

environmental monitoring

GROUP OF ACTIVITIES



STATEMENT OF COST OF ACTIVITIES

environmental monitoring

For the year ended 30 June 2010

Actual 30-Jun-09 Cost of Services \$		Note	Actual 30-Jun-10 Cost of Services \$	LTCCP 30-Jun-10 Cost of Services \$	Variance \$
	REVENUE				
1,512,526	User Charges	1	1,494,776	1,407,008	87,768
<u>1,512,526</u>	TOTAL OPERATING REVENUE		<u>1,494,776</u>	<u>1,407,008</u>	<u>87,768</u>
	EXPENDITURE				
2,035,572	Personnel Costs	2	2,048,434	2,189,969	141,535
155,367	Depreciation		163,124	132,528	(30,596)
1,104,909	Other Operating Expenses	2	1,206,121	1,138,465	(67,656)
1,424,742	Support Costs internally allocated to Activity		1,498,703	1,463,291	(35,412)
<u>4,720,590</u>	TOTAL OPERATING EXPENDITURE		<u>4,916,382</u>	<u>4,924,253</u>	<u>7,872</u>
155,367	Less non cash items		163,122	132,528	(30,594)
<u>3,052,697</u>	NET CASH COST / (SURPLUS) OF ACTIVITY		<u>3,258,484</u>	<u>3,384,717</u>	<u>126,234</u>
	<i>Funded by:</i>				
396,933	Targeted Council Service Rate		1,296,624	1,503,486	206,862
2,346,035	Investment Income		451,843	567,383	115,540
309,728	Transfer from / (to) Cash Reserves		1,510,017	1,313,848	(196,169)
<u>3,052,697</u>	TOTAL OPERATING FUNDING		<u>3,258,484</u>	<u>3,384,717</u>	<u>126,234</u>
108,395	CAPITAL EXPENDITURE	3	155,242	198,764	43,522
	<i>Funded by:</i>				
108,395	Targeted Council Service Rate		155,242	22,000	(133,242)
–	Transfer from Cash Reserves		–	176,764	176,764
<u>108,395</u>	TOTAL CAPITAL FUNDING		<u>155,242</u>	<u>198,764</u>	<u>43,522</u>
	TOTAL OPERATING EXPENDITURE BY ACTIVITY				
1,561,935	State of the Environment Monitoring		1,800,752	1,905,118	104,365
1,851,943	Resource Consent Compliance		1,942,716	1,818,512	(124,204)
922,206	Environmental Incidents Response		798,936	750,342	(48,594)
384,506	Hazardous Substances and Contaminated Sites		373,977	450,281	76,304
<u>4,720,590</u>	TOTAL ENVIRONMENTAL MONITORING		<u>4,916,382</u>	<u>4,924,253</u>	<u>7,872</u>

Variance compared to LTCCP

Revenue

1. Revenue from user fees and sundry is greater than forecast due to the large number of Farm Dairy Effluent infringement notices and other enforcement action taken.

Expenditure

2. Expenditure is greater than forecast due to increased consultants costs and legal fees in relation to the high level of enforcement action taken. These increased costs are partially off-set by lower costs due to delays in some commercial and air quality testing work which is rain dependant and personnel costs as a result of staff vacancies during the year.

Capital Expenditure

3. Capital expenditure is lower than forecast due to expenditure budgeted for new water quality and water quantity equipment not occurring in 2009-2010 financial year as a result of the drought experienced in Northland.

LEVELS OF SERVICE

environmental monitoring

Environmental Monitoring Overview

State of the environment monitoring

Increasing community expectations and demands for higher environmental standards have seen the Council continue to increase and apply considerable resources to core environmental and compliance monitoring functions.

The State of the Environment monitoring network includes region-wide rainfall, river flow, lake, and groundwater and tide level measurements. The data collected from the Council's telemetered rainfall and river level sites throughout Northland provided vital information during the significant drought which occurred over the 2009-2010 summer. The drought resulted in a high demand on hydrological resources resulting in less essential work falling behind schedule. A programme has been put in place to catch up on the back log of work over the winter months. Winter storms may affect this programme by placing a demand on resources for flood warning.

Water quality monitoring is undertaken at numerous sites throughout the region. This includes rivers, lakes, coastal waters and popular bathing sites. Due to demand the Council significantly extended the bathing site network over the summer months. An action plan for problematic bathing sites with mixed compliance levels was also implemented. This work showed that water quality at many of the small coastal freshwater bathing sites is influenced by birds, which is beyond the control of Council. Where contamination is shown to be as a result of human sources such as pastoral farming Council staff are working with land owners to improve riparian management in an effort to improve water quality. Results from the River monitoring network show that while guideline values are not met at many sites, water quality improved in a number of areas such as nitrogen phosphorous, clarity and bacteria. The drought conditions over the summer months are likely to have played a role in these measured improvements.

The Council also undertakes an estuarine monitoring programme. This was extended over the 2009-2010 financial year and data collection targets are being met. It will take some time before meaningful results from the programme are available. The Council, in collaboration with the Far North District Council, has started or been involved in a number of community based monitoring programmes including Wai Ora Hokianga, Bay Care and Aurere Estuary monitoring.

Ambient air quality monitoring is undertaken in two of the region's airsheds – Whāngārei and Marsden Point – with further temporary monitoring scheduled to measure air quality in the region's other major centres, such as Kaitiāia and Kerikeri. A significant upgrade of the Whāngārei Air Quality monitoring station was substantially completed by the end of June 2010 with capacity at that site increased to include real-time sulphur dioxide and carbon monoxide monitoring. Auto

calibration equipment at both the Whāngārei and the Marsden Point sites was also installed.

The Annual Monitoring Report (AMR) was completed towards the end of 2009, slightly behind schedule. This is now available on the Council's website. The AMR took a new format this year in the form of Annual Monitoring Report Cards. The bathing report for the 2009-2010 summer was also completed.

Compliance monitoring

A very high standard is set in this area due to the importance of compliance monitoring. While not completely achieved a high level performance continues to be attained with;

- 98% of consent having documented monitoring programmes.
- 95.5% or better of monitoring results being loaded against Council's databases and reported to appropriate parties.
- 100% reporting of monitoring results reported to the Council on a monthly basis.
- 87% or higher of significant non compliances have enforcement action taken. The remainder had follow up at an appropriate level.
- Numerous flows gaugings were undertaken during the drought to assist with compliance of significant water take consents. 100% of all significant water abstractions were monitored.

There is a heavy demand on resources so these levels of achievement are considered to be good. Efforts will continue to maintain this high level of service with the resources available.

Environmental incidents response

Response to environmental incidents was maintained at a high level with 100% of significant incidents being responded and 895 of those resulting in significant adverse effects having formal enforcement action taken against them. Where a public health risk is considered to exist 100% of these were notified to Northland Health for appropriate advisory warnings.

Resources expended on responding to environmental incidents is on the increase. At this stage Council staff are managing to cope.

Hazardous substances and contaminated sites

A collection service for waste hazardous substances was provided to Northland ratepayers throughout 2009-2010. More than four tonnes of waste chemicals were collected and disposed of. A new, larger store has been set up at Waipapa owing to the increasing use of the Waipapa site. The old store has been retained onsite to cope with the influx of agrichemicals, and a Kaikohe site will be set up at a later date.

LEVELS OF SERVICE

environmental monitoring

Environmental Monitoring Overview continued

Council staff continue to contract to Department of Labour in providing a Hazardous Substances and New Organisms (HASNO) inspection service for commercial premises. Contractual targets continue to be met. These inspections are also used to provide an opportunity to give businesses advice in cleaner production practices.

The Council's potentially contaminated land (HAIL) database continues to be maintained and updated. This information has been provide to all District Councils for use in their statutory processes.

Activity 7.1 State of the Environment Monitoring

Objective: Promote sustainable resource management by identifying significant environmental issues and trends in the region, provide scientifically sound information to facilitate informed decision-making and monitor effectiveness of the Council's policy documents.

2010-2012 Performance Measures and Targets

7.1.1 Monitor and identify significant environmental issues and trends in the region.																										
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009																								
<p>a. Operate a region-wide quality network for the measurement, recording and reporting of groundwater, river and lake water quality trends and soil quality trends.</p> <ul style="list-style-type: none"> Annual % compliance of rivers with relevant guidelines for five key parameters. 	<p>Achieved.</p> <p>Monthly sampling undertaken at all 31 State of the Environment river water quality monitoring sites (and four sites monitored by NIWA).</p> <ul style="list-style-type: none"> Quarterly sampling carried out at 36 groundwater sites. Quarterly sampling at 28 lakes. Soil monitoring programme is being reviewed as per statement in LTCCP (pg 163). The revised programme will be implemented in the 2011 Financial year. <p>Achieved.</p> <p>The annual % compliance is calculated by comparing the median value for each parameter for each site over the 12 month sampling period against the relevant guidelines. The % compliance represents the number of monitoring sites (35 in total) that complied with relevant guidelines for more than 50% of the time. Bacteria, water clarity, total nitrogen and total phosphorus were all above target. Dissolved oxygen met target (100%).</p> <p>Total nitrogen and phosphorus % compliance was considerably better than 2007 baseline. However, this is most likely as a result of the drought experienced from November 2009 to May 2010. Reduced rainfall in the region meant there was less runoff from the land entering the rivers. Runoff from land is a significant contributor of nutrients into waterways.</p> <table border="1"> <thead> <tr> <th>Rivers Baseline 2007-2008</th> <th>Compliance %</th> <th>Rivers Baseline 2009-2010</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Bacteria</td> <td>81%</td> <td>Bacteria</td> <td>84%</td> </tr> <tr> <td>Water Clarity</td> <td>85%</td> <td>Water Clarity</td> <td>87%</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>100%</td> <td>Dissolved Oxygen</td> <td>100%</td> </tr> <tr> <td>Total Nitrogen</td> <td>61%</td> <td>Total Nitrogen</td> <td>81%</td> </tr> <tr> <td>Total Phosphorus</td> <td>45%</td> <td>Total Phosphorus</td> <td>61%</td> </tr> </tbody> </table>	Rivers Baseline 2007-2008	Compliance %	Rivers Baseline 2009-2010	Compliance %	Bacteria	81%	Bacteria	84%	Water Clarity	85%	Water Clarity	87%	Dissolved Oxygen	100%	Dissolved Oxygen	100%	Total Nitrogen	61%	Total Nitrogen	81%	Total Phosphorus	45%	Total Phosphorus	61%	<p>Achieved.</p> <p>New measure.</p>
Rivers Baseline 2007-2008	Compliance %	Rivers Baseline 2009-2010	Compliance %																							
Bacteria	81%	Bacteria	84%																							
Water Clarity	85%	Water Clarity	87%																							
Dissolved Oxygen	100%	Dissolved Oxygen	100%																							
Total Nitrogen	61%	Total Nitrogen	81%																							
Total Phosphorus	45%	Total Phosphorus	61%																							

LEVELS OF SERVICE

environmental monitoring

Activity 7.1 State of the Environment Monitoring continued

7.1.1 Monitor and identify significant environmental issues and trends in the region.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>b. Report on summer coastal and freshwater bathing water quality and water quality for the collection of shellfish at various sites.</p> <ul style="list-style-type: none"> Annual median % compliance of 20 representative bathing sites to the Ministry of Environment Guidelines. 2007-2008 baseline % - 95% 	<p>Achieved. 23 freshwater and 63 coastal sites were monitored during 2009-2010 summer. Water samples were collected from most sites on a weekly basis from 30 November 2009 to 15 February 2010, with selected high priority sites sampled until 31 March 2010. Results were reported weekly on the Northland Regional Council website www.nrc.govt.nz/Living-in-Northland/At-the-beach/Swimming-water-quality. A detailed report on the 2009-2010 results is in publication.</p> <p>Achieved. The 20 permanent monitoring sites were randomly selected for statistical defensibility and provide good geographical spread of Northland. 20 permanent sites have been selected to ensure consistency in reporting each year as the number of sites, and the site locations change depending on priority and risk.</p> <p>Achieved. Compliance is assessed for each sample for each site over the sampling season. Each site is given an overall % compliance for the season. The annual median % compliance is the median value of the 20 permanent monitoring sites. 11 of the 20 permanent sites had 100% compliance with guidelines, the remaining nine ranged from 72-94% compliance.</p>	<p>Achieved.</p> <p>New measure.</p> <p>New measure.</p>



LEVELS OF SERVICE

environmental monitoring

Activity 7.1 State of the Environment Monitoring continued

7.1.1 Monitor and identify significant environmental issues and trends in the region.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>c. Monitor ambient air quality in line with the priorities of the National Environmental Standard for Air and the Regional Air Quality Plan.</p> <ul style="list-style-type: none"> Annual % of compliance with the national environmental standards. 	<p>Not achieved.</p> <p>20% achieved. Air Quality monitoring for particulate matter (PM₁₀) was carried out at one of five airsheds in Northland (Whāngārei) as this airshed has the highest risk of exceeding National Environmental Standards. Sulphur dioxide (SO₂) and carbon monoxide (CO) monitoring was not undertaken in any airsheds during 2009-2010 due to insufficient resources. SO₂ and CO monitors were established in Whāngārei airshed in July 2010, and screening for PM₁₀ in Kaitaia also commenced in July 2010.</p> <p>Achieved.</p> <p>Whāngārei PM₁₀ compliance with National Environmental Standards during 2009-2010 was 100%.</p>	<p>Achieved</p> <p>New measure.</p>
<p>d. Operate a region wide hydrometric network for the measurement, recording and reporting of rainfall, river flows, lake, groundwater and tide levels.</p> <ul style="list-style-type: none"> No more than a seven day missing record per site annually for all automatic measuring stations. <p>Baseline 2007-2008 Compliance % - 90%</p> <ul style="list-style-type: none"> Relevant information will be available on the Hydrology Group Archive within three months of Production. <p>Baseline 2007-2008 Compliance % - 20%</p>	<p>Achieved.</p> <p>Achieved.</p> <p>92.3% compliance at the end of June 2010. Seven out of 91 sensors incurred more than seven days missing record. There are two problematic sites that cannot be Telemetered. Vandalism of sites contributes to missing record. Equipment upgrades and additional resources are required to increase % compliance.</p> <p>Not achieved.</p> <p>2.2% compliance at the end of June 2010. Data from 88 of 91 sensors has not been updated to the archive within the last three months. As a result of the increased workload relating to the drought, archiving data was deferred until the 2009-2010 drought broke (May 2010). Prioritised work July to September. As at end of August 2010 compliance was 70%.</p>	<p>Achieved.</p> <p>New measure.</p> <p>New measure.</p>

LEVELS OF SERVICE

environmental monitoring

Activity 7.1 State of the Environment Monitoring continued

7.1.1 Monitor and identify significant environmental issues and trends in the region.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>e. Establish water management zones on a prioritised basis for allocation of freshwater resources.</p> <ul style="list-style-type: none"> Develop a list of prioritised zones by 31 December 2009, include in the relevant environmental monitoring report to the Council. 	<p>Achieved.</p> <p>A GIS map was created in 2009 which shows the water management zones. The map is available for viewing on the Council's website www.nrc.govt.nz/Your-Council/Online-maps/</p> <p>Five catchments have been prioritised for action.</p>	New measure.
<p>f. Identify 'at risk' aquifers and carry out investigations to better understand this resource.</p> <ul style="list-style-type: none"> Undertake hydrogeology investigations, including (where appropriate) delineating aquifer management boundaries, estimating recharge, discharge, flow direction and sustainable yields to characterise the 'at risk' aquifers in the region. Report results each year in the Annual Monitoring Report and every five years in the State of the Environment Report. 	<p>Achieved.</p> <p>At risk aquifers have been identified and are documented in the Regional Water and Soil Plan for Northland. In 2009-2010 numerical models for Maungatapere, Maunu and Whatitiri were completed. Additionally, recharge estimates for the five Alluvial/Basalt aquifers and six small coastal aquifers were completed. These aquifers were listed in the Annual Monitoring Report 2009-2010 (in publication).</p>	New measure.



LEVELS OF SERVICE

environmental monitoring

Activity 7.1 State of the Environment Monitoring continued

7.1.1 Monitor and identify significant environmental issues and trends in the region.																																																																																																		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009																																																																																																
<p>g. Monitor water and sediment quality in Northland Harbours on a prioritised basis.</p> <ul style="list-style-type: none"> Annual % compliance for priority harbour waters with appropriate guideline values. <p>Harbour waters – Whāngārei</p> <table border="1"> <thead> <tr> <th>Baseline 2007-2008</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Bacteria</td> <td>100%</td> </tr> <tr> <td>Water Clarity</td> <td>100%</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>50%</td> </tr> <tr> <td>Total Nitrogen</td> <td>new measure</td> </tr> <tr> <td>Total Phosphorus</td> <td>new measure</td> </tr> </tbody> </table> <p>Harbour waters – Bay of Islands</p> <table border="1"> <thead> <tr> <th>Baseline 2007-2008</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Bacteria</td> <td>not monitored</td> </tr> <tr> <td>Water Clarity</td> <td>not monitored</td> </tr> <tr> <td>Dissolved oxygen</td> <td>not monitored</td> </tr> <tr> <td>Total Nitrogen</td> <td>not monitored</td> </tr> <tr> <td>Total Phosphorus</td> <td>not monitored</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Two-yearly % compliance for priority harbour sediment with appropriate action levels. <p>Harbour Sediments – Bay of Islands</p> <table border="1"> <thead> <tr> <th>Baseline 2007-2008</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Zinc</td> <td>no data</td> </tr> <tr> <td>Copper</td> <td>no data</td> </tr> <tr> <td>Lead</td> <td>no data</td> </tr> <tr> <td>Cadmium</td> <td>no data</td> </tr> <tr> <td>Chromium</td> <td>no data</td> </tr> </tbody> </table> <p>Harbour Sediments – Whāngārei</p> <table border="1"> <thead> <tr> <th>Baseline 2007-2008</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Zinc</td> <td>no data</td> </tr> <tr> <td>Copper</td> <td>no data</td> </tr> <tr> <td>Lead</td> <td>no data</td> </tr> <tr> <td>Cadmium</td> <td>no data</td> </tr> <tr> <td>Chromium</td> <td>no data</td> </tr> </tbody> </table>	Baseline 2007-2008	Compliance %	Bacteria	100%	Water Clarity	100%	Dissolved Oxygen	50%	Total Nitrogen	new measure	Total Phosphorus	new measure	Baseline 2007-2008	Compliance %	Bacteria	not monitored	Water Clarity	not monitored	Dissolved oxygen	not monitored	Total Nitrogen	not monitored	Total Phosphorus	not monitored	Baseline 2007-2008	Compliance %	Zinc	no data	Copper	no data	Lead	no data	Cadmium	no data	Chromium	no data	Baseline 2007-2008	Compliance %	Zinc	no data	Copper	no data	Lead	no data	Cadmium	no data	Chromium	no data	<p>Achieved.</p> <p>Water quality monitored bi-monthly. The 2007-2008 baseline was not accurate and has been checked and corrected. The 2009-2010 data shows improved coastal water quality in Whāngārei Harbour and approximately the same water quality in the Bay of Islands.</p> <p>Harbour waters – Whāngārei</p> <table border="1"> <thead> <tr> <th>Baseline 2009-2010</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Bacteria</td> <td>96%</td> </tr> <tr> <td>Water Clarity</td> <td>95%</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>88%</td> </tr> <tr> <td>Total Nitrogen (Ammonia not totals monitored)</td> <td>52%</td> </tr> <tr> <td>Total Phosphorus</td> <td>44%</td> </tr> </tbody> </table> <p>Harbour waters – Bay of Islands</p> <table border="1"> <thead> <tr> <th>Baseline 2009-2010</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Bacteria</td> <td>96%</td> </tr> <tr> <td>Water Clarity</td> <td>79%</td> </tr> <tr> <td>Dissolved oxygen</td> <td>100%</td> </tr> <tr> <td>Total Nitrogen (Ammonia not totals monitored)</td> <td>64%</td> </tr> <tr> <td>Total Phosphorus</td> <td>92%</td> </tr> </tbody> </table> <p>Achieved.</p> <p>The baseline 2007-2008 sediments were collected but perished in the freezer so no data exists prior to 2009-2010. The data below will become the baseline for future two-yearly sediment surveys. All sites met the ANZECC-low guideline except one site in the upper Whangarei Harbour. An investigation into the non-compliance will be undertaken.</p> <p>Harbour Sediments – Bay of Islands</p> <table border="1"> <thead> <tr> <th>Baseline 2009-2010</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Zinc</td> <td>100%</td> </tr> <tr> <td>Copper</td> <td>100%</td> </tr> <tr> <td>Lead</td> <td>100%</td> </tr> <tr> <td>Cadmium</td> <td>100%</td> </tr> <tr> <td>Chromium</td> <td>100%</td> </tr> </tbody> </table> <p>Harbour Sediments – Whāngārei</p> <table border="1"> <thead> <tr> <th>Baseline 2009-2010</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Zinc</td> <td>94%</td> </tr> <tr> <td>Copper</td> <td>100%</td> </tr> <tr> <td>Lead</td> <td>100%</td> </tr> <tr> <td>Cadmium</td> <td>100%</td> </tr> <tr> <td>Chromium</td> <td>100%</td> </tr> </tbody> </table>	Baseline 2009-2010	Compliance %	Bacteria	96%	Water Clarity	95%	Dissolved Oxygen	88%	Total Nitrogen (Ammonia not totals monitored)	52%	Total Phosphorus	44%	Baseline 2009-2010	Compliance %	Bacteria	96%	Water Clarity	79%	Dissolved oxygen	100%	Total Nitrogen (Ammonia not totals monitored)	64%	Total Phosphorus	92%	Baseline 2009-2010	Compliance %	Zinc	100%	Copper	100%	Lead	100%	Cadmium	100%	Chromium	100%	Baseline 2009-2010	Compliance %	Zinc	94%	Copper	100%	Lead	100%	Cadmium	100%	Chromium	100%	<p>New measure.</p> <p>New measure.</p>
Baseline 2007-2008	Compliance %																																																																																																	
Bacteria	100%																																																																																																	
Water Clarity	100%																																																																																																	
Dissolved Oxygen	50%																																																																																																	
Total Nitrogen	new measure																																																																																																	
Total Phosphorus	new measure																																																																																																	
Baseline 2007-2008	Compliance %																																																																																																	
Bacteria	not monitored																																																																																																	
Water Clarity	not monitored																																																																																																	
Dissolved oxygen	not monitored																																																																																																	
Total Nitrogen	not monitored																																																																																																	
Total Phosphorus	not monitored																																																																																																	
Baseline 2007-2008	Compliance %																																																																																																	
Zinc	no data																																																																																																	
Copper	no data																																																																																																	
Lead	no data																																																																																																	
Cadmium	no data																																																																																																	
Chromium	no data																																																																																																	
Baseline 2007-2008	Compliance %																																																																																																	
Zinc	no data																																																																																																	
Copper	no data																																																																																																	
Lead	no data																																																																																																	
Cadmium	no data																																																																																																	
Chromium	no data																																																																																																	
Baseline 2009-2010	Compliance %																																																																																																	
Bacteria	96%																																																																																																	
Water Clarity	95%																																																																																																	
Dissolved Oxygen	88%																																																																																																	
Total Nitrogen (Ammonia not totals monitored)	52%																																																																																																	
Total Phosphorus	44%																																																																																																	
Baseline 2009-2010	Compliance %																																																																																																	
Bacteria	96%																																																																																																	
Water Clarity	79%																																																																																																	
Dissolved oxygen	100%																																																																																																	
Total Nitrogen (Ammonia not totals monitored)	64%																																																																																																	
Total Phosphorus	92%																																																																																																	
Baseline 2009-2010	Compliance %																																																																																																	
Zinc	100%																																																																																																	
Copper	100%																																																																																																	
Lead	100%																																																																																																	
Cadmium	100%																																																																																																	
Chromium	100%																																																																																																	
Baseline 2009-2010	Compliance %																																																																																																	
Zinc	94%																																																																																																	
Copper	100%																																																																																																	
Lead	100%																																																																																																	
Cadmium	100%																																																																																																	
Chromium	100%																																																																																																	

LEVELS OF SERVICE

environmental monitoring

Activity 7.1 State of the Environment Monitoring continued

7.1.1 Monitor and identify significant environmental issues and trends in the region.																																		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009																																
<p>h. Undertake a prioritised estuary health monitoring programme.</p> <ul style="list-style-type: none"> Annual % of compliance with suitable estuary health indices for three estuaries up to 2009 and five estuaries from 2010. (Sediment metal concentrations assessed against ANZECC guideline values. No indices currently available for sediment nutrient concentrations and biological data.) <table border="1"> <thead> <tr> <th colspan="2">Three estuaries</th> </tr> <tr> <th>Baseline 2007-2008</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Zinc</td> <td>100%</td> </tr> <tr> <td>Copper</td> <td>100%</td> </tr> <tr> <td>Lead</td> <td>100%</td> </tr> <tr> <td>Cadmium</td> <td>100%</td> </tr> <tr> <td>Nickel</td> <td>89%</td> </tr> <tr> <td>Chromium</td> <td>100%</td> </tr> </tbody> </table>	Three estuaries		Baseline 2007-2008	Compliance %	Zinc	100%	Copper	100%	Lead	100%	Cadmium	100%	Nickel	89%	Chromium	100%	<p>Achieved. NRC has implemented an estuary monitoring programme in five estuaries.</p> <p>Not achieved. All five estuaries have been sampled in 2009-2010. Due to budget restraints in the last financial year, sediment results for 2009-2010 are not available. However, 2008-2009 results show full compliance with the ANZECC-low guideline.</p> <table border="1"> <thead> <tr> <th colspan="2">Five estuaries</th> </tr> <tr> <th>Baseline 2008-2009</th> <th>Compliance %</th> </tr> </thead> <tbody> <tr> <td>Zinc</td> <td>100%</td> </tr> <tr> <td>Copper</td> <td>100%</td> </tr> <tr> <td>Lead</td> <td>100%</td> </tr> <tr> <td>Cadmium</td> <td>100%</td> </tr> <tr> <td>Nickel</td> <td>100%</td> </tr> <tr> <td>Chromium</td> <td>100%</td> </tr> </tbody> </table>	Five estuaries		Baseline 2008-2009	Compliance %	Zinc	100%	Copper	100%	Lead	100%	Cadmium	100%	Nickel	100%	Chromium	100%	<p>New measure.</p> <p>New measure.</p>
Three estuaries																																		
Baseline 2007-2008	Compliance %																																	
Zinc	100%																																	
Copper	100%																																	
Lead	100%																																	
Cadmium	100%																																	
Nickel	89%																																	
Chromium	100%																																	
Five estuaries																																		
Baseline 2008-2009	Compliance %																																	
Zinc	100%																																	
Copper	100%																																	
Lead	100%																																	
Cadmium	100%																																	
Nickel	100%																																	
Chromium	100%																																	
<p>i. Monitor the effectiveness of Council policy documents.</p> <ul style="list-style-type: none"> Report on actual monitoring results compared to policy objectives every five years in the State of the Environment Report. 	<p>Not applicable to this reporting period. The next five year State of the Environment Report will be produced in 2012. This target will be reported in 2012.</p>	<p>Achieved.</p>																																
7.1.2 Provide scientific environmental information to the public and the Council to facilitate informed decision making.																																		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009																																
<p>a. Produce and publish an annual monitoring report.</p> <ul style="list-style-type: none"> Post on the Council's website by 31 October each year for the previous period 1 July to 30 June. 	<p>Not achieved. Annual Monitoring Report now available on the Council's website, this was posted in December 2009. 2009-2010 Annual Monitoring Report is on target to be completed by due date.</p>	<p>New measure.</p>																																
<p>b. Provide hydrometric information and advice in an accurate and timely way.</p> <ul style="list-style-type: none"> All advice provided in accordance with ISO accredited Council policies and procedures and no justifiable complaints received each year. 	<p>Achieved. All data is collected, recorded, processed, archived and released in accordance with the Hydrology Quality Procedures Manual which has ISO accreditation. No complaints have been received to date on quality or integrity of advice given.</p>	<p>New measure.</p>																																

LEVELS OF SERVICE

environmental monitoring

Activity 7.1 State of the Environment Monitoring continued

7.1.3 Promote improved environmental practices within the Northland region.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>a. Undertake site visits to selected industries to promote cleaner production practices.</p> <ul style="list-style-type: none"> Complete at least 25 site visits per year and report to Council in the environmental monitoring report. 	<p>Not achieved.</p> <p>Advice is generally given during routine HSNO visits where applicable 170 site inspections were made in 2009-2010 and advice was given at approximately half of those visits. However, a reporting mechanism to record visits where advice was given was only set up in the last quarter of the financial year – hence reporting not achieved.</p>	New measure.
<p>b. Promote and support community-based estuarine restoration projects on a prioritised basis.</p> <ul style="list-style-type: none"> Prioritise projects during 2009, commence during 2010 and complete implementation during 2011. Report results each year in the Annual Monitoring Report and every five years in the State of the Environment Report. 	<p>Not achieved.</p> <p>An organisational re-structuring during 2009-2010 resulted in this position being moved into the Land and Rivers department. Subsequently the focus aligned with this position has changed, with emphasis on supporting community led initiatives (i.e. Baycare), provision of advice and funding (Environment Fund) for estuarine restoration/enhancement projects and the implementation of the Mangrove Management Support Programme.</p>	New measure.

Significant positive and negative effects on well-being

The State of the Environment Monitoring activity may have the following impacts on well-being:

Well-beings	Positive effects	Negative effects
Social	Monitoring activities provide information to the public about health risks for swimming and shellfish gathering.	
Economic	Good management of water quality is beneficial to industries which require security of water supply and high water quality, such as marine farming and tourism.	Some people may consider the cost of monitoring has a negative economic impact on them personally, but overall it is considered that the advantages for the wider community outweigh the costs.
Environmental	Information gathered through SOE monitoring provides information to allow for informed decision making in relation to sustainable environmental management.	
Cultural	Maintaining good air and water quality is a taonga to iwi and good management is part of providing for their cultural beliefs and aspirations and maintains the mana of local iwi.	

LEVELS OF SERVICE

environmental monitoring

Activity 7.2 Compliance Monitoring

Objective: Promote the sustainable management of resources and minimise the adverse effects of people’s use of the environment by ensuring compliance with resource consents, regional plans and statutory environmental standards.

2010-2012 Performance Measures and Targets

7.2.1 Monitor and enforce compliance with resource consent conditions, regional rules and relevant statutory requirements.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>a. Documentation and implementation of monitoring programmes for water, land and air consents. This includes monitoring of:</p> <ul style="list-style-type: none"> – Emission testing and/or appropriate off-site monitoring of major industrial discharges to air; – Effluent and receiving water quality testing of sewage, industrial and landfill discharges; – Land clearance, earthworks, and river works that are the subject of resource consents; – Bore construction; and – Farm dairy effluent treatment and disposal systems. <ul style="list-style-type: none"> • 100% of monitoring programmes meet the standards of the Council’s independently audited and accredited ISO quality management systems. • 100% of compliance assessments are recorded on the Council’s monitoring database and results reported to appropriate parties monthly. 	<p>Not achieved. The target has been set very high. 98% compliance is a very good achievement. Staff work loads makes a higher achievement rate difficult. However, this LOS is reported monthly and if the non-compliance is increasing then individual staff are encouraged to address this.</p> <p>Not achieved. 95.5% achieved. The target has been set very high. Officers who have high numbers of non-compliance will be targeted for extra training to improve compliance rate.</p>	<p>Partially achieved.</p> <p>Partially achieved.</p>

LEVELS OF SERVICE

environmental monitoring

Activity 7.2 Compliance Monitoring continued

7.2.1 Monitor and enforce compliance with resource consent conditions, regional rules and relevant statutory requirements.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>a. Documentation and implementation of monitoring programmes for water, land and air consents. This includes monitoring of:</p> <ul style="list-style-type: none"> – Emission testing and/or appropriate off-site monitoring of major industrial discharges to air; – Effluent and receiving water quality testing of sewage, industrial and landfill discharges; – Land clearance, earthworks, and river works that are the subject of resource consents; – Bore construction; and – Farm dairy effluent treatment and disposal systems. <ul style="list-style-type: none"> • 100% of all significant non-compliances are followed up and enforcement action taken where necessary. 	<p>Not achieved.</p> <p>87% achieved. 13 of the 15 non-compliances relate to FNDC municipal sewage treatment plants. These are being “followed-up” at an upper management level. Therefore actual level of compliance is 99.9%. Of the two which were not followed-up (at the time of running the reports):</p> <ol style="list-style-type: none"> i. A monitoring officer has tried to make contact with the consent holder. ii. The other inspection was done by a contractor on 17 June 2010, an NRC officer is still to do the follow-up. Therefore, in due time all will be followed-up. <p>Repeat “minor non-compliances” are escalated to significant non-compliance and are followed-up or enforcement action taken.</p>	<p>New measure.</p>
<ul style="list-style-type: none"> • Monitoring activity reported monthly in the Council environmental monitoring report and annually in the Council Annual Report. 	<p>Achieved.</p>	<p>Partially achieved.</p>

LEVELS OF SERVICE

environmental monitoring

Activity 7.2 Compliance Monitoring continued

7.2.1 Monitor and enforce compliance with resource consent conditions, regional rules and relevant statutory requirements.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>b. Inspection of significant coastal structures and works, marine farms and the carrying out of coastal surveys where there is sand mining activity.</p> <ul style="list-style-type: none"> 100% of monitoring programmes meet the standards of the Council's independently audited and accredited ISO quality management systems. 100% of compliance assessments conducted at least once every five years and results reported monthly in the Council's environmental monitoring report. 100% of all significant non-compliances are followed-up and enforcement action taken where necessary. 	<p>Not achieved. 98% achieved. The target has been set very high. 98% compliance is a very good achievement. Staff work loads make a higher achievement rate difficult. However, this LOS is reported monthly and if the non-compliance is increasing then individual staff are encouraged to address this.</p> <p>Not achieved. 97.8% reported monthly to Council. The target has been set very high. Officers who have high numbers of non-compliance will be targeted for extra training to improve compliance rate.</p> <p>Not achieved. 98% of SNCs are followed up. The 2% relate to marine farms – where the decision was made politically not to take formal enforcement action. Councillors decided that the best options was to work with the marine farm operators to clean up the farms; if there was formal enforcement taken then the operators would become bankrupt and the tax payers would have to clean up the farms instead. Enterprise Northland facilitated this work programme with WINS.</p>	<p>New measure.</p> <p>New measure.</p> <p>New measure.</p>
<p>c. Inspection of boat moorings to ensure they are properly authorised in accordance with the requirements of the Regional Coastal Plan and the Navigation Safety Bylaw 2007 and that their positions are accurately recorded.</p> <ul style="list-style-type: none"> 100% of moorings inspected once every three years. Results reported monthly in the Council's environmental monitoring report and annually in the Council Annual Report. 	<p>Not achieved. 78% of the 2380 swing moorings in the Council database have current inspection certificates. Mooring inspections are undertaken by independent contractors and Northland Regional Council does not control or dictate the contractors work at any given time. Some areas of Northland are not serviced by the contractors, thus 100% compliance with this target will never be achieved. There is also a delay in turnaround from the Contractors which contributes to not achieving the target.</p>	<p>New measure.</p>

LEVELS OF SERVICE

environmental monitoring

Activity 7.2 Compliance Monitoring continued

7.2.1 Monitor and enforce compliance with resource consent conditions, regional rules and relevant statutory requirements.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>d. Collection of water use records to determine compliance with resource consents including the consistent and accurate metering of consented takes.</p> <ul style="list-style-type: none"> 100% of monitoring programmes meet the standards of the Council's independently audited and accredited ISO quality management systems. Compliance assessments conducted at least once per annum. All significant non-compliances are followed up with enforcement action taken where necessary. Results reported monthly in the Council's environmental monitoring report and annually in the Council Annual Report. 	<p>Achieved. All monitoring programmes meet the standards in the Resource Consent Monitoring Procedure Manual with has ISO accreditation.</p> <p>Not achieved. 40% of water use records were received and assessed at end of June 2010. Outstanding water use records are being followed up. There were three significant non-compliances during 2009-2010. All three were followed up with enforcement action. One other significant non-compliance was reported in error.</p>	<p>New measure.</p> <p>New measure.</p>
<p>e. Measurement of stream flows, groundwater and lake levels associated with significant water abstractions to ensure compliance with resource consent, including during prolonged dry periods.</p> <ul style="list-style-type: none"> 100% of monitoring programmes meet the standards of the Council's independently audited and accredited ISO quality management systems. Conduct at least one flow measurement during the dry period for significant consents and report on compliance in the Council's monthly environmental monitoring report. 100% of all significant non-compliances are followed up and enforcement action taken where necessary. 	<p>Achieved. All monitoring programmes have been completed in accordance with the Resource Consent Monitoring Procedure Manual with has ISO accreditation.</p> <p>Not achieved. Significant water abstractions were deemed to be >500m³/day and had a continuation flow as part of resource consent conditions. Compliance was assessed using actual flow measurements and flow information from the Council's hydrometric network. Significant non-compliance was reported monthly. 92% of significant abstractions had at least one flow measurement during the dry period. The remaining 8% were given a low priority due to their location (along west coast of Northland – less severely affected by drought) to allow high priority drought monitoring to occur.</p> <p>Achieved. All monitoring programmes have been completed in accordance with the Resource Consent Monitoring Procedure Manual with has ISO accreditation.</p>	<p>New measure.</p> <p>New measure.</p> <p>New measure.</p>

LEVELS OF SERVICE

environmental monitoring

Activity 7.2 Compliance Monitoring continued

Significant positive and negative effects on well-being

The Compliance Monitoring activity may have the following impacts on well-being:

Well-beings	Positive effects	Negative effects
Social	Ensuring compliance with consent conditions and regional rules helps to protect the environment which has positive effects on health, safety and social well-being.	
Economic	<ul style="list-style-type: none"> i. Helps protect the environment on which tourism, aquaculture and agriculture relies; ii. Helps ensure there are no adverse effects on the environment which will have impacts on people's health; and iii. Ensures that water is allocated, taken and used in an efficient manner which is of significant value for the Northland economy. 	Compliance monitoring may be perceived to have a possible negative economic effect on consent holders and those who infringe.
Environmental	Helps to reduce the impact of people's activities on the environment by ensuring they meet the necessary resource consent conditions and/or regional rules.	
Cultural	Control of discharges and the sustainable management of water resources are important to all communities, including when providing for the cultural values of Tāngata Whenua.	



LEVELS OF SERVICE

environmental monitoring

Activity 7.3 Environmental Incidents Response

Objective: Minimise adverse effects on the environment by responding to environmental incidents and non-compliance with the Resource Management Act.

2010-2012 Performance Measures and Targets

7.3.1 Provide a 24-hour, seven day environmental incident reporting system.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>a. Respond to calls received on the environmental hotline.</p> <ul style="list-style-type: none"> 100% of significant incidents responded to by Northland Regional Council and assessed annually for compliance with Regional Rules or Consent. <p>Baseline 2007-2008 Compliance % New measure (no baseline available).</p>	Achieved.	New measure.
<p>b. Take appropriate enforcement action in cases of significant non-compliance with statutory requirements.</p> <ul style="list-style-type: none"> 100% of non-complying incidents resulting in significant adverse environmental effects have formal enforcement action taken in relation to the incident (when offender is known). <p>Baseline 2007-2008 Compliance % New measure (no baseline available).</p>	<p>Not achieved.</p> <p>89%. Three situations occurred where formal enforcement action was not taken. All cases are treated on a case-by-case basis and in these particular cases it was decided not to take formal enforcement action. The reasons for this were:</p> <ol style="list-style-type: none"> The person responsible had already taken steps to rectify when NRC became aware of incident. A formal warning was given. The person responsible quickly took steps to comply. <p>Multiple small offenders during drought.</p>	New measure.
<p>c. Communicate incidents that negatively impact on public health as appropriate.</p> <ul style="list-style-type: none"> 100% of incidents responded to by Northland Regional Council resulting in public health risks, are notified within 24 hours to Northland District Health Board. <p>Baseline 2007-2008 Compliance % New measure (no baseline available).</p>	Achieved.	New measure.

LEVELS OF SERVICE

environmental monitoring

Activity 7.3 Environmental Incidents Response continued

Significant positive and negative effects on well-being

The Environmental Incidents Response activity may have the following impacts on well-being:

Well-beings	Positive effects	Negative effects
Social	Ensuring compliance with consent conditions and regional rules helps to protect the environment which has positive effects on health, safety and social well-being.	
Economic	Helps protect the environment on which tourism, aquaculture and agriculture relies and helps ensure there are no adverse effects on the environment which will have impacts on people's health.	Environmental incident response and enforcement may be perceived to have a possible negative economic effect on consent holders and those who infringe.
Environmental	Helps to reduce the impact of people's activities on the environment by ensuring they meet the necessary resource consent conditions and/or regional rules.	
Cultural	Control of discharges and the sustainable management of water resources is important for providing for Tāngata Whenua cultural values.	



LEVELS OF SERVICE

environmental monitoring

Activity 7.4 Hazardous Substances and Contaminated Sites

Objective: Reduce the quantities of hazardous substances entering Northland's environment and minimise any adverse effects.

2010-2012 Performance Measures and Targets

7.4.1 Facilitate the safe handling and lawful storage of hazardous substances and management of waste hazardous substances.		
Performance Measures and Targets	Actual Service Performance to 30 June 2010	Actual 30 June 2009
<p>a. Operate facilities throughout Northland for the short-term storage of waste hazardous substances awaiting transport.</p> <ul style="list-style-type: none"> Facilities open for 100% of working hours. <p>Baseline 2007-2008 Working Hours Open 100%</p>	<p>Achieved. Facilities were open for 100% of working hours during the 2009-2010 financial year. Re-sort Whāngārei is only closed two days per year.</p>	Achieved.
<p>b. Provide a transport and disposal service for appropriate hazardous substances.</p> <ul style="list-style-type: none"> 100% of hazardous substances are collected, transported and disposed of within 18 months of collection. <p>Baseline 2007-2008 Disposed Of 100%</p>	<p>Achieved. 100%. All hazardous substances collected and disposed of within 18 months.</p>	Achieved.
<p>c. Provide a hazardous substances monitoring service to the Department of Labour, as required.</p> <ul style="list-style-type: none"> At least 80 hours a month spent undertaking workplace inspections. <p>Baseline 2007-2008 Average Hours Per Month 99.75%</p>	<p>Achieved. On average 100 hours per month were spent undertaking workplace inspections.</p>	Achieved.
<p>d. Provide an on-call 24 hour, seven day a week service for responding to incidents involving hazardous substances.</p> <ul style="list-style-type: none"> 100% response rate to all calls involving hazardous substances. <p>Baseline 2007-2008 Response Rate 100%</p>	<p>Achieved. 10 incidents received, 10 incidents responded to in the 2009-2010 financial year.</p>	New measure.
<p>e. Maintain a database of potentially contaminated sites, related site assessments and remediation.</p> <ul style="list-style-type: none"> Relevant data provided to the relevant District Councils for inclusion in the LIM and PIM systems by 31 December each year. 	<p>Achieved. Data was provided to District Councils. The database is available on the Northland Regional Council website www.nrc.govt.nz/hail</p>	Achieved.

LEVELS OF SERVICE

environmental monitoring

Activity 7.4 Hazardous Substances and Contaminated Sites continued

Significant positive and negative effects on well-being

The Hazardous Substances and Contaminated Sites activity may have the following impacts on well-being:

Well-beings	Positive effects	Negative effects
Social	The removal of hazardous substances from the environment ensures well-being of the community.	
Economic	The Potentially Contaminated Sites database flags which sites are either potentially contaminated or are confirmed sites. This warns prospective purchasers of the economic consequences of purchasing a particular parcel of land.	Identifying the true cost of waste disposal has a negative financial impact on some of the community in terms of waste disposal charges. However, this is outweighed by the positive impact on the well-being of the wider regional community from the appropriate management of waste.
Environmental	The recovery of hazardous substances that may otherwise find their way into Northland's eco-system is of significant benefit to the Northland environment.	
Cultural	Both activities contribute towards cultural well-being of Northland's communities.	

