Environment B·O·P
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Bathing Suitability Investigations Summer 2000/2001

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Executive Summary

Over the summer of 2000/2001, Environment B·O·P staff sampled bathing waters in the Bay of Plenty in accordance with The Ministry for the Environment and the Ministry of Health Recreational Water Quality Guidelines. The new guidelines promote annual surveys of bathing beaches. Consequently an annual programme has been implemented to complement the three yearly Bay of Plenty bathing suitability survey.

Marine, estuarine, stream and lake sites selected included the most popular tourist bathing beaches, sites based on a risk assessment of previous years data, and those based on local issues raised by the liaison group. Environment B·O·P staff undertook the majority of the sampling and analyses.

The results show that the marine, estuarine, and lake sites were safe for bathing for the complete period of monitoring. The Waimapu Stream and Waihi Beach stream sites, however, were found to have very poor water quality for all of the summer and signs were erected to warn the public against bathing in these waters. Little Waihi Estuary and the Waiteti Stream were in alert mode for much, or all, of the sampling period.

As a result of a record of poor bathing water quality at Whakarewarewa in the past, a catchment survey of the Puarenga Stream and its tributaries was undertaken prior to the summer sampling programme. There was communication with resource consent holders in the catchment prior to and during the survey so that they would be aware of the current findings. Despite high bacterial levels being found in some of the tributaries, the site at Whakarewarewa remained suitable for bathing over the summer of 2000/2001.

Publicity over contamination problems was effective in reducing contamination at Pilot Bay although the exact cause of the contamination was not found. The approach taken over the Puarenga Stream catchment will be followed in future years with other catchments where bacterial contamination has been consistently high.

Next summer, the Waimapu Stream and its tributary the Waiorahi Stream will be surveyed. A combination of publicity and catchment sampling will be used to find the source(s) of contamination and draw people's attention to the types of activities that result in bacterial discharges.

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Chapter 1: Introduction

The Ministry for the Environment and the Ministry of Health introduced new guidelines for recreational water quality in November 1999. These new guidelines promote annual surveys of bathing beaches. Consequently an annual programme has been implemented to complement the three yearly Bay of Plenty bathing suitability survey. Over the summer of 2000/2001, Environment B·O·P staff sampled waters in the Bay of Plenty in accordance with these guidelines.

Initially, liaison meetings were held with District Council staff, the Medical Officer of Health and Pacific Health staff to select sites and discuss the monitoring strategy. Selection of sites was based on the need to provide information on the most popular bathing sites, particularly the tourist beaches. Secondly, sites were selected from a risk assessment based on previous years data. Thirdly, other sites were selected based on local issues raised by the liaison group.

Environment B·O·P staff undertook to carry out the sampling and analysis for most of the sites. Pacific Health staff also sampled some sites. Rotorua District Council staff assisted with sampling and analysis where follow up sampling was required by the sampling protocol. The sites selected are listed in Table 1.1.

Table 1.1 Bathing sites sampled over the summer of 2000/2001.

Marine	Estuary	Streams	Lakes
Waihi Beach	Anzac Bay	Waihi Beach Stream	Rotorua
Mt Maunganui	Pilot Bay	2 Mile Creek Waihi Beach	Rotoiti
Omanu Beach	Omokoroa	3 Mile Creek (plus two tributaries)	Rerewhakaaitu
Papamoa Beach	Maketu (2 sites)	Waimapu Stream (plus two tributaries)	Okareka
Ohope Beach	Little Waihi	Puarenga Stream (numerous sites)	Okaro
Ohope Spit		Whakatane River	

Chapter 2: Methods

The sites were sampled in accordance with the principles of the MfE/MoH (1999) guideline. Environment B·O·P staff carried out the majority of the sampling but were assisted by Pacific Health staff, and the Rotorua District Council.

Marine waters were analysed for enterococci using the USEPA Method 1600, the results being checked against APHA Method 9230C. Freshwaters were analysed for *Escherichia coli* using the APHA Method 9213D, which is also known as USEPA Method 1103.1 1985.

Chapter 3: Results

3.1 Marine Beaches

The sampling sites at Waihi Beach, Mt Maunganui, Omanu, Papamoa, Ohope, and Ohope Holiday Park, are shown in Figure 3.1. Results are shown in Table 3.1. The table consists of two columns for each site, the first recording individual sample results, and the second recording the running median, *i.e.* the median of all the samples to that time. This column is used to indicate the status of the site. These beaches were safe for bathing for the complete period of monitoring.

The beaches were sampled from 11 October 2000 to 14 February 2001. 'Alert' situations occurred on four occasions but follow up sampling showed that the site had returned to the 'safe' mode.

The sampling on 11 October 2000 was after a heavy rainfall event and the contamination at Omanu Beach resulted from the large discharge of stormwater onto the beach from nearby piped outlets.

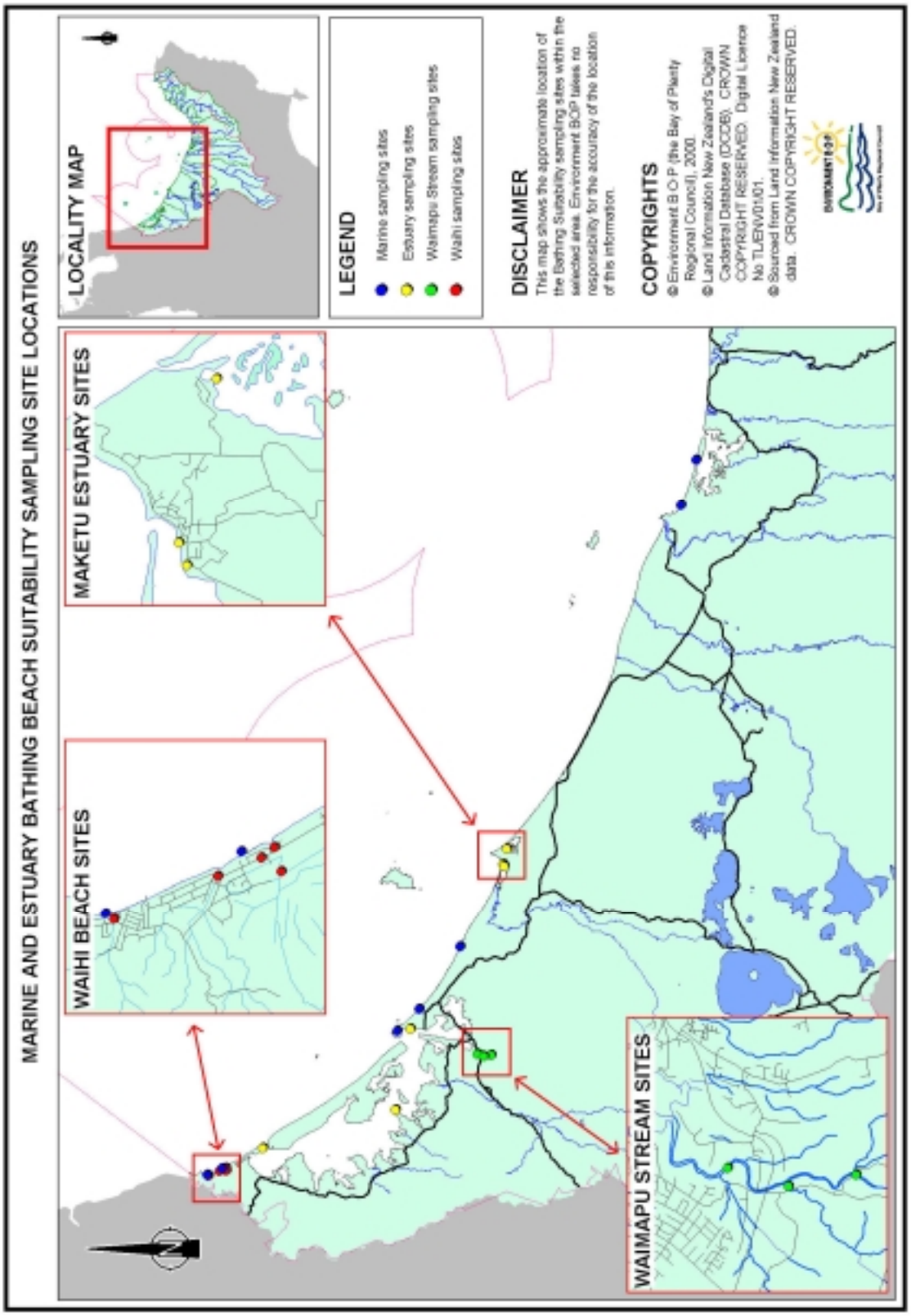


Figure 3.1 Marine and Estuary Bathing Beach Suitability Sampling Site Locations

3.2 Estuaries

Sites are shown in Figure 3.1. Results are displayed in Table 3.2.

The sites at Maketu, Anzac Bay (Tauranga), and Omokoroa were safe for bathing over the summer sampling period of 2000/2001. Pilot Bay and Little Waihi Estuary were also safe for bathing with Pilot Bay in "alert" mode on one occasion, and Little Waihi Estuary frequently in 'alert' mode.

Table 3.1: Individual Sample Results and Running Median for Enterococci (n/100ml) for the Marine Bathing Sites Sampled over the Summer of 2000/2001.

Site	Waihi Beach BOP160076		Mt Maunganui BOP160025		Omanu Beach BOP900096		Papamoa Beach BOP160026		Ohope Beach BOP160011		Ohope Holiday Park BOP160047	
Date		run med		run med		run med		run med		run med		run med
11/10/00			<1		530		2					
18/10/00	<1		1	1	<1	265	<1	1	<1		<1	
25/10/00		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
01/11/00		<1	<1	<1	<1	<1	<1	<1		<1	<1	<1
08/11/00	60	30	3	<1	4	<1	2	<1	5	<1	<1	<1
15/11/00	3	3	<1	<1	<1	<1	<1	<1	11	3	<1	<1
22/11/00	6	4	<1	<1	1	<1	<1	<1	190	5	2	<1
24/11/00		4		<1		<1		<1	17	8		<1
29/11/00	153	6	2	<1	51	1	31	<1	7	7	6	<1
06/12/00	3	5	<1	<1	<1	<1	<1	<1	1	6	2	<1
13/12/00	3	3	<1	<1	<1	<1	<1	<1	14	7	9	<1
19/12/00		3	2	<1	15	<1	2	<1	9	8	<1	<1
27/12/00		3	3	<1	<1	<1	<1	<1		8		<1
03/01/01		3	<1	<1	<1	<1	<1	<1		8		<1
10/01/01	150	5	10	<1	9	<1	13	<1	54	9	2	<1
11/01/01	8	6		<1		<1		<1		9		<1
17/01/01	7	7	<1	<1	<1	<1	5	<1	1	8	1	1
24/01/01	16	7	22	<1	10	<1	1	<1	7	7	<1	<1
31/01/01	6	7	22	<1	15	<1	39	<1	44	8		
01/02/01	5	6		<1		<1		<1		8		
07/02/01			4	1	7	1	34	1	9	9		
14/02/01			2	1	2	1	11	1	5	8		

Safe mode:	Enterococci running median < 35 /100ml
Alert/amber mode I:	Enterococci running median > 35 /100ml, with no single sample >136 /100ml
Alert/amber mode II:	Enterococci single sample > 136 /100ml
Action/red mode:	Enterococci 2 consecutive samples > 277 /100ml

Table 3.2: Individual Sample Results and Running Median for Enterococci (n/100ml) for the Estuarine Bathing Sites Sampled over the Summer of 2000/2001.

Site	Omokoroa BOP160082		Anzac Bay BOP160028		Pilot Bay BOP160024		Maketu Marae BOP160048		Maketu Dwellings BOP160045		Little Waihi BOP160046	
Date		run med		run med		run med		run med		run med		run med
18/10/00					13				<1		55	
25/10/00	<1		2		3	8	<1		4	2	104	79
01/11/00	2	1	<1	1	<1	3		<1	3	3		79
08/11/00		1	4	2	<1	2	1	1	12	3	3	55
15/11/00	1	1	2	2	7	3	7	1	67	4	335	79
22/11/00	1	1	<1	2	147	5	1	1	1	3	6	55
24/11/00		1		2	3	3		1		3		55
29/11/00	2	1	3	2		3	19	1	7	4	26	40
06/12/00	<1	1	<1	2	90	5	<1	1	<1	3	4	26
13/12/00	3	1	2	2	<1	3	2	1	4	4	140	40
19/12/00	1	1	1	2	4	3	1	1	9	4	12	26
27/12/00	4	1	5	2	<1	3		1		4		26
03/01/01		1		2	1	3		1		4		26
10/01/01	145	1		2	2	3	9	1	11	4	280	40
11/01/01	50	2		2	4	3		1		4	32	32
17/01/01	2	2	3	2		3	3	2	25	6	5	29
24/01/01	9	2	3	2	2	3	1	1	1	4	3	26
31/01/01	<1	2	<1	2	35	3	38	2	31	6	35	29
01/02/01		2		2		3		2		6		29
07/02/01	<1	2	73	2	2	3	14	2	15	7	25	26
14/02/01	3	2	3	2	7	3	10	2	60	8	170	29
21/02/01	<1	2	1	2	4	3						
28/02/01	2	2	4	2								

Safe mode:	Enterococci running median < 35 /100ml
Alert/amber mode I:	Enterococci running median > 35 /100ml, with no single sample >136 /100ml
Alert/amber mode II:	Enterococci single sample > 136 /100ml
Action/red mode:	Enterococci 2 consecutive samples > 277 /100ml

3.3 Freshwater Sites

3.3.1 Waihi Beach

The Waihi Beach Stream was sampled near the Surf Club. Two and Three Mile Creeks were sampled where they emerged onto the beach. Three Mile Creek was also sampled on two tributary drains where the creek diverged upstream of Seaforth Road. Results are shown in Table 3.3 and the site locations in Figure 3.1.

Very poor quality water was found at all sites. Signs warning the public against bathing were placed at Two and Three Mile Creeks in November 2000 and later at Waihi Beach Stream when the quality deteriorated.

Table 3.3: Individual Sample Results and Running Median for E.coli (n/100ml) for the Waihi Beach Sites Sampled over the Summer of 2000/2001

Site	Waihi Stream Beach BOP160034		2 Mile Creek Beach BOP900076		3 Mile Creek Beach BOP900077		3 Mile Creek Trib. at Edwards St BOP110078		3 Mile Creek Trib. u/s Edwards St BOP800103	
Date		run med		run med		run med		run med		run med
18/10/00	230		660		530		730		840	
25/10/00	120	175	480	570	790	660	3800	2265	1400	1120
01/11/00		175		570		660		2265		1120
08/11/00	80	120	2400	660	900	790	70	730	830	840
15/11/00	110	115	1700	1180	130	660	800	765	80	835
22/11/00		115		1180		660		765		835
29/11/00	220	120	6000	1700	8500	790	10000	800	7600	840
06/12/00	240	170	3400	2050	870	830	2300	1550	490	835
13/12/00	4600	220	1400	1700	480	790	1700	1700	220	830
19/12/00		220		1700		790		1700		830
10/01/01	4300	225	2400	2050	1000	830	3500	2000	830	830
17/01/01	450	230	1800	1800	510	790	970	1700	790	830
24/01/01	53	225		1800		790		1700	800	815
31/01/01	490	230	1600	1750	610	700		1700		
07/02/01	1600	460	3800	1800	800	790	2600	2000		
14/02/01	180	320	830	1750	390	700				
28/02/01	460	235	700	1700	270	610				

Safe mode:	E. coli running median < 126 /100ml
Alert/amber mode I:	E. coli running median 126 - 273 /100ml
Alert/amber mode II:	E. coli single sample > 273 /100ml
Action/red mode:	E. coli single sample > 410 /100ml

3.3.2 Waimapu Stream

The Waimapu Stream at Greerton Park was sampled as the main bathing site on the stream. In addition, two upstream tributaries were sampled to examine the relative contribution of bacteria from each branch. Results are shown in Table 3.4 and the site locations in Figure 3.1.

The Greerton Park site was found to exceed the bathing guideline and a sign warning the public was erected in December 2000. Upstream sampling showed that the Waiorohi tributary was the primary source of contamination.

Table 3.4: Individual Sample Results and Running Median for E.coli (n/100ml) for the Waimapu Stream Sites Sampled over the Summer of 2000/2001

Site	Waimapu Stream BOP160212		Waiorohi Stream BOP160213		Waimapu Stream GP BOP160121		Whakatane River BOP160106	
Date		run med		run med		run med		run med
18/10/00	140		370					
25/10/00	83	112	180	275	200			
01/11/00		112		275		200		
08/11/00	1400	140	380	370	260	230		
15/11/00	97	119	220	295	140	200		
22/11/00		119		295		200	80	
29/11/00	3000	140	3100	370	2900	230		80
06/12/00	300	220	710	375	560	260	17	49
13/12/00	770	300	510	380	1900	410	780	80
19/12/00		300		380		410	37	59
10/01/01	900	535	3700	445	570	560	240	80
17/01/01	130	300	770	510	360	460	77	79
24/01/01	120	220	610	560	230	360	29	77
31/01/01	160	160	640	610	420	390	93	79
07/02/01	120	150	360	560	490	420	170	80
14/02/01	360	160	1100	610	580	455		
28/02/01	630	230	2700	625	690	490		

Safe mode:	E. coli running median < 126 /100ml
Alert/amber mode I:	E. coli running median 126 - 273 /100ml
Alert/amber mode II:	E. coli single sample > 273 /100ml
Action/red mode:	E. coli single sample > 410 /100ml

3.4 Whakatane River

The bathing site at Landing road bridge on the Whakatane River was found to be suitable for bathing although a single sample exceeded in December 2000. Results are shown in Table 3.4.

Table 3.5: Individual Sample Results and Running Median for E.coli (n/100ml) for the Rotorua Lakes Bathing Sites Sampled over the Summer of 2000/2001

Site	Hinehopu BOP1160083		Gisborne Point BOP160054		Hamurana BOP1160070		Waiteti Stream BOP120003		Ngongotaha BOP160069		Lake Okareka BOP160062		Lake Okaro BOP160073	
Date		run med		run med		run med		run med		run med		run med		run med
22/11/00			7		16				110		21		83	
29/11/00			23	15	53	35			27	69	77	49	2200	1142
06/12/00			1	7	1	16			7	27	20	21	6	83
13/12/00	320		1	4	70	35	320		12	20	7	21	370	227
19/12/00	220	270	3	3	7	16	130	225	17	17	24	21	13	83
10/01/01	37	220	24	5	10	13	120	130	3	15	97	23	15	49
17/01/01	63	142	2	3	150	16	97	125	11	12	12	21	17	17
24/01/01	0.5	63	3	3	42	29	160	130	3	12	100	23	4	25
31/01/01	84	74	1	3	8	16	280	145	43	12	26	24	31	17
07/02/01	80	80	1	3	17	17	340	160	69	15	42	25	39	24
14/02/01	29	72	20	3	110	17	120	145	190	17	34	26	19	19
28/02/01	71	71	2	3	39	28	120	130	36	22	78	30		

Safe mode:	E. coli running median < 126 /100ml
Alert/amber mode I:	E. coli running median 126 - 273 /100ml
Alert/amber mode II:	E. coli single sample > 273 /100ml
Action/red mode:	E. coli single sample > 410 /100ml

3.4.1 Lake Sites

Sites are shown in Figure 3.2. Results in Table 3.5 show that the sites were generally safe for bathing. Lake Okaro was found to be unsuitable for bathing on one sampling occasion in November 2000 but subsequent follow up sampling showed the contamination had abated.

The Lake Rotorua site at Ngongotaha was suitable for bathing despite the nearby Waiteti Stream being in an 'alert' state.

Table 3.6: Sample Results for E.coli (n/100ml) for the Puarenga Stream Sanitary Survey, October and November 2000

Puarenga Stream Sanitary Survey

Site No.	Environment BOP Site No.	Stream	Site Description	E. coli (n/100ml) Sampling Dates				
				18/10/00	25/10/00	01/11/00	08/11/00	15/11/00
1	BOP160210	Te Kahikatea Stream	Opposite Bryce Rd	160	490	350	3200	90
2	BOP160211	Waiotkomanga Stream	At farm crossing	300	550	2200	1100	130
3	BOP160152	Tureporepo tributary	Upstream of Landfill	260	240	200	1100	1000
4	BOP160214	Drain into Tureporepo Stream	Drain above site BOP160152	NS	3	7	71	97
5	BOP290090	Tureporepo Stream	Upstream of Landfill and tributary	83	220	200	200	87
6	BOP160162	Waihuahuakakahi Stream	Upstream of Landfill drain	200	390	230	480	160
7	BOP160215	Landfill Drain	Midway between SH30 and the Waihuahuakakahi Stream	NS	160	190	900	240
8	BOP160155	Tureporepo Stream	SH 30	87	57	230	260	140
9	BOP160161	Waihuahuakakahi Stream	Upstream of Tureporepo Stream	250	150	370	270	150
10	BOP290127	Waipa Stream	Footbridge	90	87	250	230	100
11	BOP160158	Kawaka Stream	Confluence	67	100	250	200	80
12	BOP110057	Puarenga Stream	Hemo Gorge recorder tower	130	77	100	280	110
13	BOP160113	Puarenga Stream	Whakarewarewa	110	140	350	180	150

NS = No sample taken

Safe mode:	E. coli running median < 126 /100ml
Alert/amber mode I:	E. coli running median 126 - 273 /100ml
Alert/amber mode II:	E. coli single sample > 273 /100ml
Action/red mode:	E. coli single sample > 410 /100ml

3.4.2 Puarenga Stream

A major investigation was undertaken on the Puarenga Stream. In October and November 2000, 13 sites along the many tributaries were sampled to examine the relative contribution of bacteria from the large number of possible sources along the stream. The results are shown in Table 3.6 and also displayed on Figures 3.3 to 3.7, which show the location of the sites. The complete survey data for the bathing site at Whakarewarewa is shown in Table 3.7.

The main contamination source was found to be in the upper reaches of the catchment. Three single sample exceedences were recorded at Whakarewarewa but immediate follow up sampling showed the contamination had abated.

Overall, the site where the penny divers swim was suitable for bathing.

Table 3.7: Individual Sample Results and Running Median for E.coli (n/100ml) for the Puarenga Stream Bathing Site at Whakarewarewa Sampled over the Summer of 2000/2001

Puarenga Stream at Whakarewarewa

Date	E. coli *n/100ml*	Running median	
18/10/00	110		
25/10/00	140	125	
01/11/00	350	140	single sample exceedence
08/11/00	180	160	
15/11/00	150	150	
22/11/00	570	165	single sample exceedence
29/11/00	2300	180	single sample exceedence
06/12/00	100	165	
13/12/00	800	180	single sample exceedence
19/12/00	140	165	
10/01/01	270	180	
17/01/01	110	165	
24/01/01	83	150	
31/01/01	97	145	
07/02/01	210	150	
14/02/01	140	145	
28/02/01	240	150	

Safe mode:	E. coli running median < 126 /100ml
Alert/amber mode I:	E. coli running median 126 - 273 /100ml
Alert/amber mode II:	E. coli single sample > 273 /100ml
Action/red mode:	E. coli single sample > 410 /100ml

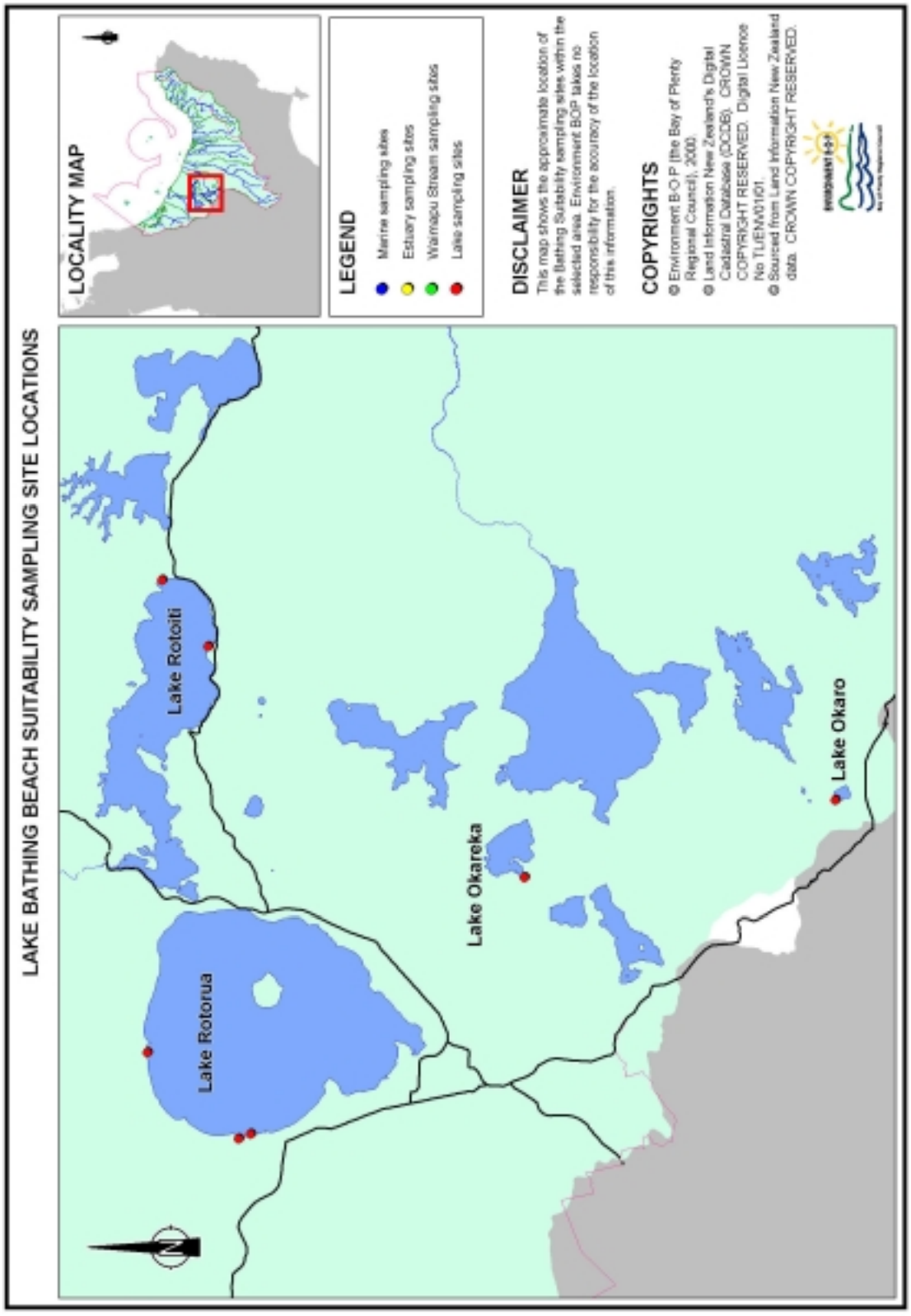


Figure 3.2: Lake Bathing Beach Suitability Sampling Site Locations

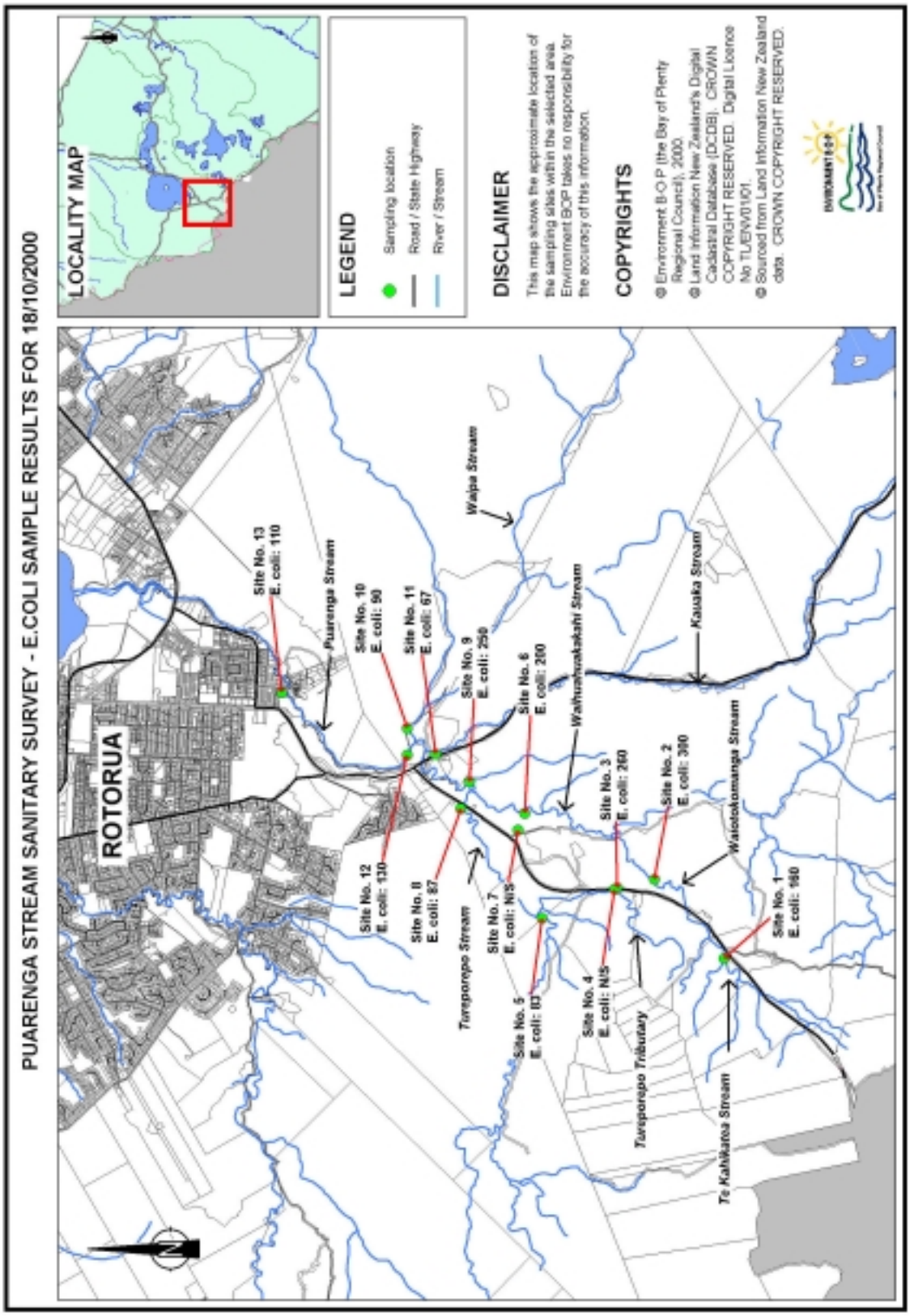


Figure 3.3: Puarenga Stream Sanitary Survey – E.coli Sample Results for 18 October 2000

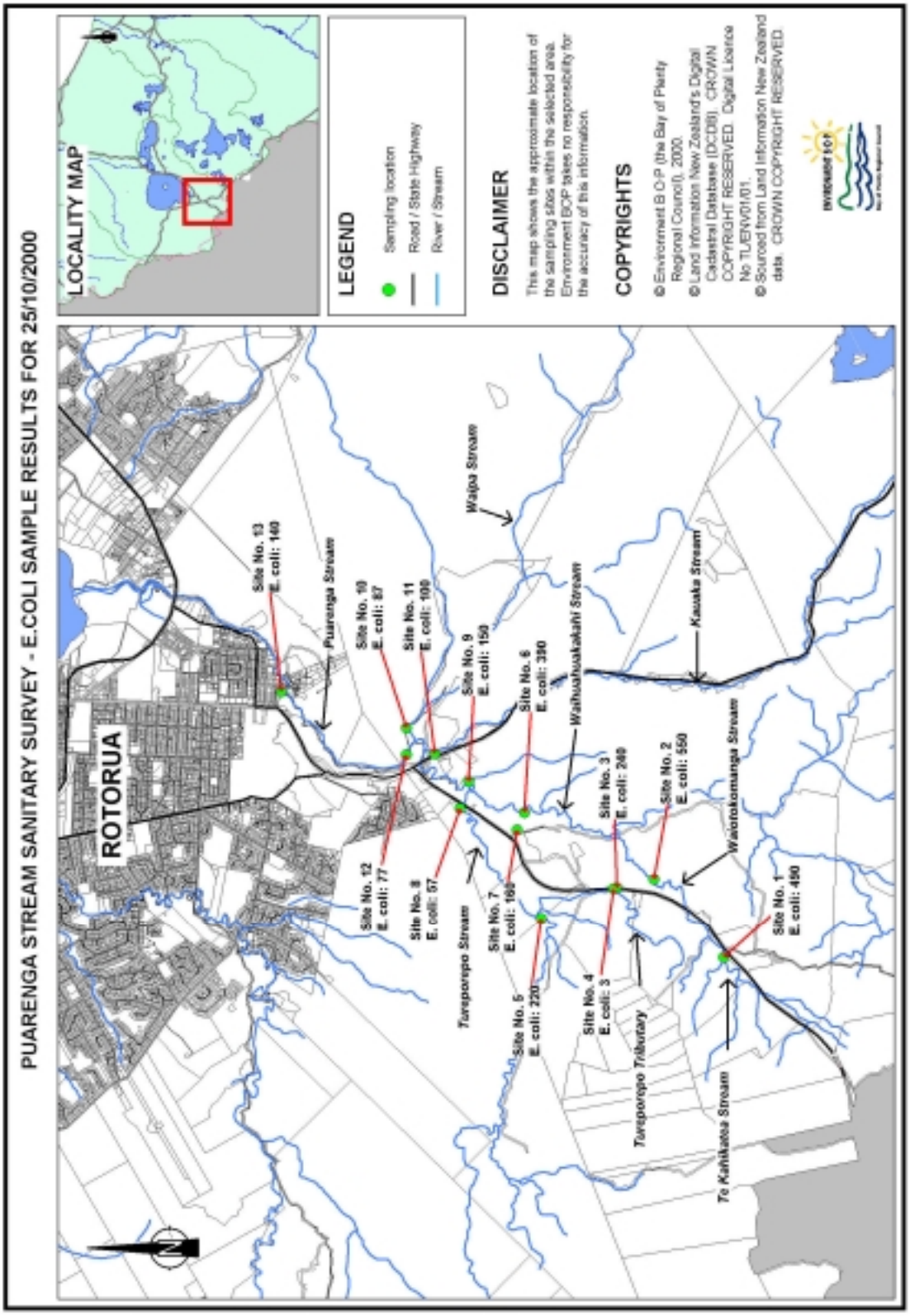


Figure 3.4: Puarenga Stream Sanitary Survey – E.coli Sample Results for 25 October 2000

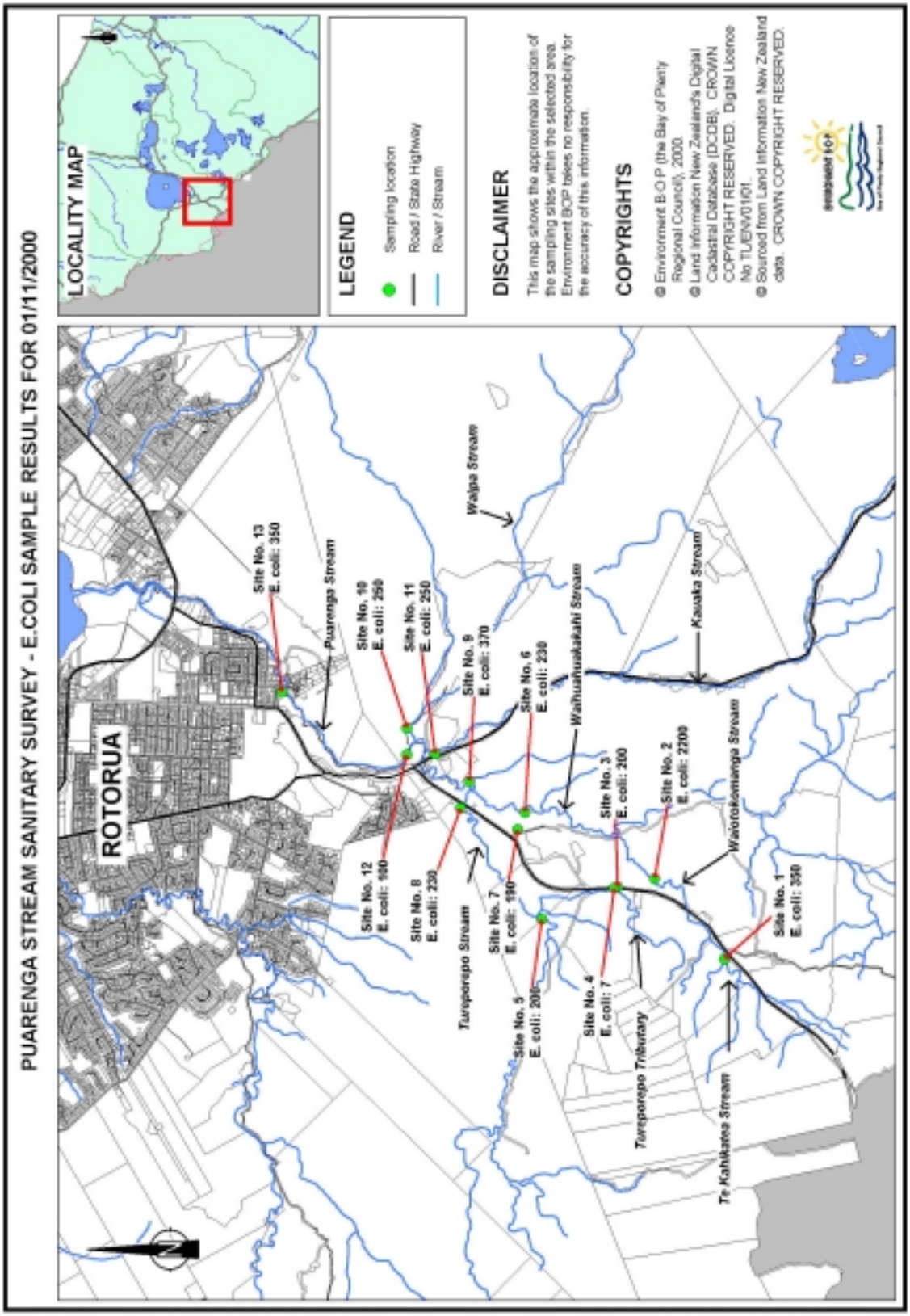


Figure 3.5: Puarenga Stream Sanitary Survey – E.coli Sample Results for 1 November 2000

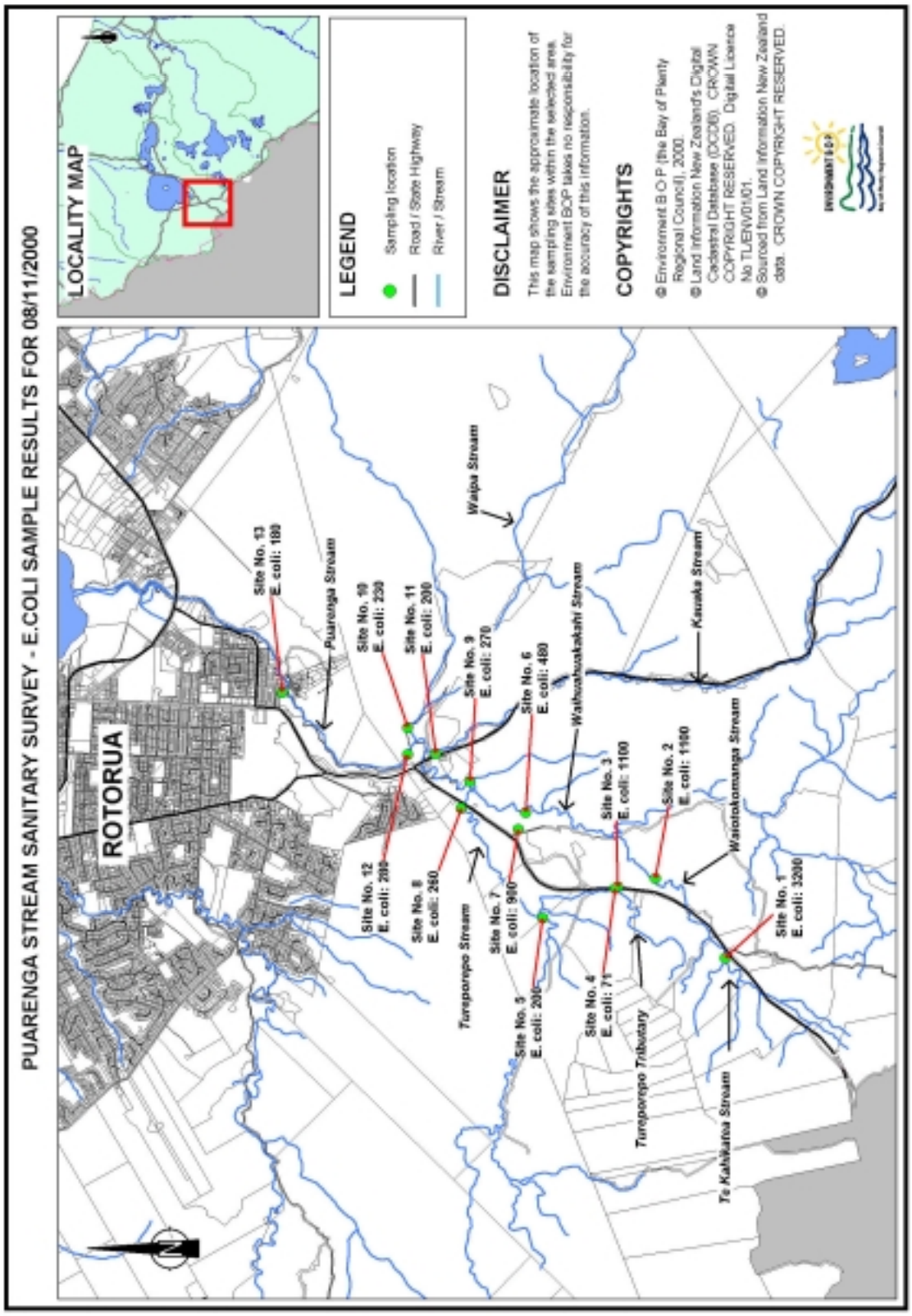


Figure 3.6: Puarenga Stream Sanitary Survey – E.coli Sample Results for 8 November 2000

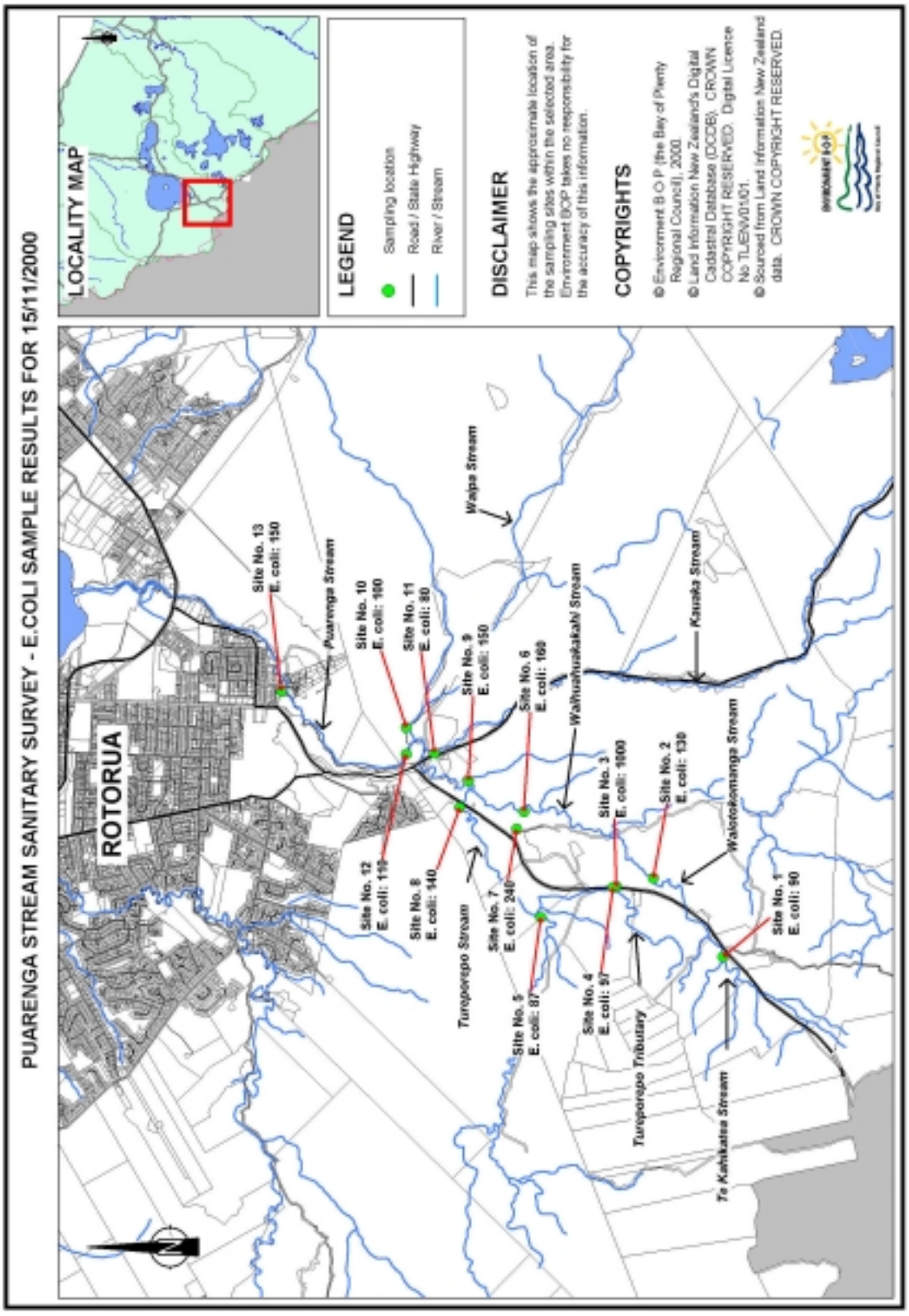


Figure 3.7: Puarenga Stream Sanitary Survey – E.coli Sample Results for 15 November 2000

Chapter 4: Discussion and Conclusion

4.1 Marine Beaches

The major marine beaches of the Bay of Plenty were sampled comprehensively over the summer of 2000/2001 in accordance with the protocol of the Recreational Water Quality Guidelines (MfE/MoH, 1999). The quality of the bathing waters was very high as previous surveys had also shown (Environment B·O·P, 1991, 1993, 1995, 1998, 2000).

In future years a lower monitoring frequency will be undertaken at these sites. However, sufficient monitoring will be carried out to maintain an up-to-date information base for reporting in the newspapers and Ministry of the Environment web site.

4.2 Estuaries

These sites were selected in consultation with Pacific Health and Western Bay of Plenty District Council to monitor effects of small communities on the bacterial levels in the surrounding water bodies. Bathing quality was found to be acceptable at all sites. The Little Waihi site had the highest bacterial numbers but the waters were safe for swimming despite the evidence for local contamination.

Monitoring of septic tank seepage at Omokoroa, Maketu and Little Waihi has shown that contaminated discharges are occurring to open waters. However, at the depth of sampling (500 mm) for bathing quality, sufficient dilution occurred to render the contamination to 'safe' levels.

4.3 Waihi Beach Streams and Drains

The quality of water is very poor in these waterways. Even the Waihi Beach Stream, which is at the reticulated end of the settlement showed high bacterial levels in the latter part of the bathing season. Pacific Health required Western Bay of Plenty District Council to erect warning signs at all of the creeks that cross Waihi Beach.

A sewage reticulation scheme is being constructed to lessen the contamination at Two and Three Mile Creeks. Western Bay of Plenty District Council staff investigated the contamination found at the Waihi Beach Stream (see press article in Appendix I).

4.4 Waimapu Stream

The main bathing site on the Waimapu stream is at Greerton Park. Two additional sites were sampled to examine the quality in the major tributaries.

In November 2000, the Waimapu was found to exceed the bathing guidelines and Tauranga District Council staff erected a sign to warn bathers of the state of the stream (see press article in Appendix II). Data from the upstream sites showed that the Waiorohi tributary was the major source of bacteria to the stream.

Environmental Field Officers undertook a dairy shed survey in the catchments of Tauranga Harbour in March 2001. Some problems were found with shed discharges in the Waimapu Stream catchment and these were subsequently rectified.

A sanitary survey will be undertaken of this catchment in November/December 2001 to isolate the causes of bacterial contamination.

4.5 Whakatane River

The Whakatane River at Landing Road Bridge was found to comply with the bathing guideline, although a recent report on river quality (Environment B·O·P, 2001/12) shows that bacterial levels are increasing in the river.

4.6 Lake sites

At Lake Rotoiti, some high bacterial levels were found at the Hinehopu site in December and January but later samples were lower. The Gisborne Point site, which had been at 'alert' status for a short period in the previous summer was found to be safe for bathing in 2000/2001.

The Hamurana and Ngongotaha sites on Lake Rotorua were safe for bathing, while the Waiteti Stream was safe but at 'alert' status.

Lake Okareka, at the jetty, was found to be safe for bathing. Lake Okaro displayed one short period of poor quality.

It should be noted that because of possible toxins in the water due to blue-green algal blooms, Okawa Bay in Lake Rotoiti, Lake Rotoehu, and Lake Okaro, were issued with warnings advising people not to bathe.

4.7 Puarenga Stream

Because the bathing site at Whakarewarewa had a poor record for bathing quality, a major sanitary survey was undertaken in October and November. Consent holders in the catchment were informed of the survey and of the results of sampling the tributary streams.

The highest bacterial levels were found in the tributaries to the west of Hemo Gorge. These occurred in the dairy farming area of the catchment. Environment B·O·P staff visited the farms to inspect disposal systems and inform of the monitoring results.

The bathing site at Whakarewarewa remained suitable for bathing over the summer of 2000/2001, despite occasional high results.

Maintenance of the bathing quality depends to a large extent on maintaining surveillance and continuing education of the people in the catchment likely to be responsible for bacterial discharges. However, during and after rainfall events there will always be a greater risk of bacterial contamination than during dry weather.

4.8 Conclusion

In future bathing seasons, bathing sites will again be selected in conjunction with district councils and Pacific Health staff. In addition, the main marine bathing beaches will be monitored to ensure that the quality of the popular tourist beaches is known. A lesser sampling frequency is appropriate for these sites, due to the historically excellent quality.

Monitoring will continue at Waihi Beach to monitor improvements in the quality of the creeks where sewage reticulation has been installed.

A sanitary survey of the Waiorahi Stream will be undertaken in November 2001 to identify any point sources or diffuse discharges that are causing elevated bacterial levels at the bathing site on the Waimapu Stream at Greerton Park.

The Ministry for the Environment trialed new guidelines for water quality classification over the 2000/2001-summer season. These new guidelines expand on the 1999 guidelines and involve classifying each bathing beach in terms of its recreational contact use, catchment risk factors, bacterial components, and the presence of wastewater treatment facilities within the catchment area. Once all factors have been considered, each bathing beach will receive a classification from a scale ranging from very poor through to excellent. Monitoring each beach will remain the same as previous summer bathing periods. If any change in a catchment results in an improvement, or deterioration, of the bathing water quality then that beach can be reclassified. Once the trial results have been assessed, and any amendments made to the guidelines, they will then be distributed to the appropriate authorities for implementation. It is envisaged that these new guidelines will be available for the 2001/2002 summer bathing season.

Appendices

Appendix I – Bacteria Alert at Waihi Beach (Newspaper Article)

Appendix II – Water Contamination Worries Maori Fishers (Newspaper Article)

Appendix I – Bacteria Alert at Waihi Beach (Newspaper Article)

Bacteria alert at Waihi Beach

BOP TIMES 17.2.01

By Andrew Still

BATHERS are being warned away from a creek running into Waihi Beach, because bacteria levels are 15 times the recommended limit.

With the completion of the new sewerage scheme still some months away and the likelihood of residents in the area not being connected until the end of 2002 bathers could face a long wait before safely re-entering the creek, which runs alongside the surf club.

Warning signs will soon be erected near where high levels of E.coli bacteria were recorded after the recent water quality tests by Pacific Health officials. Results from the creek, which flows into Waihi Beach, show contamination to be at 4500 organisms per 100ml when safe levels of E.coli should be no more than 300 per 100ml.

In a letter to Western Bay of Plenty District Council and Environment BOP, Public Health protection officers recommended that, in the interests of public health, signs be erected as soon as possible. This follows the need to install similar warning signs at Two and Three Mile Creeks at the southern end of Waihi Beach, after dangerously high levels of bacteria were recorded late last year.

Septic tank seepage is being blamed as one of the potential causes of contamination, although council utilities manager Ted Anderson said a nearby camping ground ablution block may be the cause.

Water dye tests were to be made during the next few weeks to try and trace the exact source he said.

Mr Anderson said the traditional high summer loading at the nearby caravan park combined with one or two residents not hooked up to the existing sewerage scheme, had contributed to the high result. These were a part of the problems that had led the council to try to get the proposed sewerage scheme into place before next summer, he said.

Signs were being constructed and would soon be put in place to warn against the danger of bathing in the stream until then, Mr Anderson said.

Appendix II – Water Contamination Worries Maori Fishers (Newspaper Article)

Water contamination worries Maori fishers

BOP Times 7/12

By Vanessa Phillips

BACTERIAL contamination of a suburban Tauranga stream, used for swimming and by neighbouring Maori for food gathering, will be tracked to its source by Environment BOP.

Signs have been erected near Waimapu Stream at Greerton Park, warning the public against swimming, fishing or taking shellfish. Significant levels of bacterial contamination, likely to be E coli from faecal pollution, have been found in the stream.

Keni Piahana of Poike said his hapu Ngati Ruahine regularly harvested eels, fish, whitebait and fresh water crayfish from the Waimapu Stream and were concerned about spiritual contamination of the stream by human effluent.

Mr Piahana is the convenor of Te Waka Iti O Ruahine — the combined land trusts and marae trusts of the Waimapu people. The Waimapu pa, on the eastern banks of the Waimapu Stream, is home to about 30 Ngati Ruahine families.

The Waiorahi Stream, which joins the Waimapu upstream in the Oropi area, has been identified as the major carrier of the bacterial contamination, which was possibly dairy shed effluent tank discharge or septic tank leakage. Environment BOP is to do a sanitary survey to determine the exact cause of the contamination.

Mr Piahana felt disappointed he was told by Environment BOP only yesterday morning that the stream was badly contaminated and said authorities needed to talk to tangata whenua before customary harvest areas like the Waimapu Stream were declared unsafe.

Mr Piahana said he was not surprised to learn the Waimapu Stream had become badly contaminated with bacteria, because he felt land-use practices around it were bad.

He said Ngati Ruahine had presented at least 10 to 15 submissions during the past five years to Tauranga District Council and Environment BOP, dealing with various issues on helping preserve water quality and monitoring of the Waimapu Stream, and felt progress in implementing changes had been too slow.

Ngati Ruahine wanted the district council to establish water monitoring sites in the Maleme Street area and closer to Greerton Park and develop riparian margins along the banks of the stream to help improve water quality.

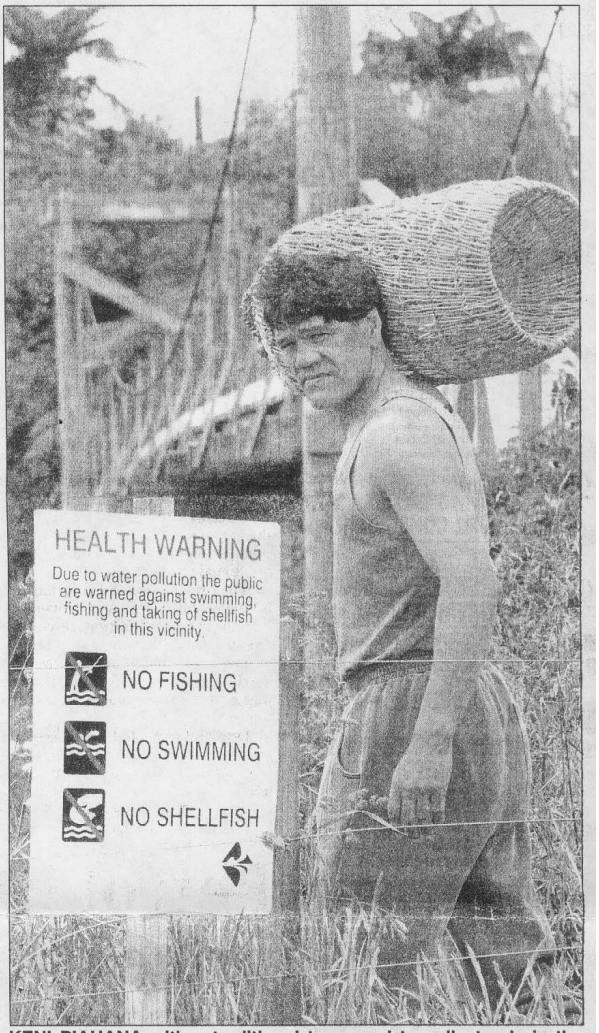
Environment BOP regulation and monitoring director Paul Dell said the council's first priority was to make sure the wider community was made aware the stream was unsafe, rather than first notifying one particular group of people.

Mr Dell said Environment BOP only got the results on the level of bacterial contamination in the stream on Tuesday and Mr Piahana was told yesterday morning about the situation.

He said Environment BOP did have a close working relationship with iwi. The regional council's first priority now was to find out the exact cause of the contamination in the Waimapu Stream, he said.

Tauranga District Council city services group manager Bruno Petrenas said if it turned out the contamination was coming from a council zone, immediate action would be taken to fix the problem.

Mr Petrenas said the need to improve water quality in the area of the Waimapu Stream had been recognised and he intended to talk to Mr Piahana about any initiatives that might be beneficial.



KENI PIAHANA with a traditional trap used to collect eels in the Waimapu Stream, which has now been declared unsafe.

Picture: Ross Brown E6435-92