prone areas unless mitigation measures can be provided.	<p>3.1 All development avoids floodable and coastal protection areas or mitigates the hazard through design solutions.</p> <p><i>Councils Role: Lead</i></p>
Outcome 4 (BCST4):	Communities are consulted and informed about various approaches to stormwater management, and their views are sought and taken into account.	<p>4.1 Provide adequate information so that residents are fully informed about stormwater issues and responsibilities.</p> <p><i>Councils Role: Lead</i></p> <p>4.2 Discuss and explain the philosophy of the different approaches to stormwater with community.</p> <p><i>Councils Role: Lead</i></p> <p>4.3 Explore the use of incentives to encourage runoff contaminant on sites.</p> <p><i>Councils Role: Lead</i></p>
Outcome 5 (BCST5):	Compliance and monitoring activities are carried out.	<p>5.1 Ensure the consents necessary for works are lodged and approved as required.</p> <p><i>Councils Role: Lead</i></p> <p>5.2 Quantify the water quality issue by monitoring the effect of stormwater discharges on receiving environments.</p> <p><i>Councils Role: Research and Monitoring</i></p> <p>5.3 Carry out contaminant loading studies, including those associated with roading stormwater systems.</p> <p><i>Councils Role: Research and Monitoring</i></p>

3.2 TRACKING PROGRESS TOWARDS OUTCOMES

Council uses performance measures to track its progress towards achievement of Council outcomes and levels of service. The following tables outline the proposed performance measures for the 2012-2022 LTP.

Table 3: Tracking progress of outcomes (Source: WBOPDC LTP, 2009)

Council Outcome											
Outcome 1 (BCST1): Stormwater systems in Urban Growth Nodes are progressively upgraded to comply with adopted structure plans.											
Outcome 2 (BCST2): Existing Stormwater systems in Small Settlements are progressively upgraded to provide a minimum level of service.											
Outcome 3 (BCST3): Urban Development is avoided in flood prone areas unless mitigation measures can be provided.											
Outcome 4 (BCST4): Communities are consulted and informed about various approaches to stormwater management, and their views are sought and taken into account.											
Outcome 5 (BCST5): Compliance and monitoring activities are carried out.											
Performance Measure	Actual			Targets							
	30/6/2008	30/6/2010	30/6/2011	2010	2011	2012	2013	2014	2015	2019	2023
Key Performance Measure: Percentage of actions identified in the Stormwater Action Plan for the year that have been completed.	70%	64%	44%	90%	90%	90%	90%	90%	90%	90%	90%
Key Performance Measure: Resident satisfaction level with stormwater systems.	68%	58%	58%	60%	65%	65%	70%	70%	70%	70%	70%

Stormwater outcomes contribute to the following Community Outcomes:

- ▶ We can all enjoy a healthy and safe lifestyle
- ▶ Our environment is clean green and valued
- ▶ Our economy is thriving

3.3 LEVELS OF SERVICE

Levels of service have been developed to achieve the Stormwater Outcomes. Levels of Service are expected outputs that have quantifiable performance measures.

The levels of services that Council has agreed with the community are:

- ▶ Progressively upgrade infrastructure to manage flood levels within designated areas.
- ▶ Maintain existing stormwater system to contain flooding within designated areas.

Levels of service will be developed in the future to include technical measures.

The following table is used to track the levels of service and includes the levels of service, performance measures and targets for increased performance (as proposed for the 2012-2022 LTP).

Table 4: Tracking Level of Service (Source: WBOPDC LTP, 2009)

Level of Service	Performance Measure	Actual			Targets							
		30/6 2008	30/6 2010	30/6 2011	2010	2011	2012	2013	2014	2015	2018	2022
Progressively upgrade infrastructure to manage flood levels within designated areas	Percentage of reticulation (by length) that is under size as shown by stormwater modelling based on current rainfall data. Regional Council have adjusted stormwater calculations resulting in a larger number of Councils assets being undersized.	28%	28%	26%	40%	35%	35%	35%	25%	25%	15%	10%
Maintain existing stormwater system to retain flooding within designated areas	Number of times flooding occurs outside identified flood prone areas during 50 year or less storm event.	4	0	7	2	2	2	2	2	2	2	2

During the 2010/2011 financial year target levels were not met as flooding occurred outside identified flood prone areas seven times. There were various reasons for these flooding events including blocked pipes and some pipes being undersized. At the time the service request was put in the blocked drains were cleared out. These flood events were then factored into the future planning of upgrades/remedial works during the LTP review.

What Council proposed

Council proposed extensive stormwater projects over the 10-year period to upgrade ageing stormwater works in urban growth nodes and bring the small settlements management area up to a minimum level of service. This was in response to revised rainfall intensity projections. Structure plan works were also proposed for the urban growth nodes. The expected impact of the proposed work on the projected targeted rates paid by each of the areas of benefit for the next two years is shown in Table 5.

Table 5: Rates Comparison (Source: WBOPDC LTP, 2009)

Area of benefit targeted rate per property	Current Rate 2008/9	Proposed Rate 2009/10	Indicative Rate 2010/11
Small settlements (Tanners Point, Kauri Point, Te Puna, Paengaroa, Pukehina Beach, Maketu, Ongare Point)	\$85	\$173	\$236
Urban growth nodes (Te Puke, Katikati, Omokoroa, Waihi Beach, Pios Beach, Athenree)	\$200	\$241	\$267
Minden	\$124	\$169	\$137

Decision taken

In response to submissions opposing the increases in stormwater charges, Council reviewed the capital expenditure forecasts. For the growth nodes, Council postponed several projects beyond the 10 years of this plan, and removed some that could be completed using existing budgets. For the small communities' area of benefit, Council resolved to reduce rate increases to an affordable level, noting that a review of the Stormwater Strategy is scheduled for 2011/12. Council requested staff to revise the capital expenditure programme for approval by the Services Committee. For the Minden area of benefit, review of the financial forecasts revealed that the charge could be reduced without affecting the level of service.

As a result, the proposed rates (from Table 5) for 2009/10 were revised as follows:

- Growth nodes \$200
- Small Settlements \$129 increasing by inflation for each year
- Minden \$124

Consequently, the speed at which Council will bring the network up to the standard of the code of practice has been reduced and is reflected in lower Levels of Service measures.

Table 6: LOS Performance Measures (Source: WBOPDC LTP, 2009)

Levels of Service	Performance Measures	Actual			Target		
		30/6/2008	2010	2011	2012	2013-2015	2016-2019
Progressively upgrade infrastructure to manage flood levels within designated areas.	% of reticulation (by length) that is under size. Note: Environment Bay of Plenty has adjusted stormwater calculations which has resulted in a higher proportion of the Council's network being "under size". The action plans are addressing this issue and trends will improve in later years of plan.	28%	40%	35%	35%	25%	15%
Maintain existing stormwater system to contain flooding within designated areas.	Number of times flooding occurs outside identified flood prone urban areas during a 50-year or less storm event. (50 year storm event is a nationally recognised measure and used in Councils Code of Practice.)	4	2	2	2	2	2

4 CONCLUSIONS

The boundaries of the responsibilities between the Regional and the District Council are widely unknown to Tangata Whenua and the Communities.

During the Consultation Phase of the project the question was raised "Comprehensive Stormwater Consent & Catchment Management Plans – Where do they fit in?"

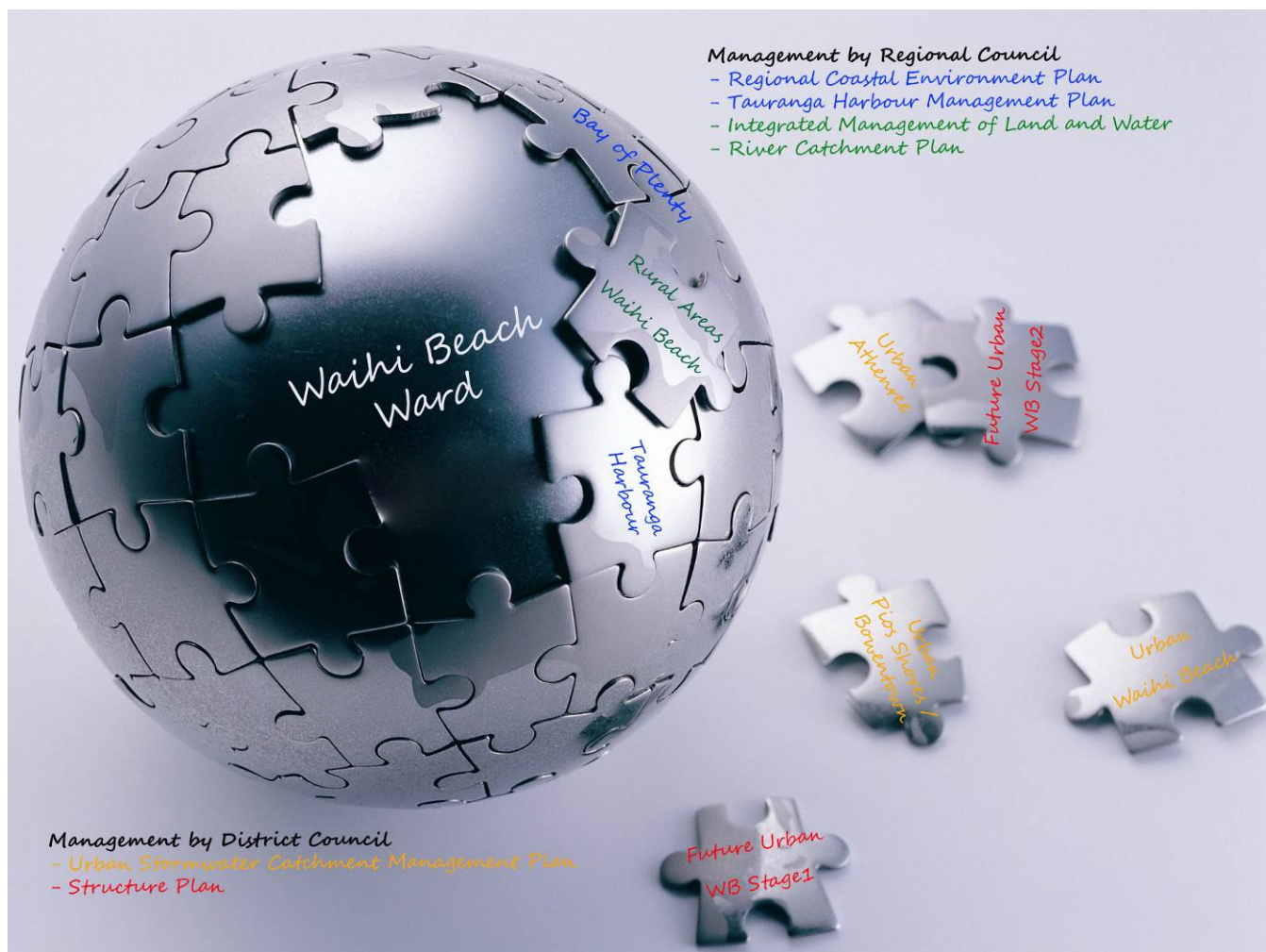
A question hard to respond to, given the complexity of the interrelations between the different authorities and the diverse planning processes already in place.

In order to gain CSC from the Regional Council the District Council needs to plan the stormwater management within the urban portion of the catchment only as opposed to the integrated catchment management approach, which takes the entire catchment area into account.

In Figure 3: Legislative Framework we have shown where the CSC and CMP sit in relation to the diverse other planning processes. The CMP will affectively be used as an asset management tool.

In general this planning process can be seen as one piece of a big jigsaw puzzle, with the overall goal of improving the human impact on planet Earth (Figure 10).

Figure 10: Relationship (Source: unpublished, background from <http://www.hitwallpapers.com>)



Both authorities have concluded that the CSC and CMP process will have long term benefits to the environment as well as to the Council itself through savings in the planning process, administration cost and monitoring cost.

However, the increased requirements set in the CMP to comply with the Regional Councils Stormwater Strategy will result in increased financial burden to the community.

ACKNOWLEDGEMENTS

The authors would like acknowledge the ongoing involvement and support of the Western Bay of Plenty District Council (Kelvin Hill, Ilze Krus), the Bay of Plenty Regional Council (Marlene Bosch, Bruce Gardner) for providing valuable guidance, and to CPG New Zealand Ltd (Tauranga Team), Boffa Miskell (Richard Coles) and Freshwater Solutions Ltd (Richard Montgomerie) for their valuable contribution to the planning phase of the CMP's.

Finally we would like to thank Tangata Whenua for their valued insight into their significant cultural views, and other stakeholders consulted for their support and understanding.

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