

Regional Water Allocation Framework :

Technical Report to Support Policy Development - Volume 2

(Appendix to Volume 1)



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Development - Volume 2
(Appendix to Volume 1)**



May 2007

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May 2007

ISBN: 978-1-877413-93-3
Report No: 2007/EXT/810

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INTRODUCTION

This document is an Appendix to the document “Regional Water Allocation Framework, Technical Report to Support Policy Development”. It presents the frequency tables used in the process of setting minimum flows and core allocation limits for some of the Water Management Zones in the Horizons Region.

The tables document the frequency of occurrence of flows less than the flow specified in the table heading. The numbers in the tables document the cumulative number of days that the flow was below that specified flow. This cumulative number of days is not necessarily consecutive. The numbers in red contain months with missing data. Missing periods may range in length from a few hours to the whole time period, eg. the whole month. Where gaps were not expected to contain the low flow for the year, those years have been included in the analysis.

Analysis was completed based on the “water year”, ie. 1 July to 30 June.

Tiraumea Water Management Zone – Mana 7

Upper Tiraumea – Mana 7a

Table 1: Number of days that the MALF occurs at Tiraumea at Ngaturi

Flow Statistic	MALF	Flow	2.380																	
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL							
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4							
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	6.5	0.0	7.2							
1981		0.0	0.0	0.0	0.0	0.0	2.8	7.8	1.6	0.2	0.0	0.0	12.5							
1982		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1983		0.0	0.0	0.0	0.0	0.0	13.4	8.1	4.9	5.2	1.2	0.0	32.8							
1984		0.0	0.0	0.0	0.0	0.0	13.2	14.7	24.8	21.3	23.4	14.3	0.0	111.8						
1985		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	7.3							
1986		0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.6	0.0	0.0	0.0	9.0							
1987		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1988		0.0	0.0	0.0	0.0	0.0	0.0	2.8	11.4	12.6	0.0	0.0	26.8							
1989		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1990		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3							
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1993		0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	24.5	23.2	8.4	0.0	68.8						
1994		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1995		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1997		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	26.0	14.1	0.0	0.0	40.9						
1998		0.0	0.0	0.0	0.0	0.0	0.0	1.5	14.3	10.1	3.8	0.0	0.0	29.7						
1999		0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.1	13.0	0.0	0.1	0.0	17.6						
2000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	8.6	0.2	0.0	16.0						
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2003		0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.8						
2004		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
TOTAL		0.0	0.0	0.0	0.0	13.2	37.4	82.3	120.1	99.0	30.7	0.0	382.7							
Average		0.0	0.0	0.0	0.0	0.5	1.4	3.2	4.6	3.8	1.2	0.0	14.7							
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Maximum		0.0	0.0	0.0	0.0	13.2	14.7	24.8	26.0	23.4	14.3	0.0	111.8							
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1						
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3						
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.8	3.3	2.2	0.0	0.0	14.3						
Percentile 80%		0.0	0.0	0.0	0.0	0.0	0.0	1.5	6.6	10.1	7.3	0.1	0.0	26.8						
Percentile 90%		0.0	0.0	0.0	0.0	0.0	0.0	2.7	10.4	17.2	13.4	3.9	0.0	36.9						
Percentile 100%		0.0	0.0	0.0	0.0	13.2	14.7	24.8	26.0	23.4	14.3	0.0	111.8							

Table 2: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Tiraumea at Ngaturi

Flow Statistic	MALF *0.9	Flow	2.1										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	4.6
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.2	0.5	0.0	0.0	0.0	4.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	7.0	23.3	16.8	21.5	14.1	0.0	82.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.7
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	16.2	5.0	0.0	27.4
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.6	0.0	0.0	10.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	7.8
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	7.6	28.0	40.6	39.0	23.7	0.0	138.9
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	1.6	1.5	0.9	0.0	5.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	7.0	23.3	16.8	21.5	14.1	0.0	82.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	7.0	0.7	2.3	0.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	7.0	23.3	16.8	21.5	14.1	0.0	82.6

Table 3: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Tiraumea at Ngaturi

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	2.380										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	6.5	0.0	7.2
1981	0.0	0.0	0.0	0.0	0.0	0.0	2.8	7.8	1.6	0.2	0.0	0.0	12.5
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	13.4	8.1	4.9	5.2	1.2	0.0	32.8
1984	0.0	0.0	0.0	0.0	0.0	13.2	14.7	24.8	21.3	23.4	14.3	0.0	111.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	7.3
1986	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.6	0.0	0.0	0.0	0.0	9.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	11.4	12.6	0.0	0.0	26.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	24.5	23.2	8.4	0.0	68.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	26.0	14.1	0.0	0.0	40.9
1998	0.0	0.0	0.0	0.0	0.0	0.0	1.5	14.3	10.1	3.8	0.0	0.0	29.7
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.1	13.0	0.0	0.1	0.0	17.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	8.6	0.2	0.0	16.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.8
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	13.2	37.4	82.3	120.2	99.0	30.7	0.0	382.8
Average	0.0	0.0	0.0	0.0	0.0	0.5	1.4	3.2	4.6	3.8	1.2	0.0	14.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	13.2	14.7	24.8	26.0	23.4	14.3	0.0	111.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.8	3.3	2.2	0.0	14.3
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	6.6	10.1	7.3	0.1	26.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	10.4	17.2	13.4	3.9	36.9
Percentile 100%	0.0	0.0	0.0	0.0	0.0	13.2	14.7	24.8	26.0	23.4	14.3	0.0	111.8

Table 4: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Tiraumea at Ngaturi

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	2.499										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.1
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.6	7.6	0.0	11.6
1981	0.0	0.0	0.0	0.0	0.0	0.0	3.6	10.4	2.6	0.5	0.2	0.0	17.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	8.1	0.0	0.0	0.0	15.9
1983	0.0	0.0	0.0	0.0	0.0	0.4	31.0	12.9	7.8	19.0	2.1	0.0	73.2
1984	0.0	0.0	0.0	0.0	5.9	14.8	18.6	25.3	22.6	24.2	14.4	0.0	125.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	0.0	0.0	14.2
1986	0.0	0.0	0.0	0.0	0.0	0.0	7.8	10.3	0.0	0.0	0.0	0.0	18.1
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	18.8	18.0	0.0	0.0	45.3
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.5	0.0	0.0	5.4
1990	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.8	0.0	0.0	0.0	0.0	5.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	28.3	23.9	9.1	0.0	79.4
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	26.9	16.7	0.0	0.0	51.1
1998	0.0	0.0	0.0	0.0	0.0	0.0	10.4	20.5	12.4	8.4	0.0	0.0	51.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	3.7	5.6	14.0	0.0	5.1	0.0	28.3
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	16.7	2.2	0.0	34.3
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	5.6
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	5.9	15.2	84.5	131.9	162.7	143.4	40.6	0.0	584.2
Average	0.0	0.0	0.0	0.0	0.2	0.6	3.3	5.1	6.3	5.5	1.6	0.0	22.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	5.9	14.8	31.0	25.3	28.3	24.2	14.4	0.0	125.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	8.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	15.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	7.6	8.0	5.0	0.0	23.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	10.3	14.0	16.7	2.1	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	15.5	20.7	18.5	6.4	0.0
Percentile 100%	0.0	0.0	0.0	0.0	5.9	14.8	31.0	25.3	28.3	24.2	14.4	0.0	125.8

Table 5: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Tiraumea at Ngaturi

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	2.618										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	3.7	8.4	0.0	16.9
1981	0.0	0.0	0.0	0.0	0.0	0.3	5.0	14.3	4.1	1.2	0.4	0.0	25.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6	17.5	4.1	0.0	0.0	40.3
1983	0.0	0.0	0.0	0.0	0.0	2.4	31.0	15.0	9.8	21.9	3.9	0.0	84.0
1984	0.0	0.0	0.0	0.0	7.9	15.9	19.8	25.9	23.9	24.5	14.4	0.0	132.4
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	3.1	0.0	22.1
1986	0.0	0.0	0.0	0.0	0.0	0.3	14.6	16.8	1.2	0.0	0.0	0.0	32.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.7	0.0	0.0	0.0	0.0	2.1
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.2	22.4	20.2	0.0	0.0	55.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	5.5	1.2	0.0	0.0	11.8
1990	0.0	0.0	0.0	0.0	0.0	0.0	6.1	5.2	0.0	0.0	0.0	0.0	11.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	2.2	21.8	29.4	24.5	9.1	0.0	87.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	5.7
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	28.3	18.1	1.5	0.0	61.5
1998	0.0	0.0	0.0	0.0	0.0	0.0	15.2	21.9	14.8	9.6	0.0	0.0	61.5
1999	0.0	0.0	0.0	0.3	0.0	0.0	5.7	6.9	14.4	0.0	6.5	0.0	33.8
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	23.5	19.2	2.2	0.0	47.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	5.7	0.0	0.0	0.0	10.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	9.7
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.3	7.9	18.9	115.5	189.3	205.4	167.2	49.5	0.0	754.0
Average	0.0	0.0	0.0	0.0	0.3	0.7	4.4	7.3	7.9	6.4	1.9	0.0	29.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.3	7.9	15.9	31.0	25.9	29.4	24.5	14.4	0.0	132.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	10.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	2.7	0.0	0.0	14.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.2	5.5	1.2	0.0	25.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	13.4	12.1	6.9	1.0	37.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	15.0	17.5	19.0	3.1	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	14.9	20.2	23.7	21.1	7.5	0.0
Percentile 100%	0.0	0.0	0.0	0.3	7.9	15.9	31.0	25.9	29.4	24.5	14.4	0.0	132.4

Table 6: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Tiraumea at Ngaturi

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	2.737										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	2.1
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	5.5	9.9	0.0	23.2
1981	0.0	0.0	0.0	0.0	0.0	0.6	6.9	16.4	7.1	2.0	0.8	0.0	33.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	1.1	19.8	19.4	11.1	0.0	0.0	51.4
1983	0.0	0.0	0.0	0.0	0.0	7.6	31.0	16.1	11.0	22.6	7.7	0.0	96.1
1984	0.0	0.0	0.0	0.0	8.9	16.9	20.5	26.5	24.7	25.0	14.4	0.0	136.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.9	5.8	0.0	25.7
1986	0.0	0.0	0.0	0.0	0.0	3.8	18.0	19.2	1.8	0.0	0.0	0.0	42.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	5.7	3.7	0.0	0.0	0.0	0.0	9.4
1988	0.0	0.0	0.0	0.0	0.0	0.0	2.0	14.8	24.3	22.9	0.0	0.0	64.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	1.3	10.8	7.3	4.9	0.0	0.0	24.3
1990	0.0	0.0	0.0	0.0	0.0	0.0	9.1	7.3	0.0	0.0	0.0	0.0	16.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	9.0	23.8	30.1	25.7	9.2	0.0	97.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	12.6	3.6	0.0	0.0	0.0	0.0	16.2
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	1.7	18.3	29.3	19.6	2.8	0.0	71.7
1998	0.0	0.0	0.0	0.0	0.0	1.6	17.2	23.3	16.5	13.9	0.0	0.0	72.6
1999	0.0	0.0	0.0	1.6	0.0	0.0	7.5	11.7	15.2	0.4	7.0	0.0	43.3
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	26.9	21.8	2.3	0.0	55.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	10.9	0.0	0.5	0.0	29.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	14.4	0.0	0.0	0.0	0.0	0.0	14.4
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	1.6	9.0	30.5	157.8	239.8	232.3	195.4	60.4	0.0	926.7
Average	0.0	0.0	0.0	0.1	0.3	1.2	6.1	9.2	8.9	7.5	2.3	0.0	35.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	1.6	8.9	16.9	31.0	26.5	30.1	25.7	14.4	0.0	136.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	16.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	1.5	6.0	4.5	0.2	0.0	0.0	25.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	5.7	11.7	7.8	4.9	0.0	0.0	33.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	8.3	16.3	13.1	12.5	1.6	0.0	47.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	12.6	18.3	19.4	19.9	5.8	0.0	64.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	2.7	17.6	21.6	25.8	22.8	8.5	0.0	84.4
Percentile 100%	0.0	0.0	0.0	1.6	8.9	16.9	31.0	26.5	30.1	25.7	14.4	0.0	136.9

Table 7: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Tiraumea at Ngaturi

Flow Statistic	(MALF * 0.9) + 30% of MALF	Flow	2.856										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	2.4
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	8.1	11.4	0.0	30.5
1981	0.0	0.0	0.0	0.0	0.0	0.9	8.7	17.9	9.9	3.1	1.4	0.0	41.9
1982	0.0	0.0	0.0	0.0	0.0	0.0	3.4	20.6	21.3	14.5	0.0	0.0	59.8
1983	0.0	0.0	0.0	0.0	0.0	10.4	31.0	17.4	13.0	23.4	10.8	0.0	106.0
1984	0.0	0.0	0.0	0.0	11.5	17.6	21.4	26.8	25.0	25.3	14.4	0.0	142.2
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.8	20.4	7.6	0.0	29.9
1986	0.0	0.0	0.0	0.0	0.0	4.9	20.1	19.7	2.6	0.0	0.0	0.0	47.2
1987	0.0	0.0	0.0	0.0	0.0	0.0	6.3	3.9	0.0	0.0	0.0	0.0	10.2
1988	0.0	0.0	0.0	0.0	0.0	0.0	4.8	15.3	25.3	24.3	0.0	0.0	69.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	3.7	16.4	8.3	7.4	0.0	0.0	35.9
1990	0.0	0.0	0.0	0.0	0.0	0.1	10.9	8.6	0.0	0.0	0.0	0.0	19.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	15.3	24.9	30.6	26.2	9.2	0.0	106.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	15.2	7.9	1.0	0.0	0.0	0.0	24.1
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	2.5	20.2	29.5	21.5	3.2	0.0	76.9
1998	0.0	0.0	0.0	0.0	0.0	3.0	19.3	24.7	18.9	15.9	0.0	0.0	81.8
1999	0.0	0.0	0.0	3.6	0.7	0.0	8.5	13.2	16.0	2.2	7.1	0.0	51.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	1.4	7.7	28.9	23.2	2.3	0.0	63.6
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.1	14.2	3.6	7.7	0.0	47.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	15.2	0.0	0.0	0.0	0.0	0.0	15.2
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	3.6	12.2	36.8	188.0	270.8	256.5	219.3	75.2	0.0	1062.6
Average	0.0	0.0	0.0	0.1	0.5	1.4	7.2	10.4	9.9	8.4	2.9	0.0	40.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	3.6	11.5	17.6	31.0	26.8	30.6	26.2	14.4	0.0	142.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	12.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.9	0.8	0.0	0.0	0.0	24.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	3.6	8.3	5.5	2.7	0.0	0.0	33.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	6.3	15.3	11.0	7.4	0.0	0.0	47.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	9.8	17.7	15.1	15.2	2.8	0.0	55.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.1	15.2	20.2	21.3	21.5	7.6	0.0	69.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	4.0	19.7	23.4	27.1	23.9	10.0	0.0	93.9
Percentile 100%	0.0	0.0	0.0	3.6	11.5	17.6	31.0	26.8	30.6	26.2	14.4	0.0	142.2

Makuri – Mana 7d**Table 8: Number of days that the MALF occurs at Makuri at Tuscan Hills**

Flow Statistic	MALF	Flow	2.2										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	26.3	25.9	3.1	0.0	59.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.9	12.0	12.1	0.0	28.2
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	13.4	17.6	15.3	0.0	56.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	8.0	0.0	0.0	0.0	8.1
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	50.7	55.5	30.5	0.0	152.7
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	7.2	7.9	4.4	0.0	21.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	26.3	25.9	15.3	0.0	59.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	3.2
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.9	0.0	0.0	0.0	8.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.0	7.2	1.9	0.0	20.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	9.1	13.1	4.9	0.0	33.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	12.3	16.5	10.3	0.0	50.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	18.6	20.9	13.4	0.0	57.9
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	26.3	25.9	15.3	0.0	59.9

Table 9: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 5% of the MALF occurs at Makuri at Tuscan Hills

Flow Statistic	MALF + 5% of MALF	Flow	2.268										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
2000	0.0	0.0	0.0	0.0	0.0	0.2	3.2	10.5	28.1	27.3	5.2	1.9	76.5
2001	2.1	0.0	0.0	2.8	0.0	0.0	0.0	4.6	14.1	17.1	16.8	0.0	57.5
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.4	20.6	20.4	23.0	17.2	0.0	81.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.4
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	13.9	0.0	0.0	0.0	19.6
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	2.1	0.0	0.0	2.8	0.0	0.2	6.0	41.5	76.6	67.5	39.3	1.9	237.7
Average	0.3	0.0	0.0	0.4	0.0	0.0	0.9	5.9	10.9	9.6	5.6	0.3	33.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	2.1	0.0	0.0	2.8	0.0	0.2	3.2	20.6	28.1	27.3	17.2	1.9	81.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	5.6	0.0	0.0	0.0	9.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	13.9	0.0	0.0	0.0	19.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.3	14.0	10.3	3.1	0.0	42.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.7	15.4	18.3	7.5	0.0	61.3
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.0	9.5	19.1	21.8	14.5	0.0	72.7
Percentile 90%	0.8	0.0	0.0	1.1	0.0	0.1	2.7	14.5	23.5	24.7	17.0	0.8	78.5
Percentile 100%	2.1	0.0	0.0	2.8	0.0	0.2	3.2	20.6	28.1	27.3	17.2	1.9	81.6

Table 10: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Makuri at Tuscan Hills

Flow Statistic	MALF + 10% of MALF	Flow	2.376										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
2000	0.0	0.0	0.0	0.0	0.0	3.8	7.9	15.5	30.1	27.7	7.6	3.3	96.0
2001	4.8	0.0	0.8	6.2	0.0	0.4	0.4	8.5	18.0	20.7	20.4	0.4	80.8
2002	0.0	0.0	0.0	0.0	0.0	0.0	6.1	26.2	23.5	25.3	18.6	0.6	100.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	6.1
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	17.6	0.0	0.0	0.0	30.1
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.8	0.0	0.8	6.2	0.0	4.2	20.5	62.7	89.3	73.9	46.7	4.3	313.4
Average	0.7	0.0	0.1	0.9	0.0	0.6	2.9	9.0	12.7	10.5	6.7	0.6	44.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	4.8	0.0	0.8	6.2	0.0	3.8	7.9	26.2	30.1	27.7	20.4	3.3	100.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.4	7.0	0.0	0.0	0.0	15.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	8.5	17.6	0.0	0.0	0.0	30.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	3.8	10.9	17.8	12.4	4.6	0.2	60.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.1	6.1	13.1	19.1	21.6	9.8	0.4	83.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.3	6.1	14.9	22.4	24.4	16.4	0.6	93.0
Percentile 90%	1.9	0.0	0.3	2.5	0.0	1.8	6.8	19.8	26.1	26.3	19.3	1.7	97.7
Percentile 100%	4.8	0.0	0.8	6.2	0.0	3.8	7.9	26.2	30.1	27.7	20.4	3.3	100.2

Table 11: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Makuri at Tuscan Hills

Flow Statistic	MALF + 5% of MALF	Flow	2.484										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
2000	0.0	0.0	0.0	0.0	0.0	7.7	11.7	19.0	31.0	28.0	11.1	5.0	113.5
2001	8.1	0.0	4.6	6.5	0.0	2.9	3.2	12.2	20.1	22.7	22.6	1.8	104.6
2002	0.0	0.0	0.0	0.0	0.0	0.0	13.9	26.9	24.7	26.1	19.3	1.5	112.3
2003	0.0	1.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	10.7
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.7	16.9	19.7	1.4	0.0	0.0	38.7
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	8.1	1.0	4.6	6.5	0.0	10.6	39.2	75.1	95.5	78.2	53.1	8.3	380.2
Average	1.2	0.1	0.7	0.9	0.0	1.5	5.6	10.7	13.6	11.2	7.6	1.2	54.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	8.1	1.0	4.6	6.5	0.0	7.7	13.9	26.9	31.0	28.0	22.6	5.0	113.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	8.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4.9	7.9	0.6	0.0	0.0	21.9
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	3.2	12.2	19.7	1.4	0.0	0.0	38.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	7.1	15.0	19.9	14.2	6.7	0.9	78.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.6	10.1	17.3	21.0	23.4	12.7	1.6	106.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	2.3	11.3	18.6	23.8	25.4	17.7	1.7	110.8
Percentile 90%	3.2	0.4	1.8	2.6	0.0	4.8	12.6	22.2	27.2	26.9	20.6	3.1	112.8
Percentile 100%	8.1	1.0	4.6	6.5	0.0	7.7	13.9	26.9	31.0	28.0	22.6	5.0	113.5

Table 12: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Makuri at Tuscan Hills

Flow Statistic	MALF + 20% of MALF	Flow	2.592										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
2000	0.0	0.0	0.0	0.0	0.0	12.0	15.2	20.7	31.0	28.3	12.9	7.5	127.5
2001	9.7	1.4	8.1	6.6	0.0	4.2	7.2	13.5	23.2	24.2	22.9	3.1	124.1
2002	0.0	0.0	0.0	0.0	0.0	0.0	21.6	27.3	25.5	26.9	19.8	2.2	123.3
2003	1.3	1.9	0.0	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0	18.4
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	2.0	0.0	0.0	0.0	6.3
2005	0.0	0.0	0.0	0.0	0.0	0.0	4.3	20.6	20.3	4.1	0.0	0.0	49.3
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	11.0	3.3	8.1	6.6	0.0	16.2	63.5	86.5	102.1	83.6	55.7	12.9	449.5
Average	1.6	0.5	1.2	0.9	0.0	2.3	9.1	12.4	14.6	11.9	7.9	1.8	64.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	9.7	1.9	8.1	6.6	0.0	12.0	21.6	27.3	31.0	28.3	22.9	7.5	127.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.4	0.0	0.0	0.0	8.7
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.5	1.6	0.0	0.0	0.0	16.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	5.5	8.0	9.3	1.6	0.0	0.0	30.8
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	7.2	13.5	20.3	4.1	0.0	0.0	49.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	11.9	17.8	22.0	16.2	7.7	1.3	93.7
Percentile 70%	0.3	0.3	0.0	0.0	0.0	0.8	15.1	20.6	23.7	24.7	14.3	2.4	123.5
Percentile 80%	1.0	1.1	0.0	0.0	0.0	3.4	15.2	20.7	25.0	26.4	18.4	2.9	123.9
Percentile 90%	4.7	1.6	3.2	2.6	0.0	7.3	17.8	23.3	27.7	27.5	21.0	4.9	125.5
Percentile 100%	9.7	1.9	8.1	6.6	0.0	12.0	21.6	27.3	31.0	28.3	22.9	7.5	127.5

Table 13: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Makuri at Tuscan Hills

Flow Statistic	MALF + 25% of MALF	Flow	2.7										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
2000	0.0	0.0	0.0	0.0	0.0	17.8	18.2	21.9	31.0	28.4	14.5	11.1	142.8
2001	10.4	4.9	13.300	6.9	1.5	5.6	10.5	14.5	24.8	25.3	22.9	4.6	145.0
2002	0.0	0.0	0.0	0.0	0.0	0.3	25.8	27.3	26.1	27.7	20.4	2.3	129.8
2003	3.6	3.4	0.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.0	0.0	23.9
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	10.9	0.0	0.0	0.0	19.2
2005	0.0	0.0	0.7	0.0	0.0	0.0	7.3	24.8	20.9	8.1	0.0	0.0	61.8
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	14.0	8.3	14.0	6.9	1.5	23.8	78.8	96.8	113.8	89.6	57.9	17.9	523.3
Average	2.0	1.2	2.0	1.0	0.2	3.4	11.2	13.8	16.2	12.8	8.3	2.6	74.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	10.4	4.9	13.3	6.9	1.5	17.8	25.8	27.3	31.0	28.4	22.9	11.1	145.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.7	2.2	0.0	0.0	0.0	20.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	5.8	6.6	8.7	0.0	0.0	0.0	23.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	8.6	10.8	14.9	3.2	0.0	0.0	39.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	10.5	14.5	20.9	8.1	0.0	0.0	61.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.2	14.3	18.9	23.2	18.4	8.7	1.4	102.6
Percentile 70%	0.7	0.7	0.1	0.0	0.0	1.4	17.2	22.5	25.1	25.8	15.7	2.8	132.4
Percentile 80%	2.9	2.7	0.6	0.0	0.0	4.5	17.9	24.2	25.8	27.2	19.2	4.1	140.2
Percentile 90%	6.3	4.0	5.7	2.8	0.6	10.5	21.2	25.8	28.1	28.0	21.4	7.2	143.7
Percentile 100%	10.4	4.9	13.3	6.9	1.5	17.8	25.8	27.3	31.0	28.4	22.9	11.1	145.0

Table 14: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Makuri at Tuscan Hills

Flow Statistic	MALF + 30% of MALF	Flow	2.808										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
2000	0.0	0.0	0.0	0.0	0.0	21.0	20.3	22.9	31.0	28.6	15.5	13.3	152.5
2001	11.1	7.7	15.1	7.3	3.2	6.3	13.8	16.1	26.4	26.1	23.0	6.0	162.1
2002	0.0	0.0	0.0	0.0	0.0	2.0	27.2	27.4	26.5	28.1	21.4	2.3	135.0
2003	5.5	4.8	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	28.3
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	13.3	3.8	0.0	0.0	28.0
2005	0.0	0.0	8.0	0.0	0.5	0.0	9.7	25.8	21.2	10.9	0.0	0.0	76.1
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	16.6	12.5	23.1	7.3	3.7	29.3	89.2	103.3	118.5	97.6	59.9	21.7	582.9
Average	2.4	1.8	3.3	1.0	0.5	4.2	12.7	14.7	16.9	13.9	8.6	3.1	83.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	11.1	7.7	15.1	7.3	3.2	21.0	27.2	27.4	31.0	28.6	23.0	13.3	162.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.8
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.2	2.7	0.8	0.0	0.0	28.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	7.8	8.7	10.6	3.0	0.0	0.0	28.2
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	11.3	13.0	16.5	6.6	0.0	0.0	47.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	13.8	16.1	21.2	10.9	0.0	0.0	76.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	1.2	16.3	20.2	24.3	20.0	9.3	1.4	111.4
Percentile 70%	1.1	1.0	1.6	0.0	0.1	2.9	18.5	23.5	26.4	26.5	16.7	3.0	138.5
Percentile 80%	4.4	3.8	6.4	0.0	0.4	5.4	19.8	25.2	26.5	27.7	20.2	5.3	149.0
Percentile 90%	7.7	6.0	10.8	2.9	1.6	12.2	23.1	26.4	28.3	28.3	22.0	8.9	156.3
Percentile 100%	11.1	7.7	15.1	7.3	3.2	21.0	27.2	27.4	31.0	28.6	23.0	13.3	162.1

Mangatainoka Water Management Zone – Mana 8

Upper Mangatainoka – Mana 8a

Table 15: Number of days that the MALF occurs at Mangatainoka at Larsons Rd

Flow statistic	MALF	Flow	0.39										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.6	8.3	11	19.4	10.1	0.0	50.4
1985	0.0	0.0	1.2	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	7.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	9.9	11.5	0.0	0.0	24.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	1.6	0.0	0.0	0.0	22.5
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	9.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	11.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	11.3	8.4	1.7	0.0	23.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	0.0	0.0	0.0	0.0	11.7
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	1.2	0.0	0.0	1.8	6	48.1	60.3	39.4	11.9	0.0	168.6
Average	0.0	0.0	0.1	0.0	0.0	0.1	0.3	2.2	2.7	1.8	0.5	0.0	7.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	1.2	0.0	0.0	1.8	2.8	18.1	11.3	19.4	10.1	0.0	50.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	8.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	8.5	0.0	0.0	0.0	11.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.4	8.0	10.9	7.6	0.0	0.0	23.5
Percentile 100%	0.0	0.0	1.2	0.0	0.0	1.8	2.8	18.1	11.3	19.4	10.1	0.0	50.4

Table 16: Number of days that a proposed management flow of the MALF plus a core allocation of 10% of the MALF occurs at Mangatainoka at Larsens Rd

Flow statistic	MALF + 10% of MALF	Flow	0.429										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1984	0.0	0.0	0.0	0.0	0.0	0.0	4.3	10.3	13.4	19.4	11.6	0.0	58.9
1985	0.0	0.0	2.4	0.0	0.0	2.6	0.0	7	0.0	0.0	0.0	0.0	12
1986	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	4.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	7.5	0.0	0.0	0.0	7.7
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	14.9	0.0	0.0	0.0	41.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.6	0.0	0.0	0.0	0.0	5.1
1995	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0	0.0	0.0	0.0	0.0	3.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.9	19.7	4.4	0.0	0.0	0.0	31.5
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	0.0	0.0	0.0	12.2
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	16.1	0.0	0.0	0.0	16.5
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	13.6	13.5	1.7	0.0	34.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	0.0	0.6	0.0	0.0	14.3
2005	0.0	0.0	3.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	4.7
TOTAL	0.0	0.0	6.3	0.0	0.0	3.4	20.3	73.7	82.1	48	13.3	0.0	247.2
Average	0.0	0.0	0.3	0.0	0.0	0.2	0.9	3.4	3.7	2.2	0.6	0.0	11.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	3.9	0.0	0.0	2.6	6.9	19.7	16.1	19.4	11.6	0.0	58.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	6.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	3.1	0.0	0.0	0.0	12.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	1.2	6.8	11.3	0.4	0.0	0.0	16.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	4.2	12.1	13.6	12.2	0.0	0.0	34.4
Percentile 100%	0.0	0.0	3.9	0.0	0.0	2.6	6.9	19.7	16.1	19.4	11.6	0.0	58.9

Table 17: Number of days that a proposed management flow of the MALF plus a core allocation of 15% of the MALF occurs at Mangatainoka at Larsens Rd

Flow statistic	MALF + 15% of MALF	Flow	0.449										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1984	0.0	0.0	0.0	0.0	0.6	0	5.6	11.9	14.6	19.4	12.5	0.0	64.6
1985	0.0	0.0	2.5	0.0	0.0	2.7	0.0	7.8	0.0	0.0	0.0	0.0	13
1986	0.0	0.0	0.0	0.0	0.0	0.0	6	0.0	0.0	0.0	0.0	0.0	6
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	8	0.0	0.0	0.0	10.1
1989	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.0	0.0	3
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.9	16.2	14.6	0.0	0.0	46.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	2.4	5.6	1.2	0.0	0.0	0.0	9.3
1995	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	4.2
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	8.9	20.1	5.4	1.5	0.0	0.0	35.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	0.0	0.0	0.0	14.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	17.3	0.0	0.0	0.0	19.3
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7	15.4	14.7	1.7	0.0	38.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.2	14.9	0.0	1.2	0.0	0.0	16.3
2005	0.0	0.0	5.7	0.0	0.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	7.7
TOTAL	0.0	1.8	8.3	0.0	1.4	3.9	27.3	88.2	92.7	51.4	15.1	0.0	290
Average	0.0	0.1	0.4	0.0	0.1	0.2	1.2	4.0	4.2	2.3	0.7	0.0	13.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	1.8	5.7	0.0	0.9	2.7	8.9	20.1	17.3	19.4	12.5	0.0	64.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.2	0.0	0.0	9.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	4.1	0.0	0.0	13.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	7.6	12.9	1.0	0.0	18.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	14.6	15.3	13.3	0.8	38.4
Percentile 100%	0.0	1.8	5.7	0.0	0.9	2.7	8.9	20.1	17.3	19.4	12.5	0.0	64.6

Table 18: Number of days that a proposed management flow of the MALF plus a core allocation of 20% of the MALF occurs at Mangatainoka at Larsens Rd

Flow statistic	MALF + 20% of MALF	Flow	0.468										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1984	0.0	0.0	0.0	0.0	1.5	0.2	6.6	12.4	15.9	19.4	13.3	0.0	69.4
1985	0.0	0.0	3	0.0	0.0	2.9	0.0	8.1	0.0	0.0	0	0.0	14.1
1986	0.0	0.0	0.0	0.0	0.0	0.3	6.3	0.0	0.0	0.0	0	0.0	6.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	8.6	0.0	0.0	0.0	12.2
1989	0.0	5.1	0.0	0.0	0.0	0.0	0.0	1.1	0.8	0.0	0.0	0.0	6.9
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	17.5	15	0.0	0.0	50.3
1994	0.0	0.0	0.0	0.0	0.0	0.8	4.1	7.8	2.3	0.0	0.0	0.0	15
1995	0.0	0.0	0.0	0.0	0.0	4.6	0.4	0.0	0.0	0.0	0.0	0.0	5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	10.6	20.5	7.1	2	0.0	0.0	40.3
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	16.1	0.0	0.0	0.0	16.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	18.2	0.0	0.4	0.0	21
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	16.4	15.7	1.8	0.0	42.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	1.2	15.8	0.0	2	0.0	0.0	19
2005	0.0	0.0	7	0.0	3.3	1.4	0.0	0.0	0.0	0.0	0.0	0.0	11.6
TOTAL	0.0	5.1	10	0.0	4.8	5.6	33.5	98.7	102.9	54.2	17.4	0.0	332.2
Average	0.0	0.2	0.5	0.0	0.2	0.3	1.5	4.5	4.7	2.5	0.8	0.0	15.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	5.1	7.0	0.0	3.3	2.9	10.6	20.5	18.2	19.4	13.3	0.0	69.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	9.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.5	0.0	0.0	0.0	13.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	5.7	0.0	0.0	0.0	16.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.2	3.5	8.5	14.4	1.6	0.0	0.0	20.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.8	6.1	15.5	16.4	13.7	1.7	0.0	42.2
Percentile 100%	0.0	5.1	7.0	0.0	3.3	2.9	10.6	20.5	18.2	19.4	13.3	0.0	69.4

Table 19: Number of days that a proposed management flow of the MALF plus a core allocation of 25% of the MALF occurs at Mangatainoka at Larsens Rd

Flow statistic	MALF + 25% of MALF	Flow	0.488										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1984	0.0	0.0	0.0	0.0	2.8	0.4	6.9	13.4	17.3	19.4	13.9	0.0	74.2
1985	0.0	0.0	3.3	0.0	0.0	3.5	0.0	9.3	0	0.4	0.0	0.0	16.6
1986	0.0	0.0	0.0	0.0	0.0	1.3	7.5	0.0	0.0	0.0	0.0	0.0	8.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	2.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9	0.0	0.0	0.0	13.8
1989	0.0	8.4	0.0	0.0	0.0	0.0	0.0	1.8	1.1	0.0	0.0	0.0	11.4
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5	18.8	15.4	0.0	0.0	53.8
1994	0.0	0.0	0.0	0.0	0.0	1.5	5.1	8.1	3.9	0.0	0.0	0.0	18.6
1995	0.0	0.0	0.0	0.0	0.0	0.0	6	0.8	0.0	0.0	0.0	0.0	6.8
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	12.1	21	8	2.5	0.0	0.0	43.7
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	16.4	0.0	0.0	0.0	16.9
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	19.3	0.2	2.1	0.0	25.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0	0.0	1.3
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	18.3	17	2.1	0.0	47.5
2003	0.0	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
2004	0.0	0.0	0.0	0.0	0.0	0.0	1.4	16.3	0.0	2.3	0.0	0.0	20
2005	0.0	0.0	8	0.0	3.7	1.5	0.0	0.0	0.0	0.0	0.0	0.0	13.2
TOTAL	0.0	9.4	11.3	0.0	6.6	8.1	38.9	109.1	112.7	58.6	21.1	0.0	375.9
Average	0.0	0.4	0.5	0.0	0.3	0.4	1.8	5.0	5.1	2.7	1.0	0.0	17.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	8.4	8.0	0.0	3.7	3.5	12.1	21.0	19.3	19.4	13.9	0.0	74.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	12.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.8	0.0	0.0	0.0	15.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	6.8	0.3	0.0	0.0	18.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.3	4.4	9.9	14.9	2.1	0.0	0.0	24.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.5	6.8	16.0	18.2	14.1	2.1	0.0	47.1
Percentile 100%	0.0	8.4	8.0	0.0	3.7	3.5	12.1	21.0	19.3	19.4	13.9	0.0	74.2

Table 20: Number of days that a proposed management flow of the MALF plus a core allocation of 30% of the MALF occurs at Mangatainoka at Larsens Rd

Flow statistic	MALF + 30% of MALF	Flow	0.507										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1984	0.0	0.0	0.0	0.0	3.2	0.5	7.5	13.7	17.9	19.4	14.6	0.0	76.8
1985	0.0	0.0	3.8	0.0	0.0	3.9	0.0	9.9	0.0	0.6	0	0.0	18.1
1986	0.0	0.0	0.0	0.0	0.0	2.9	7.9	0.0	0.0	0.0	0.0	0.0	10.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	3.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	9.7	0.0	0.0	0.0	14.8
1989	0.0	10.6	0.0	0.0	0.0	0.0	0.0	2.9	1.8	0.0	0.0	0.0	15.2
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4	19.7	15.7	0.8	0.0	58.6
1994	0.0	0.0	0.0	0.0	0.0	2.1	6.5	8.9	4.7	0.0	0.0	0.0	22.1
1995	0.0	0.0	0.0	0.0	0.0	0.0	7	1.3	0.0	0.0	0.0	0.0	8.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	13.1	21.3	9.2	2.9	0.0	0.0	46.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	16.6	0.0	0.8	0.0	18.3
2000	0.0	0.0	0.0	0.0	0.0	0.1	0.0	4.2	19.9	1.3	2.2	0.0	27.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	2.7
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	19	17.7	3	0.0	51.3
2003	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
2004	0.0	0.0	0.0	0.0	0.0	0.0	2.3	17	0.0	3.1	0.0	0.0	22.3
2005	0.0	0.0	8.8	0.0	5.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0	16.1
TOTAL	0.0	12.1	12.6	0.0	8.6	11.2	44.3	119.2	121.2	63.4	25.4	0.0	417.9
Average	0.0	0.6	0.6	0.0	0.4	0.5	2.0	5.4	5.5	2.9	1.2	0.0	19.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	10.6	8.8	0.0	5.5	3.9	13.1	22.4	19.9	19.4	14.6	0.0	76.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.3	0.0	0.0	0.0	15.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	2.0	0.0	0.0	0.0	17.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	7.9	1.1	0.0	0.0	21.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.4	5.7	11.3	15.2	2.9	0.8	0.0	26.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	2.1	7.5	16.7	18.9	14.4	2.9	0.0	50.8
Percentile 100%	0.0	10.6	8.8	0.0	5.5	3.9	13.1	22.4	19.9	19.4	14.6	0.0	76.8

**Middle Mangatainoka – Mana 8b, Lower Mangatainoka – Mana 8c and
Mangaramarama – Mana 8e**

Table 21: Number of days that the MALF occurs at Mangatainoka at Pahiatua Town Bridge

Flow Statistic	MALF	Flow	1.6												
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		TOTAL	
1954	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.3	0.0	0.0	0.0	0.0	0.0	4.9	
1955	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1956	0.0	0.0	0.0	0.0	2.5	4.5	2.1	13.0	8.4	7.9	0.0	0.0	0.0	38.4	
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1958	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1962	0.0	0.0	0.0	0.0	0.0	0.0	11.1	14.7	0.0	0.0	0.0	0.0	0.0	25.8	
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	8.7	0.0	0.0	0.0	15.3	
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3	
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.7	15.8	0.9	0.0	0.0	0.0	35.3	
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	7.7	0.0	0.0	0.0	0.0	26.5	
1972	0.0	0.0	0.0	0.0	3.0	9.3	21.5	16.9	10.4	14.2	0.0	0.0	0.0	75.2	
1973	0.0	0.0	0.0	0.0	0.0	5.4	7.6	12.3	2.4	7.5	0.0	0.0	0.0	35.2	
1974	0.0	0.0	0.0	0.0	0.0	0.9	21.8	24.5	4.7	0.0	0.0	0.0	0.0	52.0	
1975	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	1.2	0.0	0.0	0.0	6.7	
1977	0.0	0.0	0.0	0.0	0.0	0.0	9.4	27.8	25.1	16.7	0.0	0.0	0.0	79.0	
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.6	4.7	0.0	0.0	0.0	11.7	
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.2	10.3	7.1	0.0	0.0	37.6	
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	5.3	5.9	0.0	0.0	0.0	13.4	
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	16.8	20.4	12.0	0.0	0.0	57.2	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.3	
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0	9.7	
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	9.7	
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.4	22.1	17.0	0.1	0.0	0.0	56.6	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	3.3	0.0	0.0	0.0	0.0	12.5	
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	4.3	
1998	0.0	0.0	0.0	0.0	0.0	0.0	2.1	20.5	3.8	4.4	0.0	0.0	0.0	30.9	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	9.4	
2000	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	7.9	0.0	0.0	0.0	0.0	8.4	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	21.4	18.9	6.8	0.0	60.9	
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.4	
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	0.0	5.5	23.8	90.6	234.8	207.7	138.8	25.9	0.0	0.0	727.2	
Average	0.0	0.0	0.0	0.0	0.1	0.5	1.7	4.5	4.0	2.7	0.5	0.0	0.0	14.0	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	0.0	3.0	9.3	21.8	27.8	25.1	20.4	12.0	0.0	0.0	79.0	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Flow Statistic	MALF	Flow	1.6											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	7.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.7	0.0	0.0	0.0	0.0	12.3
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	11.8	7.9	4.6	0.0	0.0	0.0	30.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.4	7.1	17.4	10.4	10.1	0.0	0.0	0.0	50.6
Percentile 100%	0.0	0.0	0.0	0.0	3.0	9.3	21.8	27.8	25.1	20.4	12.0	0.0	0.0	79.0

Table 22: Number of days that a proposed management flow of the MALF plus a core allocation of 10% of the MALF occurs at Mangatainoka at Pahiatua Town Bridge

Flow Statistic	MALF + 10% of MALF	Flow	1.738										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1954	0.0	0.0	0.0	0.0	0.0	0.0	10.1	4.3	0.0	4.6	0.0	0.0	19.1
1955	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1956	0.0	0.0	0.0	0.0	3.2	5.8	2.3	14.0	10.6	8.6	0.0	0.0	44.6
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.1	0.0	0.0	0.0	0.0	1.8
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	13.0	16.0	1.6	0.0	0.0	0.0	30.6
1963	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	4.3
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	9.0	0.0	0.0	17.7
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	1.2	0.0	0.0	10.5
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.1	16.2	3.5	0.5	0.0	41.4
1970	0.0	0.0	0.0	0.0	0.0	0.1	3.3	0.0	0.0	0.0	0.0	0.0	3.4
1971	0.0	0.0	0.0	0.0	0.0	0.0	2.3	20.4	8.0	0.0	0.0	0.0	30.7
1972	0.0	0.0	0.0	0.0	3.9	11.6	22.3	18.8	11.9	16.2	0.0	0.0	84.6
1973	0.0	0.0	0.0	0.1	0.0	9.2	11.5	14.2	6.0	8.9	0.0	0.0	49.9
1974	0.0	0.0	0.0	0.0	0.0	3.7	23.4	25.0	8.0	0.0	0.0	0.0	60.2
1975	0.0	0.0	0.0	0.0	0.3	6.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	2.1	0.0	0.0	9.3
1977	0.0	0.0	0.0	0.0	0.0	0.0	10.9	28.0	25.9	16.7	0.8	0.0	82.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	2.1
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	1.8	6.2	8.4	6.4	0.0	0.0	22.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	14.4	10.9	7.6	0.0	43.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	7.9	2.0	5.7	7.9	0.0	0.0	23.5
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	18.4	20.5	13.0	0.0	62.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.2
1986	0.0	0.0	0.0	0.0	0.0	1.2	12.1	0.0	0.0	0.0	0.0	0.0	13.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.5
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	10.5	0.0	0.0	12.9
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	23.4	17.6	2.1	0.0	61.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	1.3	10.6	4.0	0.0	0.0	0.0	15.9
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	0.0	7.6
1998	0.0	0.0	0.0	0.0	0.0	0.0	3.6	21.4	6.4	5.2	0.0	0.0	36.5
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	0.0	0.0	0.0	13.1
2000	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	8.9	0.0	0.0	0.0	10.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9	22.4	22.2	9.0	0.0	70.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.2	0.0	4.8
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.1	7.4	43.7	129.1	275.9	256.9	161.6	33.0	0.0	907.7
Average	0.0	0.0	0.0	0.0	0.1	0.8	2.5	5.3	4.9	3.1	0.6	0.0	17.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.1	3.9	11.6	23.4	28.0	25.9	22.2	13.0	0.0	84.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6

Flow Statistic	MALF + 10% of MALF	Flow	1.738											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.0	0.0	0.0	0.0	0.0	12.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.5	7.9	0.9	0.0	0.0	0.0	18.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.3	13.3	9.3	6.2	0.0	0.0	0.0	35.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	3.5	10.8	18.8	14.3	10.7	0.4	0.0	0.0	59.2
Percentile 100%	0.0	0.0	0.0	0.1	3.9	11.6	23.4	28.0	25.9	22.2	13.0	0.0	0.0	84.6

Table 23: Number of days that a proposed management flow of the MALF plus a core allocation of 15% of the MALF occurs at Mangatainoka at Pahiatua Town Bridge

Flow Statistic	MALF	+ 15% of MALF	Flow	1.817									
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1954	0.0	0.0	0.0	0.0	0.0	0.0	15.0	5.2	1.4	6.0	0.0	0.0	27.7
1955	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
1956	0.0	0.0	0.0	0.0	4.9	6.5	2.5	16.2	11.4	9.7	0.0	0.0	51.1
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.8	0.0	0.0	0.0	0.0	4.8
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	13.8	16.2	2.8	0.0	0.0	0.0	32.8
1963	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	6.9
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	9.1	0.0	0.0	18.1
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	2.3	0.0	0.0	14.5
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.1	16.4	4.6	0.7	0.0	43.8
1970	0.0	0.0	0.0	0.0	0.0	0.7	3.3	0.0	0.0	0.0	0.0	0.0	4.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	3.1	21.4	8.1	0.0	0.0	0.0	32.6
1972	0.0	0.0	0.0	0.0	6.2	12.4	22.7	19.8	12.9	16.9	0.0	0.0	90.8
1973	0.0	0.0	0.0	0.8	0.0	10.0	13.2	16.1	8.5	8.9	0.0	0.0	57.5
1974	0.0	0.0	0.0	0.0	0.0	5.2	24.0	25.3	9.0	0.0	0.0	0.0	63.5
1975	0.0	0.0	0.0	0.0	0.9	7.1	0.0	0.0	0.0	0.0	0.0	0.0	8.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	2.5	0.0	0.0	11.2
1977	0.0	0.0	0.0	0.0	0.0	0.0	11.7	28.0	26.2	16.7	2.4	0.0	85.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	2.6
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.2	9.4	6.9	0.0	0.0	25.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	15.2	11.3	7.8	0.0	46.1
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	11.1	2.6	5.8	8.7	0.0	0.0	28.2
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	19.4	20.5	14.1	0.0	65.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	4.6
1986	0.0	0.0	0.0	0.0	0.0	2.4	12.8	0.0	0.0	0.0	0.0	0.0	15.2
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	4.3
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	12.6	0.0	0.0	0.0	16.7
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.7	23.8	18.2	2.5	0.0	65.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	3.3	12.3	4.6	0.0	0.0	0.0	20.2
1995	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.8	0.0	0.0	0.0	10.8
1998	0.0	0.0	0.0	0.0	0.0	0.0	3.8	21.5	7.4	5.5	0.0	0.0	38.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	14.9	0.0	0.0	16.6
2000	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	10.3	0.0	0.0	0.0	13.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.7	22.9	22.9	9.7	0.0	73.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.8	0.0	6.2
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.8	11.9	54.1	151.2	297.8	283.9	171.3	37.1	0.0	1008.1
Average	0.0	0.0	0.0	0.0	0.2	1.0	2.9	5.7	5.5	3.3	0.7	0.0	19.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.8	6.2	12.4	24.0	28.0	26.2	22.9	14.1	0.0	90.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1

Flow Statistic	MALF + 15% of MALF	Flow	1.817										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3	0.0	0.0	0.0	14.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.3	8.9	1.8	0.0	0.0	23.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.3	15.3	11.3	6.7	0.0	0.0	37.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	5.0	12.7	20.6	15.2	11.1	0.6	0.0	62.9
Percentile 100%	0.0	0.0	0.0	0.8	6.2	12.4	24.0	28.0	26.2	22.9	14.1	0.0	90.8

Table 24: Number of days that a proposed management flow of the MALF plus a core allocation of 20% of the MALF occurs at Mangatainoka at Pahiatua Town Bridge

Flow Statistic	MALF + 20% of MALF	Flow	1.896										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1954	0.0	0.0	0.0	0.0	0.0	0.0	18.7	6.6	1.5	7.4	0.0	0.0	34.2
1955	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	1.3	0.6	0.0	0.0	4.0
1956	0.0	0.0	0.0	0.0	6.2	7.3	2.6	18.1	12.0	10.3	0.0	0.0	56.6
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958	0.0	0.0	0.0	1.0	0.0	0.0	4.1	2.3	0.0	0.0	0.0	0.0	7.5
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	14.6	16.3	3.8	0.0	1.2	0.0	35.8
1963	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	8.8
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.9
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	9.1	0.0	0.0	18.6
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	13.9	3.1	0.0	0.5	18.5
1969	0.0	0.0	0.0	0.0	1.7	0.0	0.0	22.9	16.6	5.3	0.8	0.0	47.3
1970	0.0	0.0	0.0	0.0	0.0	1.2	3.4	0.0	0.0	0.0	0.0	0.0	4.6
1971	0.0	0.0	0.0	0.0	0.0	0.0	3.9	22.6	8.3	0.0	0.0	0.0	34.7
1972	0.0	0.0	0.0	0.0	8.2	13.7	23.0	20.4	13.8	17.5	0.0	0.0	96.6
1973	0.0	0.0	0.0	1.6	0.0	10.9	14.3	17.1	10.8	8.9	0.0	0.0	63.5
1974	0.0	0.0	0.0	0.0	0.0	7.6	24.6	25.5	10.0	0.0	0.0	0.0	67.6
1975	0.0	0.0	0.0	0.0	1.6	8.1	0.0	0.0	0.0	0.0	0.0	0.0	9.8
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	9.8	2.7	0.0	13.2
1977	0.0	0.0	0.0	0.0	0.0	0.0	13.3	28.0	26.6	16.7	2.9	0.0	87.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	4.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	3.3	6.2	10.9	7.4	0.0	0.0	27.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	15.8	11.7	7.9	0.0	48.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	3.2	5.8	9.3	0.0	30.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	20.2	20.8	15.5	0.0	69.3
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0
1986	0.0	0.0	0.0	0.0	0.0	2.9	13.3	0.0	0.0	0.0	0.0	0.0	16.2
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	12.6	0.0	0.0	0.0	18.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.6	24.0	19.2	2.5	0.0	68.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	3.3	12.5	4.9	0.0	0.0	0.0	20.7
1995	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	2.8
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0	0.0	12.3
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.3	21.8	8.1	5.6	0.0	0.0	39.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	15.9	0.0	0.0	0.0	18.4
2000	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	11.4	0.0	0.0	0.0	15.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.4	23.3	23.4	10.2	0.0	75.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	2.2	0.0	8.2
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	2.6	17.8	64.0	167.5	316.0	308.0	181.4	41.0	0.5	1098.7
Average	0.0	0.0	0.0	0.1	0.3	1.2	3.2	6.1	5.9	3.5	0.8	0.0	21.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	1.6	8.2	13.7	24.6	28.0	26.6	23.4	15.5	0.5	96.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9

Flow Statistic	MALF + 20% of MALF	Flow	1.896										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	9.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	5.4	0.0	0.0	0.0	17.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.6	6.2	9.9	2.6	0.0	0.0	25.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.8	15.6	12.2	7.4	0.0	0.0	39.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	6.9	13.3	21.7	15.9	11.6	1.2	0.0	67.2
Percentile 100%	0.0	0.0	0.0	1.6	8.2	13.7	24.6	28.0	26.6	23.4	15.5	0.5	96.6

Table 25: Number of days that a proposed management flow of the MALF plus a core allocation of 25% of the MALF occurs at Mangatainoka at Pahiatua Town Bridge

Flow Statistic	MALF + 25% of MALF	Flow	1.975										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1954	0.0	0.0	0.0	0.0	0.6	0.0	20.8	8.0	1.6	9.5	0.0	0.0	40.4
1955	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.0	3.2	2.6	0.0	0.0	9.2
1956	0.0	0.0	0.0	0.0	7.4	8.7	2.8	20.4	12.7	10.8	0.0	0.0	62.8
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	1.5
1958	0.0	0.0	0.0	2.7	3.1	0.9	4.9	4.9	0.0	0.0	0.0	0.0	16.6
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	15.3	16.4	4.5	0.8	2.4	0.0	39.3
1963	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	10.5
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	8.4	0.0	0.0	0.0	8.6
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	2.6
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	9.2	0.0	0.0	19.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	15.3	3.7	0.0	2.1	22.5
1969	0.0	0.0	0.0	2.8	0.0	0.0	23.5	16.7	6.0	0.9	0.0	0.0	49.9
1970	0.0	0.0	0.0	0.0	0.0	1.7	3.4	0.0	0.0	0.0	0.0	0.0	5.1
1971	0.0	0.0	0.0	0.0	0.0	0.0	4.6	23.0	8.3	0.0	0.0	0.0	36.0
1972	0.0	0.0	0.0	0.0	8.8	14.8	23.3	20.8	14.5	18.2	0.0	0.0	100.5
1973	0.0	0.0	0.0	2.1	0.0	11.8	15.2	18.0	13.0	9.5	0.0	0.0	69.7
1974	0.0	0.0	0.0	0.0	0.0	10.2	25.1	25.6	11.0	0.0	0.0	0.0	71.8
1975	0.0	0.0	0.0	0.3	2.8	9.1	0.0	0.0	0.0	0.0	0.0	0.0	12.1
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	11.1	2.9	0.0	0.0	15.8
1977	0.0	0.0	0.0	0.0	0.0	0.0	14.9	28.0	26.9	16.7	3.3	0.0	89.8
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	4.8
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.0	12.7	7.9	0.0	0.0	31.3
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	16.4	12.1	8.1	0.0	49.9
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
1983	0.0	0.0	0.0	0.0	0.0	0.0	12.9	5.1	5.8	9.9	0.0	0.0	33.8
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.5	13.3	21.3	21.8	16.8	0.0	73.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	5.6
1986	0.0	0.0	0.0	0.0	0.0	3.8	13.8	0.0	0.0	0.0	0.0	0.0	17.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	5.3
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	12.6	0.0	0.0	0.0	19.1
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.2	24.2	20.2	3.6	0.0	72.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	3.4	12.8	5.6	0.0	0.0	0.0	21.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.7	0.0	0.0	0.0	13.7
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.4	22.0	9.2	5.8	0.0	0.0	41.3
1999	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	16.7	0.0	0.0	0.0	19.9
2000	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	14.3	1.6	0.0	0.0	19.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	23.6	23.8	10.7	0.0	77.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	2.6	0.0	0.0	9.1
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	5.1	25.6	75.9	179.5	338.2	336.0	195.3	45.7	2.1	1203.4
Average	0.0	0.0	0.0	0.1	0.5	1.5	3.5	6.5	6.5	3.8	0.9	0.0	23.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	2.7	8.8	14.8	25.1	28.0	26.9	23.8	16.8	2.1	100.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8

Flow Statistic	MALF + 25% of MALF	Flow	1.975										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.1	0.0	0.0	0.0	12.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	7.3	0.0	0.0	0.0	19.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.1	6.9	11.1	2.8	0.0	0.0	28.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.2	4.3	15.8	13.6	8.9	0.0	0.0	41.1
Percentile 90%	0.0	0.0	0.0	0.0	0.5	8.2	14.8	21.9	16.7	12.0	2.3	0.0	71.6
Percentile 100%	0.0	0.0	0.0	2.7	8.8	14.8	25.1	28.0	26.9	23.8	16.8	2.1	100.5

Table 26: Number of days that a proposed management flow of the MALF plus a core allocation of 30% of the MALF occurs at Mangatainoka at Pahiatua Town Bridge

Flow Statistic	MALF + 30% of MALF	Flow	2.054										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1954	0.0	0.0	0.0	0.2	1.8	0.0	22.8	9.9	1.6	11.4	0.0	0.0	47.7
1955	0.0	0.0	0.0	0.0	0.0	0.0	6.9	2.0	4.4	4.2	0.5	0.0	18.1
1956	0.0	0.0	0.0	0.0	8.3	9.9	3.6	21.9	13.3	11.1	0.0	0.0	68.2
1957	0.0	0.0	0.0	0.0	0.2	0.0	0.0	3.8	0.0	0.0	0.0	0.0	4.0
1958	0.0	0.0	0.0	4.5	6.2	2.3	5.6	6.8	1.2	0.0	0.0	0.0	26.6
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	16.0	16.5	5.2	3.3	2.5	0.0	43.4
1963	0.0	0.0	0.0	1.1	0.0	12.3	0.0	0.2	0.0	0.0	0.0	0.0	13.6
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	10.9	0.0	0.0	0.0	13.4
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	4.7
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	9.2	0.0	0.0	19.4
1968	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	16.5	4.5	0.0	3.1	26.1
1969	0.0	0.0	0.0	0.0	3.8	0.2	0.0	24.2	16.8	6.7	0.9	0.0	52.5
1970	0.0	0.0	0.0	0.0	0.0	2.0	3.4	0.0	0.0	0.0	0.0	0.0	5.4
1971	0.0	0.0	0.0	0.0	0.0	0.0	5.3	23.4	8.4	0.0	0.0	0.0	37.1
1972	0.0	0.0	0.0	0.0	9.2	15.6	23.6	21.1	15.2	18.8	0.0	0.0	103.6
1973	0.0	0.0	0.0	2.5	0.0	12.6	16.2	18.8	14.4	10.3	0.0	0.0	74.7
1974	0.0	0.0	0.0	0.0	0.0	12.8	25.6	25.7	11.7	0.0	0.0	0.0	75.7
1975	0.0	0.0	0.0	0.8	3.6	10.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	12.6	3.0	0.0	0.0	18.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	17.1	28.0	27.0	16.7	3.6	0.0	92.4
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	5.5
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.1	15.2	8.3	0.0	0.0	35.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	1.2	13.9	18.5	13.4	8.2	0.0	55.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	13.5	6.3	5.8	10.4	0.0	0.0	36.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	2.3	14.2	22.3	22.2	17.2	0.0	78.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	5.7
1986	0.0	0.0	0.0	0.0	0.0	4.3	14.4	0.0	0.0	0.0	0.0	0.0	18.7
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.3	0.0	0.0	0.0	0.0	6.2
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.3	12.6	0.0	0.0	0.0	20.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.4	25.1	24.5	20.7	4.0	0.0	74.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	4.3	13.1	7.5	0.0	0.8	0.0	25.7
1995	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.7	0.0	0.0	0.0	0.0	4.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	0.0	0.0	0.0	15.5
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.9	22.1	10.4	5.9	0.0	0.0	45.4
1999	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.3	17.0	0.0	0.0	0.0	21.0
2000	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.4	14.8	2.6	1.7	0.0	23.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.5	23.8	24.2	11.1	0.0	79.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	1.5	3.2	0.0	12.8
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	9.1	33.2	88.8	204.1	361.2	366.3	210.6	50.5	3.1	1327.0
Average	0.0	0.0	0.0	0.2	0.6	1.7	3.9	6.9	7.0	4.1	1.0	0.1	25.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	4.5	9.2	15.6	25.6	28.0	27.0	24.2	17.2	3.1	103.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	8.8

Flow Statistic	MALF + 30% of MALF	Flow	2.054										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.1	0.0	0.0	0.0	16.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.1	5.6	8.0	0.4	0.0	0.0	20.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.6	8.1	12.3	3.9	0.0	0.0	33.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	1.6	5.5	16.0	15.1	9.0	0.0	0.0	47.2
Percentile 90%	0.0	0.0	0.0	0.0	1.6	9.3	15.8	22.1	17.0	13.2	2.4	0.0	74.7
Percentile 100%	0.0	0.0	0.0	4.5	9.2	15.6	25.6	28.0	27.0	24.2	17.2	3.1	103.6

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Table 27: Numbers of days that the MALF occurs at Makakahi at Hamua

Flow statistic	MALF	Flow	0.350										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.0	11.3	7.4	0.0	0.0	32.6
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	10.1	0.0	0.0	0.0	10.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	11.5	5.1	4.4	0.0	0.0	0.0	20.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	20.9	20.3	6.7	0.0	58.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	2.8	13.8	1.4	0.0	0.0	0.0	0.0	18.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	2.3	5.6	0.0	0.0	0.0	0.0	7.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	13.2	0.0	0.0	0.0	18.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	22.5	17.0	1.3	0.0	56.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	4.3	10.2	2.1	0.0	0.0	0.0	16.6
1995	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	11.5	0.0	0.0	0.0	12.5
1998	0.0	0.0	0.0	0.0	0.0	0.0	1.8	17.4	2.0	5.5	0.0	0.0	26.7
1999	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	8.4	0.0	0.0	0.0	10.3
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.1	0.0	0.0	9.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	19.2	15.7	9.4	0.0	59.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	4.1	0.0	0.0	0.0	15.6
TOTAL	0.0	0.0	0.0	0.0	0.0	2.8	44.6	108.0	139.2	66.0	17.4	0.0	378.0
Average	0.0	0.0	0.0	0.0	0.0	0.1	1.8	4.3	5.6	2.6	0.7	0.0	15.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	2.8	13.8	17.4	22.5	20.3	9.4	0.0	59.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.0	0.0	0.0	0.0	10.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.2	0.0	0.0	0.0	13.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.4	5.6	9.0	0.0	0.0	0.0	17.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.7	10.1	11.3	1.2	0.0	0.0	22.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	4.6	13.8	16.8	12.4	0.8	0.0	46.8
Percentile 100%	0.0	0.0	0.0	0.0	0.0	2.8	13.8	17.4	22.5	20.3	9.4	0.0	59.6

Table 28: Number of days that a proposed management flow of the MALF plus a core allocation of 10% of the MALF occurs at Makakahi at Hamua

Flow statistic	MALF + 10% of MALF	Flow	0.385										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	5.3	11.5	16.9	7.5	0.0	0.0	41.2
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	16.1	0.0	0.0	0.0	19.4
1983	0.0	0.0	0.0	0.0	0.0	0.0	12.6	6.4	5.7	0.0	0.0	0.0	24.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.6	11.2	22.3	21.4	8.8	0.0	65.2
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	3.6	14.3	2.1	0.0	0.0	0.0	0.0	20.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	3.3	5.7	0.0	0.0	0.0	0.0	9.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	14.9	0.0	0.0	0.0	22.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9	23.2	18.5	2.4	0.0	60.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	5.3	10.8	2.8	0.0	0.0	0.0	18.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0	0.0	7.6
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	13.8	0.0	0.0	0.0	15.4
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.5	18.9	3.4	6.2	0.0	0.0	32.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	9.7	0.0	0.0	0.0	11.7
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	1.4	0.0	0.0	14.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1	20.9	18.3	11.1	0.0	67.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.2	5.3	0.0	0.0	0.0	18.5
TOTAL	0.0	0.0	0.0	0.0	0.0	3.6	56.5	125.8	168.1	73.2	22.3	0.0	449.6
Average	0.0	0.0	0.0	0.0	0.0	0.1	2.3	5.0	6.7	2.9	0.9	0.0	18.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	3.6	14.3	18.9	23.2	21.4	11.1	0.0	67.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.8	0.0	0.0	14.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	5.5	0.0	0.0	0.0	18.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.0	7.0	12.0	0.0	0.0	0.0	19.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	4.7	11.3	15.1	2.4	0.0	0.0	26.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	6.7	15.4	19.3	14.0	1.4	0.0	53.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	3.6	14.3	18.9	23.2	21.4	11.1	0.0	67.3

Table 29: Number of days that a proposed management flow of the MALF plus a core allocation of 15% of the MALF occurs at Makakahi at Hamua

Flow statistic	MALF + 15% of MALF	Flow	0.403										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	5.9	12.3	18.3	7.5	0.0	0.0	44.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	16.8	0.0	0.0	0.0	20.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	13.9	6.7	6.2	0.0	0.0	0.0	26.8
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.3	11.6	22.8	21.9	9.8	0.0	69.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	4.8	14.6	2.5	0.0	0.0	0.0	0.0	21.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	3.9	5.7	0.0	0.0	0.0	0.0	9.7
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	15.4	0.0	0.0	0.0	22.9
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.9	24.0	19.1	2.5	0.0	63.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	6.6	12.4	3.3	0.0	0.0	0.0	22.3
1995	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	9.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	14.2	0.0	0.0	0.0	16.3
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.0	19.7	5.2	6.2	0.0	0.0	37.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	11.8	0.0	0.0	0.0	14.2
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	1.8	0.0	0.0	16.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	21.3	20.0	11.7	0.0	70.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.7	6.2	0.0	0.0	0.0	19.9
TOTAL	0.0	0.0	0.0	0.0	0.0	4.8	65.7	133.6	181.1	76.6	24.1	0.0	485.8
Average	0.0	0.0	0.0	0.0	0.0	0.2	2.6	5.3	7.2	3.1	1.0	0.0	19.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	4.8	14.6	19.7	24.0	21.9	11.7	0.0	70.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	3.3	0.0	0.0	16.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	6.2	0.0	0.0	20.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7.3	13.7	0.0	0.0	0.0	22.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	5.9	12.3	15.7	2.7	0.0	0.0	28.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	8.1	16.0	20.1	14.5	1.5	0.0	55.7
Percentile 100%	0.0	0.0	0.0	0.0	0.0	4.8	14.6	19.7	24.0	21.9	11.7	0.0	70.6

Table 30: Number of days that a proposed management flow of the MALF plus a core allocation of 20% of the MALF occurs at Makakahi at Hamua

Flow statistic	MALF + 20% of MALF	Flow	0.420										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	7.0	12.8	19.2	7.5	0.0	0.0	46.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	17.3	0.0	0.0	0.0	21.6
1983	0.0	0.0	0.0	0.0	0.0	0.0	15.7	6.9	6.6	0.1	0.0	0.0	29.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.9	13.3	23.1	22.2	10.7	0.0	73.2
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	6.6	15.0	3.4	0.0	0.0	0.0	0.0	25.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	4.1	5.8	0.0	0.0	0.0	0.0	9.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	0.0	24.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.4	24.5	19.8	2.6	0.0	66.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	7.6	13.4	3.6	0.0	0.0	0.0	24.7
1995	0.0	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	9.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	16.2	0.0	0.0	0.0	18.7
1998	0.0	0.0	0.0	0.0	0.0	0.0	7.1	20.5	5.8	6.3	0.0	0.0	39.7
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	12.4	0.0	0.0	0.0	15.2
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	2.3	1.4	0.0	19.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	21.6	20.5	12.0	0.0	72.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	6.7	0.0	0.0	0.0	21.6
TOTAL	0.0	0.0	0.0	0.0	0.0	6.6	72.8	143.6	190.5	78.8	26.7	0.0	519.0
Average	0.0	0.0	0.0	0.0	0.0	0.3	2.9	5.7	7.6	3.1	1.1	0.0	20.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	6.6	15.7	20.5	24.5	22.2	12.0	0.0	73.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.6	0.0	0.0	18.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	6.6	0.0	0.0	21.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.7	7.9	14.8	0.0	0.0	0.0	24.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	7.0	13.3	16.5	3.1	0.0	0.0	31.5
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	8.7	16.9	20.6	14.9	2.1	0.0	58.4
Percentile 100%	0.0	0.0	0.0	0.0	0.0	6.6	15.7	20.5	24.5	22.2	12.0	0.0	73.2

Table 31: Number of days that a proposed management flow of the MALF plus a core allocation of 25% of the MALF occurs at Makakahi at Hamua

Flow statistic	MALF + 25% of MALF	Flow	0.438										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	8.5	13.6	20.0	7.5	0.0	0.0	49.7
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.8
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	17.8	0.0	0.0	0.0	22.3
1983	0.0	0.0	0.0	0.0	0.0	0.0	16.5	7.6	6.9	0.2	0.0	0.0	31.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	7.3	14.3	23.4	22.5	12.6	0.0	80.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	8.5	15.4	4.7	0.0	0.0	0.0	0.0	28.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	4.3	5.8	0.0	0.0	0.0	0.0	10.1
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	16.8	0.0	0.0	0.0	25.5
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.3	24.9	20.6	2.6	0.0	68.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	8.5	14.1	4.0	0.0	0.0	0.0	26.6
1995	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	9.8
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	16.9	0.0	0.0	0.0	19.5
1998	0.0	0.0	0.0	0.0	0.0	0.0	7.8	20.7	6.9	6.3	0.0	0.0	41.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.2	14.0	0.0	0.0	0.0	17.5
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	17.5	3.1	2.1	0.0	22.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6	21.9	21.1	12.4	0.0	74.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.1	7.1	0.0	0.0	0.0	23.3
TOTAL	0.0	0.0	0.0	0.0	0.0	8.5	81.4	152.1	200.1	81.3	29.7	0.0	553.1
Average	0.0	0.0	0.0	0.0	0.0	0.3	3.3	6.1	8.0	3.3	1.2	0.0	22.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	8.5	16.5	20.7	24.9	22.5	12.6	0.0	80.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	10.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.0	0.0	0.0	0.0	19.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	7.0	0.0	0.0	0.0	23.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	4.1	8.5	16.2	0.0	0.0	0.0	26.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	7.9	14.1	17.6	3.7	0.0	0.0	33.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	9.3	17.6	21.1	15.4	2.4	0.0	61.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	8.5	16.5	20.7	24.9	22.5	12.6	0.0	80.1

Table 32: Number of days that a proposed management flow of the MALF plus a core allocation of 30% of the MALF occurs at Makakahi at Hamua

Flow statistic	MALF + 30% of MALF	Flow	0.455										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	9.1	14.2	20.7	7.8	0.0	0.0	51.7
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	2.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	18.0	0.0	0.0	0.0	22.5
1983	0.0	0.0	0.0	0.0	0.0	0.1	17.1	8.2	7.1	0.2	0.0	0.0	32.8
1984	0.0	0.0	0.0	0.0	0.0	0.3	9.0	15.6	24.3	23.0	13.8	0.0	86.2
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	9.5	15.5	5.5	0.0	0.0	0.0	0.0	30.5
1987	0.0	0.0	0.0	0.0	0.0	0.0	4.5	5.8	0.0	0.0	0.0	0.0	10.3
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.2	9.4	17.0	0.0	0.0	0.0	26.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	25.5	21.3	2.6	0.0	70.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	9.2	14.4	4.2	0.0	0.0	0.0	27.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	10.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	17.2	0.0	0.0	0.0	20.2
1998	0.0	0.0	0.0	0.0	0.0	0.0	9.6	21.1	7.3	6.4	0.0	0.0	44.4
1999	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.3	14.3	0.0	0.0	0.0	18.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	19.2	4.1	2.2	0.0	26.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	22.2	21.9	12.9	0.0	76.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.6	7.4	0.0	0.0	0.0	24.0
TOTAL	0.0	0.0	0.0	0.0	0.0	10.0	88.0	160.1	207.1	84.8	31.5	0.0	581.5
Average	0.0	0.0	0.0	0.0	0.0	0.4	3.5	6.4	8.3	3.4	1.3	0.0	23.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	9.5	17.1	21.4	25.5	23.0	13.8	0.0	86.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	10.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	4.2	0.0	0.0	20.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	5.6	7.3	0.0	0.0	0.0	25.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	4.3	9.2	16.5	0.0	0.0	0.0	27.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	9.1	14.6	18.2	4.6	0.0	0.0	35.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.1	10.0	18.1	21.6	15.9	2.4	0.0	63.2
Percentile 100%	0.0	0.0	0.0	0.0	0.0	9.5	17.1	21.4	25.5	23.0	13.8	0.0	86.2

Upper Gorge Water Management Zone – Mana 9

Upper Gorge – Mana 9a

Table 33: Number of days that the MALF occurs at Manawatu at Upper Gorge

Flow Statistic	MALF	Flow	11.530										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.0	0.0	0.0	3.4
1981	0.0	0.0	0.0	0.0	0.4	0.0	6.3	8.3	9.4	0.4	0.0	0.0	24.8
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	9.9	5.1	4.2	0.0	0.0	0.0	19.2
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	8.9	20.2	7.0	0.0	49.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	7.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	9.3	0.0	0.0	0.0	12.2
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	19.3	14.9	0.0	0.0	52.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.1	0.0	0.0	0.0	0.0	5.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.2	20.0	5.6	0.0	0.0	30.6
1998	0.0	0.0	0.0	0.0	0.0	0.0	7.8	9.1	7.4	2.6	0.0	0.0	27.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.4	3.3	12.7	0.0	0.0	0.0	18.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.5	0.0	0.0	9.3
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	13.4	1.4	1.9	0.0	33.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.4	0.0	42.2	79.8	111.9	50.6	8.9	0.0	293.9
Average	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.2	4.5	2.0	0.4	0.0	11.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.4	0.0	9.9	18.8	20.0	20.2	7.0	0.0	52.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	8.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.0	6.9	0.3	0.0	0.0	17.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.1	5.7	9.3	1.6	0.0	0.0	25.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	7.0	11.4	13.1	5.2	0.0	0.0	32.4
Percentile 100%	0.0	0.0	0.0	0.0	0.4	0.0	9.9	18.8	20.0	20.2	7.0	0.0	52.9

Table 34: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Manawatu at Upper Gorge

Flow Statistic	MALF *0.9	Flow	10.377											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1981	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.9	2.2	0.0	0.0	0.0	8.1	
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	0.3	0.0	0.0	0.0	5.4	
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	4.3	18.5	4.6	0.0	35.8	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1986	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.4	
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7	
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	17.9	13.4	0.0	0.0	43.8	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4	
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3	17.1	1.0	0.0	0.0	19.8	
1998	0.0	0.0	0.0	0.0	0.0	0.0	3.3	5.8	5.3	0.0	0.0	0.0	14.4	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	11.1	
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.8	0.0	0.0	4.3	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	9.6	0.0	0.0	0.0	19.5	
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	0.0	0.0	10.0	45.4	76.0	34.7	4.6	0.0	170.7		
Average	0.0	0.0	0.0	0.0	0.0	0.4	1.8	3.0	1.4	0.2	0.0	6.8		
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	0.0	0.0	3.3	12.6	17.9	18.5	4.6	0.0	43.8		
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	3.2	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	5.6	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.1	5.4	0.0	0.0	0.0	11.8	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.8	7.3	10.5	1.5	0.0	0.0	19.7	
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	3.3	12.6	17.9	18.5	4.6	0.0	43.8	

Table 35: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Manawatu at Upper Gorge

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	11.530										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.0	0.0	0.0	3.4
1981	0.0	0.0	0.0	0.0	0.4	0.0	6.3	8.3	9.4	0.4	0.0	0.0	24.8
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	9.9	5.1	4.2	0.0	0.0	0.0	19.2
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	8.9	20.2	7.0	0.0	49.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	7.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	9.3	0.0	0.0	0.0	12.2
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	19.3	14.9	0.0	0.0	52.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.1	0.0	0.0	0.0	0.0	5.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.2	20.0	5.6	0.0	0.0	30.6
1998	0.0	0.0	0.0	0.0	0.0	0.0	7.8	9.1	7.4	2.6	0.0	0.0	27.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.4	3.3	12.7	0.0	0.0	0.0	18.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.5	0.0	0.0	9.3
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	13.4	1.4	1.9	0.0	33.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.4	0.0	42.2	79.8	111.9	50.6	8.9	0.0	293.7
Average	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.2	4.5	2.0	0.4	0.0	11.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.4	0.0	9.9	18.8	20.0	20.2	7.0	0.0	52.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	8.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.0	6.9	0.3	0.0	0.0	17.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.1	5.7	9.3	1.6	0.0	0.0	25.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	7.0	11.4	13.1	5.2	0.0	0.0	32.4
Percentile 100%	0.0	0.0	0.0	0.0	0.4	0.0	9.9	18.8	20.0	20.2	7.0	0.0	52.9

Table 36: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Manawatu at Upper Gorge

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	12.107										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	2.0	0.2	0.0	6.4
1981	0.0	0.0	0.0	0.0	1.5	0.0	8.1	8.8	11.0	0.6	0.0	0.0	30.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	13.8	6.4	4.3	0.0	0.0	0.0	24.5
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.8	14.7	10.4	20.2	8.1	0.0	54.2
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.5	3.3	0.0	0.0	0.0	0.0	12.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.2	11.3	0.0	0.0	0.0	16.3
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	19.6	16.5	0.0	0.0	57.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	7.5	1.3	0.0	0.0	0.0	0.0	8.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.8	21.0	7.1	0.0	0.0	34.1
1998	0.0	0.0	0.0	0.0	0.0	0.0	9.4	10.4	9.6	3.5	0.0	0.0	32.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	3.5	4.2	13.4	0.0	0.0	0.0	21.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	5.6	0.0	0.0	11.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	14.5	4.9	3.7	0.0	42.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	1.5	0.0	56.7	96.3	125.4	60.4	12.0	0.0	352.3
Average	0.0	0.0	0.0	0.0	0.1	0.0	2.3	3.8	5.0	2.4	0.5	0.0	14.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	1.5	0.0	13.8	21.0	21.0	20.2	8.1	0.0	57.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.2	0.0	0.0	12.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.7	8.9	0.5	0.0	0.0	20.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	4.3	6.9	11.1	3.8	0.0	0.0	30.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	8.9	13.0	14.1	6.5	0.1	0.0	39.0
Percentile 100%	0.0	0.0	0.0	0.0	1.5	0.0	13.8	21.0	21.0	20.2	8.1	0.0	57.1

Table 37: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Manawatu at Upper Gorge

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	12.683										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	2.9	0.4	0.0	8.6
1981	0.0	0.0	0.0	0.0	2.8	0.0	9.3	10.4	13.8	1.7	0.0	0.0	38.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	19.2	8.0	4.3	1.1	0.0	0.0	32.6
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.8	16.1	11.8	20.3	9.1	0.0	59.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4
1986	0.0	0.0	0.0	0.0	0.0	0.0	14.6	5.8	0.3	0.0	0.0	0.0	20.7
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	3.4	5.5	12.2	1.5	0.0	0.0	22.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.5	21.9	20.7	17.6	0.3	0.0	61.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	8.4	2.3	0.0	0.0	0.0	0.0	10.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.9
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	2.5	5.4	21.7	8.0	0.0	0.0	37.7
1998	0.0	0.0	0.0	0.0	0.0	0.0	10.9	12.5	10.4	3.9	0.0	0.0	37.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.5	14.4	0.0	0.0	0.0	23.1
2000	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.9	6.8	6.3	1.3	0.0	16.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.3	17.0	7.6	5.2	0.0	52.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	2.8	1.3	75.9	115.9	138.8	71.3	16.3	0.0	422.4
Average	0.0	0.0	0.0	0.0	0.1	0.1	3.0	4.6	5.5	2.9	0.7	0.0	16.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	2.8	1.3	19.2	22.3	21.7	20.3	9.1	0.0	61.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	8.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.2	4.7	0.7	0.0	18.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.4	5.5	9.7	1.7	0.0	0.0	23.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	5.0	8.5	12.5	4.4	0.1	0.0	37.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	10.3	14.7	16.0	7.8	0.9	0.0	46.5
Percentile 100%	0.0	0.0	0.0	0.0	2.8	1.3	19.2	22.3	21.7	20.3	9.1	0.0	61.0

Table 38: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Manawatu at Upper Gorge

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	13.260										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	6.7	5.3	0.9	0.0	13.3
1981	0.0	0.0	0.0	0.0	3.0	0.0	9.8	11.4	16.7	3.2	0.0	0.0	44.1
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.0	0.0	0.0	1.3
1983	0.0	0.0	0.0	0.0	0.0	0.0	21.9	10.1	4.4	5.3	0.0	0.0	41.6
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.1	17.4	14.4	20.3	10.4	0.0	65.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
1986	0.0	0.0	0.0	0.0	0.0	0.0	16.0	9.1	1.2	0.0	0.0	0.0	26.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.6	6.2	7.1	12.6	4.0	0.0	0.0	30.5
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	1.9	22.4	23.1	17.9	1.1	0.0	66.4
1994	0.0	0.0	0.0	0.0	0.0	0.0	9.5	3.1	0.5	0.0	0.0	0.0	13.1
1995	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	1.9
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.8	22.8	9.5	0.0	0.0	43.8
1998	0.0	0.0	0.0	0.0	0.0	0.0	12.6	14.8	11.4	4.2	0.0	0.0	42.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	5.1	7.1	15.1	0.0	0.0	0.0	27.3
2000	0.0	0.0	0.0	0.0	0.0	2.4	0.0	2.1	7.4	7.3	2.2	0.0	21.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7	18.6	12.0	6.4	0.0	61.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	3.0	3.0	91.7	138.0	156.0	92.4	21.0	0.0	505.1	
Average	0.0	0.0	0.0	0.0	0.1	0.1	3.7	5.5	6.2	3.7	0.8	0.0	20.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	3.0	2.4	21.9	24.7	23.1	20.3	10.4	0.0	66.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.0	13.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.9	4.7	5.3	2.8	0.0	0.0	23.4
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.7	7.7	10.6	4.2	0.0	0.0	29.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	6.9	10.4	14.5	5.7	0.2	0.0	43.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	11.5	16.4	17.8	11.0	1.8	0.0	54.7
Percentile 100%	0.0	0.0	0.0	0.0	3.0	2.4	21.9	24.7	23.1	20.3	10.4	0.0	66.4

Table 39: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Manawatu at Upper Gorge

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	13.836										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0	0.0	1.2
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	8.1	8.0	1.3	0.0	18.5
1981	0.0	0.0	0.0	0.0	3.1	0.5	10.0	12.1	18.7	4.4	0.0	0.0	48.8
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.5	0.0	0.0	0.0	2.7
1983	0.0	0.0	0.0	0.0	0.0	0.1	23.9	11.5	4.6	9.5	0.0	0.0	49.6
1984	0.0	0.0	0.0	0.0	0.0	1.6	3.7	18.7	15.8	20.8	11.2	0.0	71.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	4.1
1986	0.0	0.0	0.0	0.0	0.0	1.0	16.8	11.4	2.6	0.0	0.0	0.0	31.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	2.8
1988	0.0	0.0	0.0	0.0	0.0	1.3	7.3	9.8	12.7	6.6	0.0	0.0	37.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	2.6	22.8	24.5	18.4	1.4	0.0	69.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	10.5	4.8	2.0	0.0	0.0	0.0	17.4
1995	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	2.8
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6
1997	0.0	0.0	0.0	0.0	0.0	0.0	5.4	9.2	23.4	10.9	0.0	0.0	48.9
1998	0.0	0.0	0.0	0.0	0.0	0.0	13.9	15.8	12.1	4.5	0.0	0.0	46.3
1999	0.0	0.0	0.0	0.0	0.0	0.0	5.4	10.1	15.8	0.0	0.0	0.0	31.3
2000	0.0	0.0	0.0	0.0	0.0	3.1	0.1	2.9	7.9	9.3	2.2	0.0	25.5
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.7	0.0	3.8
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.5	19.9	16.3	7.5	0.0	69.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	3.1	8.2	102.2	161.2	169.8	115.9	24.2	0.0	584.6
Average	0.0	0.0	0.0	0.0	0.1	0.3	4.1	6.4	6.8	4.6	1.0	0.0	23.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	3.1	3.1	23.9	25.5	24.5	20.8	11.2	0.0	71.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	3.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.8	2.0	0.0	0.0	17.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	6.6	5.9	4.2	0.0	27.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	5.1	10.0	11.3	6.2	0.0	0.0	36.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.5	7.8	11.6	15.8	9.3	0.8	0.0	48.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.2	12.5	17.5	19.4	14.1	1.9	0.0	61.3
Percentile 100%	0.0	0.0	0.0	0.0	3.1	3.1	23.9	25.5	24.5	20.8	11.2	0.0	71.8

Upper Mangahao – Mana 9d and Lower Mangahao – Mana 9e**Table 40: Number of days that the MALF occurs at Mangahao at Ballance**

Flow Statistic	MALF	Flow	1.680															TOTAL
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun						
1962	0.0	0.0	0.0	0.0	0.0	0.0	8.2	8.0	1.8	0.0	0.0	0.0					17.9	
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1966	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.3	
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.9	0.0	0.0					7.6	
1968	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	15.1	0.0	0.0	0.0					15.5	
1969	0.0	0.0	0.0	1.1	7.3	1.1	0.0	10.7	6.4	0.0	0.0	0.0					26.6	
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.1	0.0	0.0	0.0					4.8	
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	3.7	0.0	0.0	0.0					11.0	
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1974	0.0	0.0	0.0	0.0	0.2	6.3	26.6	18.5	0.1	0.0	0.0	0.0					51.6	
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0					5.2	
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1977	0.0	0.0	0.0	0.0	0.0	0.0	10.2	22.7	22.9	0.0	0.2	0.0					56.0	
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.4	0.0	0.0	0.0	0.0					5.0	
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0					3.7	
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	19.7	19.2	0.0					43.1	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0					1.3	
1986	0.0	0.0	0.0	0.0	0.0	4.4	13.8	0.0	0.8	0.0	0.0	0.0					19.0	
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0					0.2	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0					5.0	
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	19.6	13.5	0.0					55.4	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.6	0.0	0.0	0.0					4.9	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	3.7	0.0	0.0	0.0					8.1	
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	19.6	13.5	0.0	0.0					0.0	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0					0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
1998	0.0	0.0	0.0	0.0	0.0	0.0	11.4	23.4	13.6	2.7	4.9	0.0					56.0	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	13.6	0.0					15.9	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0					0.7	
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	24.7	25.8	24.4	9.8	0.0				88.0	
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
TOTAL	0.0	0.0	0.3	1.1	7.5	14.2	80.7	158.8	139.2	67.3	34.1	0.0					503.1	
Average	0.0	0.0	0.0	0.0	0.2	0.3	1.9	3.7	3.2	1.6	0.8	0.0					11.7	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
Maximum	0.0	0.0	0.3	1.1	7.3	6.3	26.6	24.7	25.8	24.4	19.2	0.0					88.0	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.7	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0					4.2	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.3	0.0	0.0					5.0	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.7	4.4	0.0	0.0					16.5	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	15.1	13.6	9.2	2.9	0.0				50.5	
Percentile 100%	0.0	0.0	0.0	0.0	0.0	4.4	13.8	24.7	25.8	24.4	19.2	0.0					88.0	

Table 41: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Mangahao at Ballance

Flow Statistic	MALF *0.9	Flow	1.512											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1962	0.0	0.0	0.0	0.0	0.0	0.0	5.8	6.1	0.5	0.0	0.0	0.0	0.0	12.4
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.9
1968	0.0	0.0	0.0	0.0	0.0	4.6	0.1	0.0	8.7	5.3	0.0	0.0	0.0	13.1
1969	0.0	0.0	0.0	0.0	4.6	0.1	0.0	0.0	13.1	0.0	0.0	0.0	0.0	18.7
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.3
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	3.6	0.0	0.0	0.0	0.0	9.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	4.8	25.5	13.9	0.0	0.0	0.0	0.0	0.0	44.3
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	9.1	21.7	22.5	0.0	0.0	0.0	0.0	53.4
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	2.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	19.7	16.2	0.0	0.0	38.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	1.9	13.2	0.0	0.0	0.0	0.0	0.0	0.0	15.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.3	18.5	13.5	0.0	0.0	0.0	49.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	3.2	2.5	0.0	0.0	0.0	0.0	0.0	5.8
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.6	22.7	10.3	1.3	0.0	0.0	0.0	40.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	7.2	0.0	0.0	0.0	0.0	7.3
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	1.2	21.4	25.2	22.5	8.2	0.0	0.0	78.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	4.6	6.9	64.8	124.8	109.8	61.9	24.4	0.0	397.1	
Average	0.0	0.0	0.0	0.0	0.1	0.2	1.5	2.9	2.5	1.4	0.6	0.0	9.2	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	4.6	4.8	25.5	22.7	25.2	22.5	16.2	0.0	78.6	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.0	0.0	0.0	8.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	2.4	11.5	9.1	8.6	0.0	0.0	0.0	39.7
Percentile 100%	0.0	0.0	0.0	0.0	0.0	1.9	13.2	22.7	25.2	22.5	16.2	0.0	78.6	

Table 42: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Mangahao at Ballance

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	1.680										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962		0.0	0.0	0.0	0.0	0.0	8.2	8.0	1.8	0.0	0.0	0.0	17.9
1963		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966		0.0	0.0	0.300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
1967		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.9	0.0	0.0
1968		0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	15.1	0.0	0.0	15.5
1969		0.0	0.0	0.0	1.1	7.3	1.1	0.0	10.7	6.4	0.0	0.0	26.6
1970		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.1	0.0	0.0	4.8
1971		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972		0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	3.7	0.0	0.0	11.0
1973		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974		0.0	0.0	0.0	0.0	0.2	6.3	26.6	18.5	0.1	0.0	0.0	51.6
1975		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	5.2
1976		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977		0.0	0.0	0.0	0.0	0.0	0.0	10.2	22.7	22.9	0.0	0.2	0.0
1978		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.4	0.0	0.0	0.0	5.0
1981		0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	3.7
1982		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	19.7	19.2	0.0
1985		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.3
1986		0.0	0.0	0.0	0.0	0.0	4.4	13.8	0.0	0.8	0.0	0.0	19.0
1987		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
1988		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0
1989		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993		0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	19.6	13.5	0.0	55.4
1994		0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.6	0.0	0.0	0.0	4.9
1995		0.0	0.0	0.0	0.0	0.0	0.0	4.4	3.7	0.0	0.0	0.0	8.1
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998		0.0	0.0	0.0	0.0	0.0	0.0	11.4	23.4	13.6	2.7	4.9	0.0
1999		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000		0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	13.6	0.0	0.0	15.9
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.7
2002		0.0	0.0	0.0	0.0	0.0	0.0	3.3	24.7	25.8	24.4	9.8	0.0
2003		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL		0.0	0.0	0.3	1.1	7.5	14.2	80.7	158.7	139.1	67.3	34.1	0.0
Average		0.0	0.0	0.0	0.0	0.2	0.3	1.9	3.7	3.2	1.6	0.8	0.0
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum		0.0	0.0	0.3	1.1	7.3	6.3	26.6	24.7	25.8	24.4	19.2	0.0
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	4.2
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.3	0.0	0.0	5.0
Percentile 80%		0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.7	4.4	0.0	0.0	16.5
Percentile 90%		0.0	0.0	0.0	0.0	0.0	0.0	4.0	15.1	13.6	9.2	2.9	0.0
Percentile 100%		0.0	0.0	0.0	0.0	0.0	4.4	13.8	24.7	25.8	24.4	19.2	0.0

Table 43: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Mangahao at Ballance

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	1.764										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	8.8	9.1	2.2	0.0	0.0	0.0	20.1
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.2	7.4	0.0	0.0	10.9
1968	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.9	15.9	0.0	0.0	0.0	18.1
1969	0.0	0.0	0.0	2.0	8.2	1.3	0.0	11.3	6.8	0.0	0.0	0.0	29.7
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.6	0.0	0.0	0.0	7.1
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	3.7	0.0	0.0	0.0	11.6
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.8	7.9	27.1	20.0	1.2	0.0	0.0	0.0	57.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.9	0.0	0.0	0.0	7.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	10.6	23.1	23.1	0.0	0.9	0.0	57.8
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.0	0.0	0.0	0.0	0.0	5.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	5.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	19.7	19.8	0.0	44.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	2.6
1986	0.0	0.0	0.0	0.0	0.0	5.3	13.9	0.0	1.0	0.0	0.0	0.0	20.2
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	2.2
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	6.5
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.4	20.0	13.5	0.0	0.0	56.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	5.1	3.2	0.0	0.0	0.0	0.0	8.3
1995	0.0	0.0	0.0	0.0	0.0	0.0	5.3	4.1	0.0	0.0	0.0	0.0	9.4
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	14.6	23.6	14.5	3.7	6.3	0.0	62.7
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	3.1	0.1	0.2	15.6	1.5	0.0	0.0	20.5
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.7	0.6	0.0	0.0	5.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	3.8	26.0	25.9	24.7	10.4	0.0	90.8
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	2.2	2.0	9.0	19.0	90.0	178.7	153.0	71.1	37.5	0.0	562.4
Average	0.0	0.0	0.1	0.0	0.2	0.4	2.1	4.2	3.6	1.7	0.9	0.0	13.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	2.2	2.0	8.2	7.9	27.1	26.0	25.9	24.7	19.8	0.0	90.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	5.4
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.8	0.0	0.0	0.0	7.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.3	5.5	0.8	0.0	0.0	20.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	5.2	16.1	15.2	9.6	3.8	0.0	52.1
Percentile 100%	0.0	0.0	0.0	0.0	0.0	5.3	14.6	26.0	25.9	24.7	19.8	0.0	90.8

Table 44: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Mangahao at Ballance

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	1.848										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	9.1	10.6	2.3	0.0	0.0	0.0	22.1
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	3.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0	0.0	0.0	4.1
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.9	8.0	0.0	0.0	14.1
1968	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.3	16.8	0.0	0.0	0.0	20.1
1969	0.0	0.0	0.0	2.9	9.3	1.7	0.0	11.7	7.2	0.0	0.0	0.0	32.7
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	1.0	0.0	0.0	0.0	9.2
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	2.6	8.5	3.7	0.0	0.0	0.0	14.8
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	1.8	10.1	27.5	21.7	1.8	0.5	0.0	0.0	63.5
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	8.7	0.0	0.0	0.0	8.9
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	11.1	23.9	23.2	0.0	1.7	0.0	59.8
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	3.7	5.5	0.0	0.0	0.0	0.0	9.2
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	6.1
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	19.8	20.6	0.0	46.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	3.8
1986	0.0	0.0	0.0	0.0	0.0	6.2	14.0	0.0	1.1	0.0	0.0	0.0	21.2
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	3.1
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0	7.1
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.3	24.5	20.3	13.6	0.0	0.0	58.7
1994	0.0	0.0	0.0	0.0	0.0	0.1	6.0	4.1	0.2	0.0	0.0	0.0	10.4
1995	0.0	0.0	0.0	0.0	0.0	0.0	6.7	4.5	0.0	0.0	0.0	0.0	11.2
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	16.9	23.8	15.4	5.5	7.5	0.0	69.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5
2000	0.0	0.0	0.0	0.0	0.0	4.3	1.3	1.1	16.1	2.7	0.0	0.0	25.5
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.8	2.3	0.0	0.0	9.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	4.6	26.4	26.1	25.1	10.9	0.0	93.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	3.0	2.9	11.5	24.3	104.6	195.3	166.8	77.4	40.7	0.0	626.5
Average	0.0	0.0	0.1	0.1	0.3	0.6	2.4	4.5	3.9	1.8	0.9	0.0	14.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	3.0	2.9	9.3	10.1	27.5	26.4	26.1	25.1	20.6	0.0	93.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.2	0.0	0.0	7.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.0	2.2	0.0	0.0	0.0	10.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.9	4.7	6.5	2.4	0.0	0.0	22.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.1	6.4	16.7	15.8	10.4	4.5	0.0	53.9
Percentile 100%	0.0	0.0	0.0	0.0	0.0	6.2	16.9	26.4	26.1	25.1	20.6	0.0	93.1

Table 45: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Mangahao at Ballance

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	1.932										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	9.3	12.5	2.5	0.0	0.0	0.0	24.3
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	2.5
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	3.7	0.0	0.9	0.1	1.7	0.0	0.0	0.0	0.0	0.0	6.4
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	4.4	8.4	0.0	0.0	15.5
1968	0.0	0.0	0.0	0.0	0.0	2.2	0.0	1.6	17.3	0.0	0.0	0.0	21.1
1969	0.0	0.0	1.3	3.9	10.6	2.0	0.0	11.9	7.6	0.0	0.0	0.0	37.3
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	1.3	0.0	0.0	0.0	11.4
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	3.9	9.3	4.4	3.6	0.0	0.0	21.1
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	3.0	13.5	27.9	22.8	2.1	2.1	0.0	0.0	71.4
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	11.3	0.0	0.0	0.0	11.6
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	11.5	24.5	23.3	0.0	2.5	0.0	61.8
1978	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	7.5	5.6	0.0	0.0	0.0	0.0	13.1
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.2	6.8	0.0	0.0	0.0	0.0	7.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.5	0.0	0.0	0.0	2.4
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	20.3	20.6	0.0	47.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.4	0.0	0.0	0.0	5.2
1986	0.0	0.0	0.0	0.0	0.0	7.0	14.1	0.0	1.2	0.0	0.0	0.0	22.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.8	0.0	0.0	0.0	0.0	4.1
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	8.2
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	1.4	25.3	20.5	13.8	0.0	0.0	61.0
1994	0.0	0.0	0.0	0.0	0.0	1.2	6.4	5.3	1.5	0.0	0.0	0.0	14.4
1995	0.0	0.0	0.0	0.0	0.0	0.0	9.1	4.8	0.0	0.0	0.0	0.0	13.9
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	18.5	24.0	16.1	7.2	8.7	0.0	74.5
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	7.0
2000	0.0	0.0	0.0	0.0	0.0	4.6	1.9	1.9	16.6	4.2	0.1	0.0	29.3
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	3.6	5.3	0.0	0.0	14.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	6.5	26.5	26.2	25.4	11.4	0.0	96.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	5.0	3.9	14.8	30.6	120.2	214.1	182.8	90.3	43.2	0.0	705.0
Average	0.0	0.0	0.1	0.1	0.3	0.7	2.8	5.0	4.3	2.1	1.0	0.0	16.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	3.7	3.9	10.6	13.5	27.9	26.5	26.2	25.4	20.6	0.0	96.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.7	0.8	0.0	0.0	0.0	10.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.2	4.8	3.2	0.0	0.0	0.0	14.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	6.4	5.4	7.2	4.4	0.0	0.0	23.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.7	8.5	17.1	16.4	11.2	5.3	0.0	55.8
Percentile 100%	0.0	0.0	0.0	0.0	0.0	7.0	18.5	26.5	26.2	25.4	20.6	0.0	96.0

Table 46: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Mangahao at Ballance

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	2.016										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	9.6	15.3	2.6	0.0	0.0	0.0	27.5
1963	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.4	0.0	0.0	0.0	0.0	4.3
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	4.1	0.0	1.4	0.8	2.2	0.0	0.0	0.0	0.0	0.0	8.6
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	4.8	8.8	0.0	0.0	16.7
1968	0.0	0.0	0.0	0.0	0.0	2.4	0.3	1.9	17.5	0.0	0.0	0.0	22.1
1969	0.0	0.0	1.9	4.9	11.8	2.3	0.0	12.7	8.6	0.0	0.0	0.0	42.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.8	11.1	1.6	0.0	0.0	0.0	13.5
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	4.7	9.6	6.1	5.4	0.0	0.0	25.8
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	4.9	15.8	28.3	24.0	2.2	3.4	0.0	0.0	78.7
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	12.9	0.0	0.0	0.0	13.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
1977	0.0	0.0	0.0	0.0	0.0	0.0	12.0	24.8	23.4	0.0	2.8	0.0	63.0
1978	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	7.7	5.7	0.0	0.0	0.0	0.0	13.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	1.0	7.2	0.0	0.0	1.3	0.0	9.5
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.6	0.0	0.0	0.0	4.2
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	7.7	20.7	20.6	0.0	49.3
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	1.0	0.0	0.0	0.0	6.7
1986	0.0	0.0	0.0	0.0	0.0	7.6	14.2	0.0	1.3	0.0	0.0	0.0	23.1
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.4	0.0	0.0	0.0	0.0	5.1
1988	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3	9.6	0.0	0.0	0.0	11.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	1.8	25.5	20.7	14.0	0.0	0.0	61.9
1994	0.0	0.0	0.0	0.0	0.0	2.1	6.6	7.2	2.3	0.0	0.0	0.0	18.2
1995	0.0	0.0	0.0	0.0	0.0	0.0	10.8	5.1	0.0	0.0	0.0	0.0	15.8
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	19.9	24.2	16.8	8.5	10.4	0.0	79.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	10.3
2000	0.0	0.0	0.0	0.0	0.0	4.8	2.4	3.1	17.2	6.0	1.6	0.0	35.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	4.3	6.9	0.0	0.0	17.7
2002	0.0	0.0	0.0	0.0	0.0	0.0	8.5	26.7	26.3	25.7	11.8	0.0	99.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	6.0	4.9	18.8	36.6	132.7	232.6	199.1	99.4	48.6	0.0	778.7
Average	0.0	0.0	0.1	0.1	0.4	0.9	3.1	5.4	4.6	2.3	1.1	0.0	18.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	4.1	4.9	11.8	15.8	28.3	26.7	26.3	25.7	20.6	0.0	99.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.6	0.0	0.0	0.0	9.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.9	1.1	0.0	0.0	0.0	12.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.6	5.5	3.9	0.0	0.0	0.0	17.3
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	6.8	6.6	9.7	6.2	0.3	0.0	25.5
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.3	9.9	17.4	17.0	11.8	6.9	0.0	56.9

Percentile 100%	0.0	0.0	0.0	0.0	0.0	7.6	19.9	26.7	26.3	25.7	20.6	0.0	99.1
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Middle Manawatu Water Management Zone – Mana 10

Middle Manawatu – Mana 10a

Table 47: Number of days that the MALF occurs at Manawatu at Palmerston North

Flow Statistic	MALF	Flow	15.530										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927	0.0	0.0	0.0	0.0	0.0	0.0	4.6	19.7	0.0	0.0	0.0	0.0	24.3
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	2.4	0.0	0.0	0.0	7.3
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8
1932	0.0	0.0	0.0	0.0	0.0	5.1	5.1	4.8	9.9	1.1	0.0	0.0	26.1
1933	0.0	0.0	0.0	0.0	5.3	17.2	22.7	0.0	0.0	0.0	0.0	0.0	45.2
1934	0.0	0.0	0.0	0.0	2.0	20.2	14.1	6.6	6.8	0.0	0.0	0.0	49.7
1935	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	16.2	0.0	0.0	23.0
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1940	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	10.2	0.0	0.0	0.0	14.3
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1943	0.0	0.0	0.0	0.0	0.0	4.2	17.6	20.9	2.3	0.0	0.0	0.0	45.0
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	20.7	0.0	0.0	0.0	33.1
1947	0.0	0.0	0.0	0.0	0.0	3.8	11.9	21.9	19.0	1.1	0.0	0.0	57.7
1948	0.0	0.0	0.0	0.0	0.0	1.8	0.3	2.3	0.0	0.0	0.0	0.0	4.4
1949	0.0	0.0	0.0	0.0	0.0	0.0	14.6	7.5	10.6	3.9	0.0	0.0	36.6
1950	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.6	2.3	0.0	0.0	0.0	13.1
1951	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1952	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.2	0.0	0.0	0.0	0.0	4.3
1954	0.0	0.0	0.0	0.0	0.0	0.0	10.7	2.4	0.0	5.9	0.0	0.0	19.0
1955	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.0	3.9	0.0	0.0	11.6
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	3.2
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958	0.0	0.0	0.0	0.0	1.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	2.8
1959	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	8.0	0.0	0.0	0.0	15.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	5.9	0.0	0.0	11.4
1961	0.0	0.0	0.0	0.0	0.0	7.8	7.6	3.8	2.6	0.0	0.0	0.0	21.8
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	13.9	0.3	0.0	0.0	27.1
1963	0.0	0.0	0.0	5.8	0.0	0.0	4.8	26.5	5.9	15.8	1.2	0.0	59.9
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	2.4	0.0	0.0	5.9
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.8
1969	0.0	0.0	0.0	0.0	0.2	0.0	0.0	11.6	11.1	0.0	0.0	0.0	22.9
1970	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.3	0.0	0.0	1.5
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.9	8.3	3.0	4.8	0.0	0.0	17.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1	9.1	1.6	0.0	0.0	27.7
1973	0.0	0.0	0.0	0.0	0.0	1.7	13.4	12.4	3.6	11.7	0.0	0.0	42.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	3.6	0.0	0.0	8.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	8.2	0.0	0.0	0.0	10.9
1977	0.0	0.0	0.0	0.0	0.0	0.0	12.0	22.9	26.4	9.7	0.0	0.0	71.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	17.8	9.9	0.0	0.0	0.0	0.0	27.7
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	10.0	7.0	4.9	0.0	0.0	0.0	22.0

Flow Statistic	MALF	Flow	15.530										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	3.7	2.8	0.0	0.0	0.0	0.0	6.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	8.0	11.1	1.0	0.0	31.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	13.7	3.6	0.0	0.0	0.0	0.0	17.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.3	0.0	0.0	0.0	0.0	8.7
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	9.6	0.0	0.0	0.0	11.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	12.7	11.1	0.0	0.0	33.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0	0.0	11.9
1998	0.0	0.0	0.0	0.0	0.0	0.0	9.6	6.9	6.6	0.0	0.0	0.0	23.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1
2000	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.6	5.6	6.2	2.2	0.0	18.6
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	11.1	0.0	1.4	0.0	24.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	3.2
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	5.8	9.4	65.5	230.6	307.7	270.1	118.1	7.1	0.0	1014.4
Average	0.0	0.0	0.0	0.1	0.1	0.8	2.8	3.7	3.3	1.4	0.1	0.0	12.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	5.8	5.3	20.2	22.7	26.5	26.4	16.2	2.2	0.0	71.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.2	0.0	0.0	0.0	11.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.4	3.5	0.0	0.0	0.0	17.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	4.7	7.0	6.8	1.1	0.0	0.0	23.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.5	11.7	12.4	10.5	5.7	0.0	0.0	33.4
Percentile 100%	0.0	0.0	0.0	5.8	5.3	20.2	22.7	26.5	26.4	16.2	2.2	0.0	71.0

Table 48: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Manawatu at Palmerston North

Flow Statistic	MALF *0.9	Flow	13.977											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1927	0.0	0.0	0.0	0.0	0.0	0.0	1.5	19.0	0.0	0.0	0.0	0.0	20.4	
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.7	0.0	0.0	0.0	4.8	
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1931	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1932	0.0	0.0	0.0	0.0	0.0	1.4	2.3	1.1	2.5	0.0	0.0	0.0	7.3	
1933	0.0	0.0	0.0	0.0	3.5	14.9	21.1	0.0	0.0	0.0	0.0	0.0	39.4	
1934	0.0	0.0	0.0	0.0	0.0	14.5	8.4	6.0	3.9	0.0	0.0	0.0	32.7	
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0	11.6	
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	6.7	
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1943	0.0	0.0	0.0	0.0	0.0	2.0	15.2	14.4	2.3	0.0	0.0	0.0	33.9	
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1946	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	16.8	0.0	0.0	0.0	25.2	
1947	0.0	0.0	0.0	0.0	0.0	0.4	7.7	18.4	15.3	0.2	0.0	0.0	42.0	
1948	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.3	
1949	0.0	0.0	0.0	0.0	0.0	0.0	12.1	6.4	7.8	2.6	0.0	0.0	28.9	
1950	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	7.7	
1951	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1952	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1953	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7	
1954	0.0	0.0	0.0	0.0	0.0	0.0	5.1	2.0	0.0	1.5	0.0	0.0	8.6	
1955	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.4	
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1958	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1959	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	3.7	0.0	0.0	0.0	6.2	
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.0	0.0	0.0	2.7	
1961	0.0	0.0	0.0	0.0	0.0	4.3	1.7	0.0	0.6	0.0	0.0	0.0	6.5	
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	9.4	0.0	0.0	0.0	19.3	
1963	0.0	0.0	0.0	1.8	0.0	0.0	3.7	25.2	2.6	12.4	0.0	0.0	45.6	
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	8.8	0.0	0.0	0.0	14.8	
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.4	2.2	0.0	0.0	5.4	
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	6.7	0.0	0.0	0.0	18.5	
1973	0.0	0.0	0.0	0.0	0.0	0.0	10.3	9.8	2.4	11.0	0.0	0.0	33.5	
1974	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.7	0.0	0.0	3.8	
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9	
1977	0.0	0.0	0.0	0.0	0.0	0.0	8.3	21.4	25.9	8.1	0.0	0.0	63.7	
1978	0.0	0.0	0.0	0.0	0.0	0.0	10.4	8.5	0.0	0.0	0.0	0.0	19.0	
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1981	0.0	0.0	0.0	0.0	0.0	0.0	9.2	3.0	0.0	0.0	0.0	0.0	12.2	
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Flow Statistic	MALF *0.9	Flow	13.977											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	5.1	0.0	0.0	0.0	13.0	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9	
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	9.8	
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	3.3	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.1	0.0	0.0	0.0	6.1	
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.3	8.2	0.0	0.0	22.3	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.5	2.0	5.0	0.0	0.0	0.0	11.5	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	3.7	0.0	0.0	4.6	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	7.9	0.0	0.0	0.0	14.5	
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	1.8	3.5	37.6	144.7	202.8	156.3	66.3	0.0	0.0	613.0	
Average	0.0	0.0	0.0	0.0	0.0	0.5	1.7	2.4	1.9	0.8	0.0	0.0	7.4	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	1.8	3.5	14.9	21.1	25.2	25.9	12.4	0.0	0.0	63.7	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.0	6.6	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.1	3.2	2.6	0.0	0.0	0.0	12.7	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	8.2	8.5	6.7	1.9	0.0	0.0	24.6	
Percentile 100%	0.0	0.0	0.0	1.8	3.5	14.9	21.1	25.2	25.9	12.4	0.0	0.0	63.7	

Table 49: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Manawatu at Palmerston North

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	15.530											
Year		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1923		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1924		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1925		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1926		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927		0.0	0.0	0.0	0.0	0.0	0.0	4.6	19.7	0.0	0.0	0.0	0.0	24.3
1928		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	2.4	0.0	0.0	0.0	7.3
1929		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1930		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931		0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8
1932		0.0	0.0	0.0	0.0	0.0	5.1	5.1	4.8	9.9	1.1	0.0	0.0	26.1
1933		0.0	0.0	0.0	0.0	5.3	17.2	22.7	0.0	0.0	0.0	0.0	0.0	45.2
1934		0.0	0.0	0.0	0.0	2.0	20.2	14.1	6.6	6.8	0.0	0.0	0.0	49.7
1935		0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
1936		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1937		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1938		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	16.2	0.0	0.0	23.0
1939		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1940		0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	10.2	0.0	0.0	0.0	14.3
1941		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1942		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1943		0.0	0.0	0.0	0.0	0.0	4.2	17.6	20.9	2.3	0.0	0.0	0.0	45.0
1944		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946		0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	20.7	0.0	0.0	0.0	33.1
1947		0.0	0.0	0.0	0.0	0.0	3.8	11.9	21.9	19.0	1.1	0.0	0.0	57.7
1948		0.0	0.0	0.0	0.0	0.0	1.8	0.3	2.3	0.0	0.0	0.0	0.0	4.4
1949		0.0	0.0	0.0	0.0	0.0	0.0	14.6	7.5	10.6	3.9	0.0	0.0	36.6
1950		0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.6	2.3	0.0	0.0	0.0	13.1
1951		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1952		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953		0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.2	0.0	0.0	0.0	0.0	4.3
1954		0.0	0.0	0.0	0.0	0.0	0.0	10.7	2.4	0.0	5.9	0.0	0.0	19.0
1955		0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.0	3.9	0.0	0.0	11.6
1956		0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	3.2
1957		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958		0.0	0.0	0.0	0.0	1.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	2.8
1959		0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	8.0	0.0	0.0	0.0	15.0
1960		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	5.9	0.0	0.0	11.4
1961		0.0	0.0	0.0	0.0	0.0	7.8	7.6	3.8	2.6	0.0	0.0	0.0	21.8
1962		0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	13.9	0.3	0.0	0.0	27.1
1963		0.0	0.0	0.0	5.8	0.0	0.0	4.8	26.5	5.9	15.8	1.2	0.0	59.9
1964		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	2.4	0.0	0.0	5.9
1968		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.8
1969		0.0	0.0	0.0	0.0	0.2	0.0	0.0	11.6	11.1	0.0	0.0	0.0	22.9
1970		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.3	0.0	1.5
1971		0.0	0.0	0.0	0.0	0.0	0.0	0.9	8.3	3.0	4.8	0.0	0.0	17.0
1972		0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1	9.1	1.6	0.0	0.0	27.7
1973		0.0	0.0	0.0	0.0	0.0	1.7	13.4	12.4	3.6	11.7	0.0	0.0	42.9
1974		0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	3.6	0.0	0.0	8.0
1975		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	8.2	0.0	0.0	0.0	10.9
1977		0.0	0.0	0.0	0.0	0.0	0.0	12.0	22.9	26.4	9.7	0.0	0.0	71.0
1978		0.0	0.0	0.0	0.0	0.0	0.0	17.8	9.9	0.0	0.0	0.0	0.0	27.7
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981		0.0	0.0	0.0	0.0	0.0	0.0	10.0	7.0	4.9	0.0	0.0	0.0	22.0

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	15.530										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	3.7	2.8	0.0	0.0	0.0	0.0	6.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	8.0	11.1	1.0	0.0	31.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	13.7	3.6	0.0	0.0	0.0	0.0	17.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.3	0.0	0.0	0.0	0.0	8.7
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	9.6	0.0	0.0	0.0	11.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	12.7	11.1	0.0	0.0	33.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0	0.0	11.9
1998	0.0	0.0	0.0	0.0	0.0	0.0	9.6	6.9	6.6	0.0	0.0	0.0	23.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1
2000	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.6	5.6	6.2	2.2	0.0	18.6
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	11.1	0.0	1.4	0.0	24.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	3.2
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	5.8	9.4	65.5	230.5	307.7	270.1	118.1	7.1	0.0	1014.3
Average	0.0	0.0	0.0	0.1	0.1	0.8	2.8	3.7	3.3	1.4	0.1	0.0	12.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	5.8	5.3	20.2	22.7	26.5	26.4	16.2	2.2	0.0	71.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.2	0.0	0.0	11.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.4	3.5	0.0	0.0	0.0	17.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	4.7	7.0	6.8	1.1	0.0	0.0	23.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.5	11.7	12.4	10.5	5.7	0.0	0.0	33.4
Percentile 100%	0.0	0.0	0.0	5.8	5.3	20.2	22.7	26.5	26.4	16.2	2.2	0.0	71.0

Table 50: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Manawatu at Palmerston North

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	16.307										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927	0.0	0.0	0.0	0.0	0.0	0.0	5.9	20.0	0.0	0.0	0.0	0.0	25.9
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	2.8	0.0	0.0	0.0	8.3
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4
1932	0.0	0.0	0.0	0.0	0.0	6.7	5.6	7.0	12.7	4.0	0.0	0.0	36.0
1933	0.0	0.0	0.0	0.0	5.9	18.0	23.1	0.0	0.0	0.1	0.0	0.0	47.1
1934	0.0	0.0	0.0	0.0	5.4	21.2	15.3	6.7	7.6	0.0	0.0	0.0	56.3
1935	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	2.6
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1937	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	3.4
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	18.1	0.0	0.0	27.9
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1940	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	11.4	0.0	0.0	0.0	17.4
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1943	0.0	0.0	0.0	0.0	0.4	5.1	20.2	22.4	2.3	0.0	0.0	0.0	50.4
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946	0.0	0.0	0.0	0.0	0.0	0.0	0.1	13.7	22.1	0.0	0.0	0.0	35.8
1947	0.0	0.0	0.0	0.0	0.0	4.8	14.1	23.0	21.1	1.2	0.0	0.0	64.2
1948	0.0	0.0	0.0	0.0	0.0	2.4	1.1	2.9	0.0	0.0	0.0	0.0	6.4
1949	0.0	0.0	0.0	0.0	0.0	0.0	15.9	8.1	11.4	5.2	0.0	0.0	40.6
1950	0.0	0.0	0.0	0.0	0.0	0.0	11.4	1.9	3.1	0.0	0.0	0.0	16.5
1951	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1952	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953	0.0	0.0	0.0	0.0	0.0	0.0	3.3	2.3	0.0	0.0	0.0	0.0	5.6
1954	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	2.9	0.0	7.0	0.0	21.6
1955	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	7.4	4.6	0.0	0.0	17.9
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	7.0
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.4	0.0	0.0	0.0	2.6
1958	0.0	0.0	0.0	0.0	2.6	1.3	0.0	0.4	0.0	0.0	0.0	0.0	4.3
1959	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	10.0	0.0	0.0	0.0	19.8
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	7.0	7.9	0.2	0.0	15.9
1961	0.0	0.0	0.0	0.0	0.0	8.9	9.2	5.6	3.9	0.0	0.0	0.0	27.6
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.5	13.5	16.0	0.4	0.0	0.0	30.4
1963	0.0	0.0	0.0	7.8	0.0	1.4	5.2	26.8	7.8	17.8	2.1	0.0	68.9
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.5	0.0	0.0	0.0	2.4
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	2.5	0.0	0.0	12.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	4.8
1969	0.0	0.0	0.0	0.0	3.8	0.0	0.0	13.4	11.9	0.0	0.0	0.0	29.1
1970	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.9	0.0	0.0	2.9	0.0	6.1
1971	0.0	0.0	0.0	0.0	0.0	0.0	1.9	9.4	3.7	5.5	0.0	0.0	20.5
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.3	18.6	10.5	2.3	0.0	0.0	31.7
1973	0.0	0.0	0.0	0.0	0.0	3.9	14.1	13.4	4.5	12.0	0.0	0.0	47.8
1974	0.0	0.0	0.0	0.0	0.0	1.2	4.8	0.0	0.0	4.4	0.0	0.0	10.4
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	8.8	0.0	0.0	0.0	12.1
1977	0.0	0.0	0.0	0.0	0.0	0.0	13.3	23.4	26.8	10.1	0.0	0.0	73.5
1978	0.0	0.0	0.0	0.0	0.0	0.0	19.5	10.2	0.0	0.0	0.0	0.0	29.8
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	10.4	8.2	6.7	0.0	0.0	0.0	25.3

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	16.307										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.4	0.0	0.0	0.0	2.1
1983	0.0	0.0	0.0	0.0	0.0	0.0	8.7	2.8	0.0	0.0	0.0	0.0	11.5
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.7	13.7	9.0	16.5	4.6	0.0	44.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	15.1	7.5	0.1	0.0	0.0	0.0	22.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	5.6	4.5	0.0	0.0	0.0	0.0	10.1
1988	0.0	0.0	0.0	0.0	0.0	0.1	0.0	4.1	11.8	0.0	0.0	0.0	16.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	15.1	11.4	0.0	0.0	38.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	4.9
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	14.9	0.0	0.0	0.0	15.6
1998	0.0	0.0	0.0	0.0	0.0	0.0	11.3	8.3	7.9	1.4	0.0	0.0	28.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	8.5	0.0	0.0	0.0	10.1
2000	0.0	0.0	0.0	0.0	0.0	2.7	0.0	3.0	7.4	8.4	2.2	0.0	23.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4	13.0	0.9	1.9	0.0	30.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	4.3
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	7.8	18.3	79.1	277.8	358.3	336.0	144.5	14.0	0.0	1235.8
Average	0.0	0.0	0.0	0.1	0.2	1.0	3.3	4.3	4.1	1.7	0.2	0.0	14.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	7.8	5.9	21.2	23.1	26.8	26.8	18.1	4.6	0.0	73.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	6.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.4	2.4	0.0	0.0	12.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.9	6.8	0.0	0.0	20.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	8.2	8.9	1.9	0.0	29.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	2.2	13.0	13.7	11.9	6.7	0.0	0.0	40.1
Percentile 100%	0.0	0.0	0.0	7.8	5.9	21.2	23.1	26.8	26.8	18.1	4.6	0.0	73.5

Table 51: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Manawatu at Palmerston North

Flow Statistic	(MALF ^0.9) + 20% of MALF	Flow	17.083										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927	0.0	0.0	0.0	0.0	0.0	0.0	7.0	20.3	0.0	0.0	0.0	0.0	27.2
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	2.8	0.0	0.0	0.0	8.8
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.9
1932	0.0	0.0	0.0	0.0	0.0	8.3	5.9	8.7	16.4	4.8	0.0	0.0	44.1
1933	0.0	0.0	0.0	0.0	6.2	18.8	23.3	0.0	0.0	5.0	0.0	0.0	53.4
1934	0.0	0.0	0.0	0.0	7.9	22.2	16.5	6.9	8.4	0.0	0.0	0.0	61.8
1935	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	4.7
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.9
1937	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	4.8
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	19.3	0.0	0.0	31.7
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1940	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	12.4	0.0	0.0	0.0	21.2
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1943	0.0	0.0	0.0	0.0	1.5	7.3	21.6	24.0	2.3	0.0	0.0	0.0	56.6
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946	0.0	0.0	0.0	0.0	0.0	0.0	1.1	13.7	22.7	0.0	0.0	0.0	37.6
1947	0.0	0.0	0.0	0.0	0.0	5.9	16.3	23.9	23.5	1.2	0.0	0.0	70.7
1948	0.0	0.0	0.0	0.0	0.0	3.2	1.8	3.6	0.0	0.0	0.0	0.0	8.6
1949	0.0	0.0	0.0	0.0	0.0	0.0	20.3	8.9	11.4	8.6	0.0	0.0	49.2
1950	0.0	0.0	0.0	0.0	0.0	0.0	12.7	3.2	4.0	0.0	0.0	0.0	19.8
1951	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1952	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953	0.0	0.0	0.0	0.0	0.0	0.0	4.2	2.7	0.0	0.0	0.0	0.0	6.9
1954	0.0	0.0	0.0	0.0	0.0	0.0	12.5	3.8	0.0	7.7	0.0	0.0	24.0
1955	0.0	0.0	0.0	0.0	0.0	0.0	2.4	7.6	10.2	4.7	0.0	0.0	24.9
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	8.8
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.1	0.0	0.0	0.0	4.9
1958	0.0	0.0	0.0	0.0	3.1	1.6	0.0	0.9	0.0	0.0	0.0	0.0	5.7
1959	0.0	0.0	0.0	0.0	0.0	0.8	11.1	0.0	11.0	0.0	0.0	0.0	23.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	8.1	9.2	0.7	0.0	19.9
1961	0.0	0.0	0.0	0.0	0.0	10.6	12.1	7.3	4.7	0.0	0.0	0.0	34.6
1962	0.0	0.0	0.0	0.0	0.0	0.0	1.2	13.9	18.1	1.8	0.0	0.0	35.1
1963	0.0	0.0	0.0	9.8	0.0	2.6	5.6	27.0	9.6	19.1	3.0	0.0	76.6
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	2.7	0.0	0.0	0.0	6.4
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	12.7	3.3	0.0	0.0	17.8
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0	7.1
1969	0.0	0.0	0.0	0.0	5.7	0.0	0.0	14.7	12.7	0.0	0.0	0.0	33.1
1970	0.0	0.0	0.0	0.0	0.0	2.9	2.1	3.8	0.0	3.5	2.9	0.0	15.2
1971	0.0	0.0	0.0	0.0	0.0	0.0	2.9	10.5	4.1	7.4	0.0	0.0	25.0
1972	0.0	0.0	0.0	0.0	1.1	0.0	2.6	19.4	11.3	3.9	0.0	0.0	38.3
1973	0.0	0.0	0.0	0.0	0.0	4.9	14.8	14.8	6.1	12.2	0.0	0.0	52.7
1974	0.0	0.0	0.0	0.0	0.0	2.9	5.1	0.0	0.0	5.3	0.0	0.0	13.3
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	5.8
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	9.4	0.0	0.0	0.0	13.2
1977	0.0	0.0	0.0	0.0	0.0	0.0	14.3	23.7	27.2	10.7	0.0	0.0	75.8
1978	0.0	0.0	0.0	0.0	0.0	0.9	20.4	10.9	0.0	0.0	0.0	0.0	32.2
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	10.8	8.8	8.7	0.6	0.0	0.0	28.9

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	17.083										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.5	0.0	0.0	0.0	2.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	14.3	3.0	0.0	0.0	0.0	0.0	17.3
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.8	15.1	9.8	18.8	5.9	0.0	51.4
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	4.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	16.5	8.8	1.2	0.0	0.0	0.0	26.5
1987	0.0	0.0	0.0	0.0	0.0	0.0	6.7	4.5	0.0	0.0	0.0	0.0	11.2
1988	0.0	0.0	0.0	0.0	0.0	0.8	0.7	6.3	12.6	2.0	0.0	0.0	22.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	16.3	11.8	0.0	0.0	43.4
1994	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.2	0.0	0.0	0.0	0.0	6.7
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.8	17.1	1.1	0.0	0.0	20.2
1998	0.0	0.0	0.0	0.0	0.0	0.0	12.7	9.4	9.1	2.3	0.0	0.0	33.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.5	10.4	0.0	0.0	0.0	15.6
2000	0.0	0.0	0.0	0.0	0.0	3.6	1.3	3.4	8.4	10.6	2.3	0.0	29.5
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.9	14.0	4.2	2.3	0.0	38.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	0.0	5.4
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	9.8	25.5	99.2	330.4	408.7	388.6	185.7	17.2	0.0	1465.1
Average	0.0	0.0	0.0	0.1	0.3	1.2	4.0	4.9	4.7	2.2	0.2	0.0	17.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	9.8	7.9	22.2	23.3	27.0	27.2	19.3	5.9	0.0	76.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	8.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.6	2.7	0.0	0.0	0.0	18.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	4.4	6.1	8.2	1.1	0.0	0.0	24.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.5	8.1	8.9	10.3	4.1	0.0	0.0	33.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	3.1	14.3	15.0	12.7	8.4	0.0	0.0	48.2
Percentile 100%	0.0	0.0	0.0	9.8	7.9	22.2	23.3	27.0	27.2	19.3	5.9	0.0	76.6

Table 52: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Manawatu at Palmerston North

Flow Statistic	(MALF ‘0.9) + 25% of MALF	Flow	17.860										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927	0.0	0.0	0.0	0.0	0.0	0.0	8.0	20.6	0.0	0.0	0.0	0.0	28.5
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	2.9	0.0	0.0	0.0	9.3
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	1.5	0.0	4.7
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5
1932	0.0	0.0	0.0	0.0	0.0	9.5	6.4	9.8	18.7	5.4	0.0	0.0	49.7
1933	0.0	0.0	0.0	0.0	7.1	19.7	23.5	0.0	1.8	8.1	0.0	0.0	60.2
1934	0.0	0.0	0.0	0.0	9.8	23.1	18.8	7.0	10.6	0.0	0.0	0.0	69.2
1935	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	5.9
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.8
1937	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	6.1
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	14.4	19.3	0.0	0.0	34.3
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1940	0.0	0.0	0.0	0.0	0.0	0.0	10.5	0.0	13.2	0.0	0.0	0.0	23.7
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1943	0.0	0.0	0.0	0.0	2.3	10.2	22.0	25.4	2.3	0.0	0.0	0.0	62.2
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946	0.0	0.0	0.0	0.0	0.0	0.0	1.9	13.8	23.4	0.0	0.0	0.0	39.1
1947	0.0	0.0	0.0	0.0	0.0	6.9	18.5	24.4	25.5	1.2	0.0	0.0	76.4
1948	0.0	0.0	0.0	0.0	0.0	5.3	2.0	4.2	0.0	0.0	0.0	0.0	11.4
1949	0.0	0.0	0.0	0.0	0.0	0.0	22.0	9.7	12.4	10.8	0.0	0.0	54.9
1950	0.0	0.0	0.0	0.0	0.0	0.0	13.1	3.9	4.2	0.0	0.0	0.0	21.3
1951	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1952	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953	0.0	0.0	0.0	0.0	0.0	0.0	5.2	3.5	0.0	0.0	0.0	0.0	8.7
1954	0.0	0.0	0.0	0.0	0.0	0.0	13.3	4.8	0.0	8.4	0.0	0.0	26.5
1955	0.0	0.0	0.0	0.0	0.0	0.0	5.8	9.0	12.5	4.8	0.0	0.0	32.0
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0	9.9
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	1.8	0.0	0.0	0.0	6.7
1958	0.0	0.0	0.0	0.6	3.6	1.9	0.3	1.5	0.0	0.0	0.0	0.0	7.9
1959	0.0	0.0	0.0	0.0	0.0	1.8	12.2	0.0	11.8	0.0	0.0	0.0	25.8
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	9.0	10.5	1.1	0.0	23.9
1961	0.0	0.0	0.0	0.0	0.0	12.1	14.4	8.5	4.8	1.0	0.0	0.0	40.8
1962	0.0	0.0	0.0	0.0	0.0	0.0	2.0	14.2	20.0	3.3	0.0	0.0	39.5
1963	0.0	0.0	0.0	11.0	0.0	3.3	5.9	27.4	10.8	20.5	3.9	0.0	82.8
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	4.5	0.0	0.0	0.0	9.9
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	15.9	3.8	0.0	0.0	26.7
1968	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	8.9	0.0	0.0	0.0	10.5
1969	0.0	0.0	0.0	0.0	6.9	0.0	0.6	15.4	13.7	0.0	0.0	0.0	36.6
1970	0.0	0.0	0.0	0.0	0.0	5.6	2.9	4.6	0.8	7.0	2.9	0.0	23.8
1971	0.0	0.0	0.0	0.0	0.0	0.0	4.3	11.6	5.1	7.6	0.0	0.0	28.6
1972	0.0	0.0	0.0	0.0	1.7	0.0	7.9	19.9	12.2	7.1	0.0	0.0	48.8
1973	0.0	0.0	0.0	0.0	0.0	6.0	16.2	15.9	8.1	12.4	0.0	0.0	58.5
1974	0.0	0.0	0.0	0.0	0.0	3.9	5.3	0.0	0.0	6.4	0.0	0.0	15.6
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	8.2
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	10.6	1.2	0.0	0.0	15.9
1977	0.0	0.0	0.0	0.0	0.0	0.0	15.2	24.0	27.5	11.2	0.0	0.0	77.9
1978	0.0	0.0	0.0	0.0	0.0	1.9	21.1	11.9	0.0	0.0	0.0	0.0	34.9
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.6	0.0	0.0	0.0	2.7
1981	0.0	0.0	0.0	0.0	0.0	0.0	11.2	10.0	11.3	0.6	0.0	0.0	33.1
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.9	0.0	0.0	0.0	5.4

Flow Statistic	(MALF * 0.9) + 25% of MALF	Flow	17.860										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1983	0.0	0.0	0.0	0.0	0.0	0.0	20.5	3.1	0.4	0.5	0.0	0.0	24.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.1	16.1	11.2	19.8	6.9	0.0	57.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.0	6.6
1986	0.0	0.0	0.0	0.0	0.0	1.2	16.8	10.6	1.7	0.0	0.0	0.0	30.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	7.3	4.5	0.0	0.0	0.0	0.0	11.8
1988	0.0	0.0	0.0	0.0	0.0	1.7	2.4	8.1	13.0	2.9	0.0	0.0	28.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9	17.4	12.2	0.0	0.0	46.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	8.0	1.3	0.7	0.0	0.0	0.0	10.1
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.6	19.3	3.3	0.0	0.0	26.8
1998	0.0	0.0	0.0	0.0	0.0	0.0	14.3	11.5	10.3	2.6	0.0	0.0	38.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	3.4	4.0	10.9	0.0	0.0	0.0	18.3
2000	0.0	0.0	0.0	0.0	0.0	4.3	2.3	3.9	9.4	12.1	2.4	0.0	34.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6	14.8	6.9	4.9	0.0	45.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.9	0.0	0.0	0.0	8.6
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	11.6	31.4	120.8	383.2	457.2	443.2	224.5	23.7	0.0	1695.5
Average	0.0	0.0	0.0	0.1	0.4	1.5	4.6	5.5	5.3	2.7	0.3	0.0	20.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	11.0	9.8	23.1	23.5	27.4	27.5	20.5	6.9	0.0	82.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.1	0.8	0.0	0.0	0.0	10.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.3	3.2	0.0	0.0	23.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	7.3	9.2	2.7	0.0	28.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	1.5	9.5	10.4	11.6	6.0	0.0	37.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	5.1	16.0	16.1	14.7	10.1	0.0	53.9
Percentile 100%	0.0	0.0	0.0	11.0	9.8	23.1	23.5	27.4	27.5	20.5	6.9	0.0	82.8

Table 53: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Manawatu at Palmerston North

Flow Statistic	(MALF ‘0.9) + 30% of MALF	Flow	18.636										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927	0.0	0.0	0.0	0.0	0.0	0.0	8.9	20.8	0.0	0.0	0.0	0.0	29.7
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	3.0	0.0	0.0	0.0	9.8
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	3.3	0.0	10.1
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1
1932	0.0	0.0	0.0	0.0	0.5	10.9	7.3	10.5	20.4	5.9	0.0	0.0	55.4
1933	0.0	0.0	0.0	0.0	8.1	20.2	23.6	0.0	3.2	10.3	0.0	0.0	65.4
1934	0.0	0.0	0.0	0.0	11.4	23.9	21.3	7.5	12.1	1.4	0.0	0.0	77.8
1935	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	6.8
1936	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.9	0.0	0.0	7.3
1937	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	15.9	19.3	0.0	0.0	36.5
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1940	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.2	13.8	0.0	0.0	0.0	26.3
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1943	0.0	0.0	0.0	0.0	3.1	13.3	22.4	26.0	2.3	0.0	0.0	0.0	67.1
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946	0.0	0.0	0.0	0.0	0.0	0.0	4.5	14.3	23.5	0.0	0.0	0.0	42.4
1947	0.0	0.0	0.0	0.0	0.0	7.9	20.7	24.8	27.1	1.2	0.0	0.0	81.8
1948	0.0	0.0	0.0	0.0	0.0	7.3	2.1	4.8	0.0	0.0	0.0	0.0	14.2
1949	0.0	0.0	0.0	0.0	0.0	0.0	22.6	10.4	13.5	12.1	0.0	0.0	58.6
1950	0.0	0.0	0.0	0.0	0.0	0.0	13.5	4.7	5.0	0.0	0.0	0.0	23.3
1951	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
1952	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953	0.0	0.0	0.0	0.0	0.0	0.0	6.1	4.3	0.0	0.0	0.0	0.0	10.4
1954	0.0	0.0	0.0	0.0	0.0	0.0	14.1	6.0	0.0	9.1	0.0	0.0	29.2
1955	0.0	0.0	0.0	0.0	0.0	1.3	6.6	10.1	14.7	4.8	0.0	0.0	37.4
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	0.0	0.0	0.0	0.0	10.9
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	2.4	0.0	0.0	0.0	8.1
1958	0.0	0.0	0.0	1.7	4.0	2.3	0.9	2.1	0.0	0.0	0.0	0.0	11.2
1959	0.0	0.0	0.0	0.0	0.0	2.7	13.0	0.3	12.7	0.0	0.0	0.0	28.6
1960	0.0	0.0	0.0	0.6	0.0	0.0	0.0	5.1	9.7	11.8	1.6	0.0	28.8
1961	0.0	0.0	0.0	0.0	0.0	13.5	16.1	9.6	5.8	1.0	0.0	0.0	46.1
1962	0.0	0.0	0.0	0.0	0.0	0.0	2.8	14.6	21.8	4.1	0.0	0.0	43.2
1963	0.0	0.0	0.0	11.9	0.0	5.0	6.4	27.9	12.0	22.4	4.7	0.0	90.4
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	6.1	0.0	0.0	0.0	12.4
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	18.3	4.3	0.0	0.0	32.2
1968	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	10.4	0.0	0.0	0.0	12.7
1969	0.0	0.0	0.0	0.0	8.0	0.0	1.8	16.7	15.2	0.0	0.0	0.0	41.8
1970	0.0	0.0	0.0	0.0	0.7	7.1	3.5	5.3	3.1	9.7	2.9	0.0	32.4
1971	0.0	0.0	0.0	0.0	0.0	0.0	6.3	12.8	6.3	7.8	0.0	0.0	33.2
1972	0.0	0.0	0.0	0.0	2.6	0.0	10.7	20.6	13.0	9.2	0.0	0.0	56.1
1973	0.0	0.0	0.0	0.0	0.0	8.6	17.0	16.7	9.3	12.6	0.0	0.0	64.2
1974	0.0	0.0	0.0	0.0	0.0	4.8	5.6	0.8	0.0	7.4	0.0	0.0	18.7
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	9.8
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	13.3	2.4	0.0	0.0	20.2
1977	0.0	0.0	0.0	0.0	0.0	0.0	15.9	24.3	27.8	11.6	0.0	0.0	79.7
1978	0.0	0.0	0.0	0.0	0.0	2.9	22.2	12.3	1.8	0.0	0.0	0.0	39.3
1979	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.8	1.9	0.1	0.0	0.0	5.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	11.5	11.8	14.5	0.7	0.0	0.0	38.5

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	18.636										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.4	0.0	0.0	0.0	7.9
1983	0.0	0.0	0.0	0.0	0.0	0.0	23.1	5.1	4.4	4.9	0.0	0.0	37.5
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.8	17.1	12.2	20.5	8.0	0.0	61.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	7.6
1986	0.0	0.0	0.0	0.0	0.0	3.0	16.9	13.3	2.0	0.0	0.0	0.0	35.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	7.7	4.6	0.0	0.0	1.6	0.0	13.8
1988	0.0	0.0	0.0	0.0	0.0	2.6	5.1	9.9	13.0	7.4	0.0	0.0	37.9
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	4.3
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.3	18.4	18.1	12.5	0.0	0.0	49.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	9.0	2.7	1.6	0.0	0.0	0.0	13.3
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	1.7	5.2	20.5	5.4	0.0	0.0	32.8
1998	0.0	0.0	0.0	0.0	0.0	0.1	15.3	13.1	11.2	2.9	0.0	0.0	42.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	3.9	7.9	11.8	0.0	0.0	0.0	23.6
2000	0.0	0.0	0.0	0.0	0.0	5.3	3.3	5.2	11.6	13.9	2.4	0.0	41.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	17.1	10.4	5.7	0.0	54.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	1.7	0.0	0.0	0.0	10.9
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	14.3	38.6	149.7	430.0	509.7	505.9	266.4	30.3	0.0	1944.8
Average	0.0	0.0	0.0	0.2	0.5	1.8	5.2	6.1	6.1	3.2	0.4	0.0	23.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	11.9	11.4	23.9	23.6	27.9	27.8	22.4	8.0	0.0	90.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	9.8
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.3	2.3	0.0	0.0	0.0	13.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	3.6	5.2	4.5	0.1	0.0	0.0	28.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	6.5	9.4	10.7	4.2	0.0	0.0	35.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	2.5	11.2	12.1	13.0	7.4	0.0	0.0	42.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	6.7	16.7	17.0	16.9	11.4	0.0	0.0	58.1
Percentile 100%	0.0	0.0	0.0	11.9	11.4	23.9	23.6	27.9	27.8	22.4	8.0	0.0	90.4

Upper Pohangina – Mana 10b

Table 54: Number of days that the MALF occurs at Pohangina at Mais Reach

Flow Statistic	MALF	Flow	2.315											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1969	0.0	0.0	0.0	0.0	0.3	0.0	0.3	2.5	10.0	0.0	0.0	0.0	0.0	13.1
1970	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	4.1
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	4.6	0.0	0.0	0.0	12.6
1973	0.0	0.0	0.0	0.0	0.0	0.0	2.3	11.1	0.0	0.0	0.0	0.0	0.0	13.3
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.4
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	13.4	0.0	0.0	0.0	16.8
1978	0.0	0.0	0.0	0.0	0.0	0.0	2.8	4.8	0.0	0.0	0.0	0.0	0.0	7.6
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	9.5
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.5	0.0	0.0	0.0	0.0	0.0	2.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.8	11.9	7.5	0.0	0.0	0.0	0.0	20.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	16.2	2.2	0.0	0.0	0.0	0.0	0.0	18.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	6.5	3.8	0.0	0.0	0.0	0.0	0.0	10.3
1988	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	3.9	0.0	0.0	0.0	0.0	8.7
1989	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.9
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	3.5
1998	0.0	0.0	0.0	0.0	0.0	0.0	7.4	2.4	7.2	0.0	0.0	0.0	0.0	17.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	11.0	0.0	0.0	0.0	0.0	13.8
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	3.5	4.8	40.4	72.7	59.4	0.0	0.0	0.0	0.0	180.8
Average	0.0	0.0	0.0	0.0	0.1	0.1	1.1	2.0	1.7	0.0	0.0	0.0	0.0	5.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	3.1	4.8	16.2	11.9	13.4	0.0	0.0	0.0	0.0	20.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	3.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	8.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.4	1.8	0.0	0.0	0.0	12.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	6.4	7.4	0.0	0.0	0.0	15.3
Percentile 100%	0.0	0.0	0.0	0.0	3.1	4.8	16.2	11.9	13.4	0.0	0.0	0.0	0.0	20.1

Table 55: Number of days that the IFIM recommended minimum flow occurs at Pohangina at Mais Reach

Flow Statistic	IFIM	Flow	2.0											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	7.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.9	0.0	0.0	0.0	0.0	7.3
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	4.6
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	4.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	4.4	0.0	0.0	0.0	0.0	10.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	12.4	0.3	0.0	0.0	0.0	0.0	0.0	12.7
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	3.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	10.3	0.0	0.0	0.0	0.0	10.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	12.4	23.1	27.8	0.0	0.0	0.0	0.0	63.3
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.8	0.0	0.0	0.0	0.0	1.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	12.4	6.0	10.3	0.0	0.0	0.0	0.0	12.7
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.0	0.0	0.0	0.0	0.0	7.2
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	12.4	6.0	10.3	0.0	0.0	0.0	0.0	12.7

Table 56: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 10% of the MALF occurs at Pohangina at Mais Reach

Flow Statistic	IFIM + 10% of MALF	Flow	2.192										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	9.0	0.0	0.0	0.0	10.2
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	4.6	0.0	0.0	0.0	12.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	1.5	10.8	0.0	0.0	0.0	0.0	12.4
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.8	0.0	0.0	0.0	0.0	5.9
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0	7.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	6.7	0.0	0.0	0.0	16.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	15.2	1.3	0.0	0.0	0.0	0.0	16.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	5.4	3.8	0.0	0.0	0.0	0.0	9.1
1988	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	1.7	0.0	0.0	0.0	4.9
1989	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
1998	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	5.7	0.0	0.0	0.0	9.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	10.8	0.0	0.0	0.0	12.3
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	1.7	3.2	28.9	48.2	38.6	0.0	0.0	0.0	120.6
Average	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.3	1.1	0.0	0.0	0.0	3.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	1.7	3.2	15.2	10.8	10.8	0.0	0.0	0.0	16.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	9.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	5.6	5.2	0.0	0.0	12.2
Percentile 100%	0.0	0.0	0.0	0.0	1.7	3.2	15.2	10.8	10.8	0.0	0.0	0.0	16.6

Table 57: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 15% of the MALF occurs at Pohangina at Mais Reach

Flow Statistic	IFIM + 15% of MALF	Flow	2.307										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1969	0.0	0.0	0.0	0.0	0.3	0.0	0.3	2.4	9.9	0.0	0.0	0.0	12.8
1970	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.9	0.0	0.0	0.0	0.0	3.9
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	4.6	0.0	0.0	0.0	12.6
1973	0.0	0.0	0.0	0.0	0.0	0.0	2.3	11.0	0.0	0.0	0.0	0.0	13.3
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	2.1
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	13.4	0.0	0.0	0.0	16.8
1978	0.0	0.0	0.0	0.0	0.0	0.0	2.8	4.7	0.0	0.0	0.0	0.0	7.5
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	9.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.5	0.0	0.0	0.0	0.0	2.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.7	11.8	7.4	0.0	0.0	0.0	19.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	16.2	2.2	0.0	0.0	0.0	0.0	18.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	6.2	3.8	0.0	0.0	0.0	0.0	10.1
1988	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	3.9	0.0	0.0	0.0	8.6
1989	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	1.9
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	3.4
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.4	2.3	7.0	0.0	0.0	0.0	15.7
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	11.0	0.0	0.0	0.0	13.8
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	3.3	4.7	38.9	71.7	57.3	0.0	0.0	0.0	175.9
Average	0.0	0.0	0.0	0.0	0.1	0.1	1.1	2.0	1.6	0.0	0.0	0.0	4.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	3.1	4.7	16.2	11.8	13.4	0.0	0.0	0.0	19.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	3.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	8.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.4	0.0	0.0	0.0	12.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	6.3	7.2	0.0	0.0	14.8
Percentile 100%	0.0	0.0	0.0	0.0	3.1	4.7	16.2	11.8	13.4	0.0	0.0	0.0	19.8

Table 58: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 20% of the MALF occurs at Pohangina at Mais Reach

Flow Statistic	IFIM + 20% of MALF	Flow	2.432										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1969	0.0	0.0	0.0	0.0	1.7	0.0	3.1	4.2	10.6	0.0	0.0	0.0	19.6
1970	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.9	0.0	1.3	0.0	0.0	6.8
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	4.6	0.0	0.0	0.0	13.6
1973	0.0	0.0	0.0	0.0	0.0	1.2	3.2	11.5	0.0	0.0	0.0	0.0	15.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	6.1
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.2	7.5	18.1	0.4	0.0	0.0	26.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	4.3	6.4	0.0	0.0	0.0	0.0	10.7
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	1.3	11.9	0.0	0.0	0.0	0.0	13.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.1	0.0	0.0	0.0	0.0	3.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.2	13.1	8.2	0.0	0.0	0.0	22.4
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	16.6	2.9	0.0	0.0	0.0	0.0	19.5
1987	0.0	0.0	0.0	0.0	0.0	0.0	7.0	3.8	0.0	0.0	0.0	0.0	10.9
1988	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.6	5.5	0.0	0.0	0.0	11.8
1989	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6
1990	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.6	0.0	0.0	0.0	0.0	3.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.7	0.8	0.0	0.0	0.0	6.1
1998	0.0	0.0	0.0	0.0	0.0	0.0	9.8	3.7	7.9	0.0	0.0	0.0	21.3
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.2	11.2	0.0	0.0	0.0	14.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	5.4	6.9	53.7	95.5	76.2	1.7	0.0	0.0	239.4
Average	0.0	0.0	0.0	0.0	0.1	0.2	1.5	2.7	2.1	0.0	0.0	0.0	6.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	3.6	5.7	16.6	13.1	18.1	1.3	0.0	0.0	26.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	3.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	6.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.8	0.6	0.0	0.0	10.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	4.7	4.6	0.0	0.0	13.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	8.3	8.1	0.0	0.0	19.6
Percentile 100%	0.0	0.0	0.0	0.0	3.6	5.7	16.6	13.1	18.1	1.3	0.0	0.0	26.3

Table 59: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 25% of the MALF occurs at Pohangina at Mais Reach

Flow Statistic	IFIM + 25% of MALF	Flow	2.539										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1969	0.0	0.0	0.0	0.0	3.0	0.0	5.7	6.5	11.0	0.0	0.0	0.0	26.3
1970	0.0	0.0	0.0	0.0	0.0	0.0	2.4	4.5	0.0	5.0	0.0	0.0	11.9
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	4.6	0.0	0.0	0.0	14.3
1973	0.0	0.0	0.0	0.0	0.0	3.6	3.5	12.0	0.0	1.3	0.0	0.0	20.4
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	7.8
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	4.6	9.2	19.6	1.9	0.0	0.0	35.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.8	0.0	0.0	0.0	0.0	12.8
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	3.6	14.0	0.0	0.0	0.0	0.0	17.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	4.7	2.5	0.0	0.0	0.0	0.0	7.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.9	13.8	8.5	0.0	0.0	0.0	24.2
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	2.1
1986	0.0	0.0	0.0	0.0	0.0	0.4	17.5	4.7	0.0	0.0	0.0	0.0	22.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	8.0	3.9	0.0	0.0	0.0	0.0	11.9
1988	0.0	0.0	0.0	0.0	0.0	8.6	0.0	1.8	6.4	0.0	0.0	0.0	16.8
1989	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0	5.3
1990	0.0	0.0	0.0	0.0	0.0	0.0	3.7	1.7	0.0	0.0	0.0	0.0	5.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.4	0.0	0.0	0.0	3.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.9	6.1	2.2	0.0	0.0	0.0	9.2
1998	0.0	0.0	0.0	0.0	0.0	0.0	11.1	4.5	8.2	0.0	0.0	0.0	23.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.7	11.5	0.0	0.0	0.0	16.7
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	8.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.5	0.0	0.0	0.0	2.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	7.6	12.7	74.3	117.1	90.6	10.2	0.0	0.0	312.4
Average	0.0	0.0	0.0	0.0	0.2	0.4	2.1	3.3	2.5	0.3	0.0	0.0	8.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	4.6	8.6	17.5	14.0	19.6	5.0	0.0	0.0	35.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	5.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.3	0.0	0.0	0.0	8.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.2	4.6	2.3	0.0	0.0	0.0	12.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.7	6.5	4.6	0.0	0.0	0.0	16.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	5.9	9.5	8.4	0.7	0.0	0.0	23.2
Percentile 100%	0.0	0.0	0.0	0.0	4.6	8.6	17.5	14.0	19.6	5.0	0.0	0.0	35.3

Table 60: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 30% of the MALF occurs at Pohangina at Mais Reach

Flow Statistic	IFIM + 30% of MALF	Flow	2.655										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1969	0.0	0.0	0.0	0.0	4.4	0.0	6.3	8.0	11.4	0.0	0.0	0.0	30.1
1970	0.0	0.0	0.0	0.0	0.0	0.0	3.1	5.1	0.4	6.1	0.0	0.0	14.8
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	4.6	0.0	0.0	0.0	15.3
1973	0.0	0.0	0.0	0.0	0.0	4.6	4.9	12.3	0.0	1.8	0.0	0.0	23.6
1974	0.0	0.0	0.0	0.0	0.0	0.0	1.4	11.1	0.0	0.0	0.0	0.0	12.5
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	6.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	7.2	1.6	0.0	0.0	9.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	5.9	10.3	22.3	3.1	0.0	0.0	41.5
1978	0.0	0.0	0.0	0.0	0.0	0.0	6.5	7.3	0.0	0.0	0.0	0.0	13.8
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	3.7
1981	0.0	0.0	0.0	0.0	0.0	0.0	8.1	15.4	0.0	0.0	0.0	0.0	23.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.9
1983	0.0	0.0	0.0	0.0	0.0	0.0	5.9	2.5	0.0	0.0	0.0	0.0	8.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	2.1	14.9	9.0	0.0	0.0	0.0	26.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3
1986	0.0	0.0	0.0	0.0	0.0	1.2	18.0	5.4	0.0	0.0	0.0	0.0	24.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	9.5	3.9	0.0	1.2	0.0	0.0	14.6
1988	0.0	0.0	0.0	0.0	0.0	10.6	0.0	3.0	7.4	1.3	0.0	0.0	22.4
1989	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	1.7	0.0	0.0	0.0	7.5
1990	0.0	0.0	0.0	0.0	0.0	0.0	3.9	2.6	0.0	0.0	0.0	0.0	6.5
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	4.2	0.0	0.0	0.0	7.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	3.4	9.1	5.3	0.0	0.0	0.0	17.8
1998	0.0	0.0	0.0	0.0	0.0	0.2	14.3	5.7	8.5	0.0	0.0	0.0	28.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	1.2	6.2	11.7	0.0	0.0	0.0	19.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	10.6	0.0	0.0	0.0	11.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.8	0.0	0.0	0.0	7.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	10.2	16.6	95.8	142.8	118.4	19.9	0.0	0.0	403.8
Average	0.0	0.0	0.0	0.0	0.3	0.5	2.7	4.0	3.3	0.6	0.0	0.0	11.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	5.8	10.6	18.0	15.4	22.3	6.1	0.0	0.0	41.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	6.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	8.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.9	1.7	0.0	0.0	12.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	5.6	4.4	0.0	0.0	15.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	8.0	7.2	0.5	0.0	22.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.1	7.3	10.9	9.8	1.7	0.0	0.0	25.3
Percentile 100%	0.0	0.0	0.0	0.0	5.8	10.6	18.0	15.4	22.3	6.1	0.0	0.0	41.5

Oroua Water Management Zone

Upper Oroua – Mana 12a

Table 61: Number of days that the IFIM recommended minimum flow occurs at Oroua at Kawa Wool

Flow statistic	IFIM	Flow	1.050																	
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL							
1967		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.4							
1968		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1969		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	2.0	1.3	0.0	4.3						
1970		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	6.8						
1971		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1						
1972		0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	4.1	0.0	0.0	0.0	11.8						
1973		0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	1.1	0.0	0.0	8.8						
1974		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1975		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	3.1						
1976		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	3.2	0.0	0.0	19.2						
1977		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	0.0	0.0	0.0	12.9						
1978		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	4.3						
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1981		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1982		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1983		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1984		0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	5.7						
1985		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1986		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1987		0.0	0.0	0.0	0.0	0.0	0.0	6.5	3.8	0.0	0.0	0.0	0.0	10.3						
1988		0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	4.0	1.0	0.0	0.0	5.6						
1989		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1990		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1993		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1994		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1995		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1997		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1998		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1999		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	0.0	10.2						
2000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.1					
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
2002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
2003		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
2004		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
TOTAL		0.0	0.0	0.0	0.0	0.0	0.6	6.5	29.5	54.8	17.2	1.3	0.0	109.8						
Average		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	1.4	0.5	0.0	0.0	2.9						
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Maximum		0.0	0.0	0.0	0.0	0.0	0.6	6.5	7.7	16.0	6.8	1.3	0.0	19.2						
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2						
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1					
Percentile 80%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7					
Percentile 90%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	1.4	0.0	0.0	10.2					
Percentile 100%		0.0	0.0	0.0	0.0	0.0	0.6	6.5	7.7	16.0	6.8	1.3	0.0	19.2						

Table 62: Number of days that the MALF occurs at Oroua at Kawa Wool

Flow statistic	MALF	Flow	1.240										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.5	0.0	0.0	9.7
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
1969	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.9	7.2	3.9	1.4	0.0	17.8
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	11.6	0.0	0.0	12.6
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.9	0.0	0.0	0.0	5.1
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	4.4	0.0	0.0	0.0	16.9
1973	0.0	0.0	0.0	0.0	0.0	0.0	3.3	10.0	0.0	3.5	0.0	0.0	16.8
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	1.9
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	5.1	0.0	0.0	11.7
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.3	13.4	0.0	0.0	33.8
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	21.6	1.8	0.0	0.0	25.1
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0	7.6
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	4.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.8
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.1	10.6	0.0	0.0	0.0	0.0	10.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	2.5
1987	0.0	0.0	0.0	0.0	0.0	0.0	9.6	4.1	0.0	0.0	0.0	0.0	13.7
1988	0.0	0.0	0.0	0.0	0.0	2.8	0.5	0.8	6.8	2.4	0.0	0.0	13.3
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	5.6	0.0	0.0	0.0	12.8
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	4.1	0.0	0.0	9.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	13.8	0.0	0.0	17.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0	9.3
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	2.8	22.7	75.8	112.0	42.3	1.4	0.0	0.0	257.1
Average	0.0	0.0	0.0	0.0	0.1	0.6	2.0	2.9	1.1	0.0	0.0	0.0	6.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	2.8	9.6	12.5	21.6	13.4	1.4	0.0	0.0	33.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	7.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.8	0.0	0.0	0.0	10.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.8	6.2	0.3	0.0	0.0	13.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.7	7.3	9.2	3.6	0.0	0.0	17.1
Percentile 100%	0.0	0.0	0.0	0.0	2.8	9.6	12.5	21.6	13.4	1.4	0.0	0.0	33.8

Table 63: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 10% of the MALF occurs at Oroua at Kawa Wool

Flow Statistic	IFIM Minimum flow + 10% of MALF	Flow	1.185										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.3	4.4	3.7	1.4	0.0	13.4
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	10.2	0.0	0.0	10.7
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	4.3	0.0	0.0	0.0	15.9
1973	0.0	0.0	0.0	0.0	0.0	0.0	2.0	9.7	0.0	2.2	0.0	0.0	13.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	4.3	0.0	0.0	10.1
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.7	13.0	0.0	0.0	31.7
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	20.1	0.9	0.0	0.0	21.8
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	6.7
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	2.8
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	9.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	8.6	4.0	0.0	0.0	0.0	0.0	12.6
1988	0.0	0.0	0.0	0.0	0.0	2.0	0.4	0.6	5.8	1.8	0.0	0.0	10.5
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	3.9	0.0	0.0	0.0	8.7
1998	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	3.3	0.0	0.0	0.0	5.4
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	13.1	0.0	0.0	0.0	16.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	7.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	2.0	13.8	58.3	95.4	36.1	1.4	0.0	207.1
Average	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.5	2.5	1.0	0.0	0.0	5.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	2.0	8.6	11.6	20.1	13.0	1.4	0.0	31.7
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.5	0.0	0.0	0.0	8.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.4	0.0	0.0	0.0	10.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.4	6.5	2.7	0.0	0.0	14.5
Percentile 100%	0.0	0.0	0.0	0.0	0.0	2.0	8.6	11.6	20.1	13.0	1.4	0.0	31.7

Table 64: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 15% of the MALF occurs at Oroua at Kawa Wool

Flow Statistic	IFIM Minimum flow + 15% of MALF	Flow	1.253										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.6	0.0	0.0	12.3
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
1969	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.1	7.4	4.0	1.4	0.0	18.2
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	11.7	0.0	0.0	12.9
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.0	0.0	0.0	0.0	5.5
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.7	4.6	0.0	0.0	0.0	17.3
1973	0.0	0.0	0.0	0.0	0.0	0.0	3.5	10.1	0.0	3.7	0.0	0.0	17.3
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	5.2	0.0	0.0	12.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	13.5	0.0	0.0	34.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	21.9	1.8	0.0	0.0	25.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	7.7
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	1.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.1	11.0	0.0	0.0	0.0	0.0	11.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	3.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	9.7	4.1	0.0	0.0	0.0	0.0	13.8
1988	0.0	0.0	0.0	0.0	0.0	3.0	0.6	0.9	7.0	2.7	0.0	0.0	14.3
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	2.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	5.7	0.0	0.0	0.0	13.2
1998	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	4.3	0.0	0.0	0.0	9.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	14.0	0.0	0.0	0.0	17.8
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	9.6
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	3.0	25.1	78.9	116.8	43.3	1.4	0.0	268.5
Average	0.0	0.0	0.0	0.0	0.0	0.1	0.7	2.1	3.1	1.1	0.0	0.0	7.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	3.0	9.7	12.7	21.9	13.5	1.4	0.0	34.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	8.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.9	0.0	0.0	0.0	11.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.0	6.4	0.4	0.0	0.0	13.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	2.0	7.6	10.2	3.8	0.0	0.0	17.5
Percentile 100%	0.0	0.0	0.0	0.0	0.0	3.0	9.7	12.7	21.9	13.5	1.4	0.0	34.0

Table 65: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 20% of the MALF occurs at Oroua at Kawa Wool

Flow Statistic	IFIM Minimum flow+ 20% of MALF	Flow	1.320										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	1.0	0.0	0.0	16.4
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.4
1969	0.0	0.0	0.0	0.0	0.0	0.0	1.9	4.8	8.1	4.3	1.4	0.0	20.6
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.8	12.4	0.0	0.0	15.3
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	2.3	0.0	0.0	0.0	7.4
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5	5.3	0.0	0.0	0.0	19.8
1973	0.0	0.0	0.0	0.0	0.0	0.0	5.0	11.1	0.0	5.1	0.0	0.0	21.1
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	3.5
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	5.8	0.0	0.0	13.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	21.1	13.7	0.0	0.0	36.4
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	22.9	2.4	0.0	0.0	30.5
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	8.7
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	2.4	0.0	0.0	0.0	9.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.5	0.0	0.0	0.0	0.0	3.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.5	13.9	1.1	0.0	0.0	0.0	15.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	5.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	11.0	4.1	0.0	0.0	0.1	0.0	15.2
1988	0.0	0.0	0.0	0.0	0.0	3.8	1.1	1.6	8.6	4.6	0.0	0.0	19.7
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.9
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.1	0.0	0.0	0.0	4.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.6	10.5	8.0	0.0	0.0	0.0	19.1
1998	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.8	4.7	0.0	0.0	0.0	15.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	14.8	0.0	0.0	0.0	19.5
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.8	0.0	0.0	0.0	10.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	3.8	36.9	104.7	138.4	49.2	1.6	0.0	334.5
Average	0.0	0.0	0.0	0.0	0.0	0.1	1.0	2.8	3.6	1.3	0.0	0.0	8.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	3.8	11.0	14.5	22.9	13.7	1.4	0.0	36.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	5.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.2	0.0	0.0	0.0	9.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.3	0.0	0.0	0.0	15.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.9	7.8	0.6	0.0	0.0	18.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	2.8	9.2	12.0	4.8	0.0	0.0	20.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	3.8	11.0	14.5	22.9	13.7	1.4	0.0	36.4

Table 66: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 25% of the MALF occurs at Oroua at Kawa Wool

Flow Statistic	IFIM Minimum flow + 25% of MALF	Flow	1.388										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	18.2	1.3	0.0	0.0	19.8
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	6.1
1969	0.0	0.0	0.0	0.0	0.0	0.0	2.4	7.2	8.7	4.6	1.5	0.0	24.4
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.4	12.8	0.0	0.0	17.6
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	2.9	0.0	0.0	0.0	11.8
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	5.8	0.0	0.0	0.0	21.8
1973	0.0	0.0	0.0	0.0	0.0	0.0	6.6	12.6	1.2	6.0	0.0	0.0	26.3
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	5.1
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	6.4	0.0	0.0	14.6
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	21.5	13.9	0.0	0.0	38.5
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	24.1	3.1	0.0	0.0	35.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0	0.0	0.0	9.3
1979	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	2.3	9.2	4.9	0.0	0.0	0.0	16.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.5	0.0	0.0	0.0	0.0	3.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.5	15.1	1.1	0.0	0.0	0.0	17.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0	0.0	8.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	11.5	4.1	0.0	0.0	1.3	0.0	16.9
1988	0.0	0.0	0.0	0.0	0.0	5.6	2.3	2.2	9.4	6.2	0.0	0.0	25.7
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.6	0.0	0.0	0.0	0.0	2.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	1.0	0.0	0.0	0.0	6.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.9	12.5	11.4	0.0	0.0	0.0	24.8
1998	0.0	0.0	0.0	0.0	0.0	0.0	12.8	3.2	6.1	0.0	0.0	0.0	22.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	15.2	0.0	0.0	0.0	20.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	12.3	0.8	0.0	0.0	14.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.1	0.0	0.0	0.0	3.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	5.9	51.5	136.4	163.6	55.0	2.8	0.0	415.2
Average	0.0	0.0	0.0	0.0	0.0	0.2	1.4	3.6	4.3	1.5	0.1	0.0	10.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	5.6	12.8	16.0	24.1	13.9	1.5	0.0	38.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.1	0.0	0.0	0.0	7.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.9	0.0	0.0	0.0	14.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.7	0.0	0.0	0.0	17.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	1.6	7.6	8.5	1.1	0.0	0.0	21.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	3.7	10.3	13.2	6.1	0.0	0.0	25.1
Percentile 100%	0.0	0.0	0.0	0.0	0.0	5.6	12.8	16.0	24.1	13.9	1.5	0.0	38.5

Table 67: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 30% of the MALF occurs at Oroua at Kawa Wool

Flow Statistic	IFIM Minimum flow + 30% of MALF	Flow	1.455										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	20.3	1.8	0.0	0.0	23.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	7.7
1969	0.0	0.0	0.0	0.0	0.0	0.0	2.8	7.6	8.7	4.9	1.5	0.0	25.6
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.6	13.2	0.0	0.0	19.9
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	3.4	0.0	0.0	0.0	13.3
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	7.5	0.5	0.0	0.0	27.9
1973	0.0	0.0	0.0	0.0	0.0	0.3	8.0	13.7	1.4	6.9	0.0	0.0	30.3
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	1.3	0.0	0.0	8.4
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	6.8	0.0	0.0	16.2
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	21.9	14.0	0.0	0.0	40.1
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	25.3	4.0	0.0	0.0	39.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0	10.1
1979	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	6.2	12.7	7.3	0.0	0.0	0.0	26.1
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	4.4
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.5	0.0	0.0	0.0	0.0	4.5
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.0	15.9	1.2	0.0	0.0	0.0	20.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	10.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	12.5	4.1	0.0	0.0	2.8	0.0	19.5
1988	0.0	0.0	0.0	0.0	0.0	7.9	3.0	2.9	10.2	8.8	0.0	0.0	32.9
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4
1990	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.9	0.0	0.0	0.0	0.0	4.5
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	2.1	0.7	0.0	0.0	11.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8
1997	0.0	0.0	0.0	0.0	0.0	0.0	1.9	13.9	14.0	0.0	0.0	0.0	29.8
1998	0.0	0.0	0.0	0.0	0.0	0.2	15.0	4.7	7.1	0.0	0.0	0.0	27.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	16.0	0.0	0.0	0.0	21.5
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	14.4	2.2	0.0	0.0	18.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	3.3	0.0	0.0	0.0	9.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	9.0	67.5	167.7	190.1	65.0	4.4	0.0	503.7
Average	0.0	0.0	0.0	0.0	0.0	0.2	1.8	4.4	5.0	1.7	0.1	0.0	13.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	7.9	15.0	20.0	25.3	14.0	2.8	0.0	40.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	7.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.3	0.0	0.0	0.0	10.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	3.4	0.0	0.0	0.0	16.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	7.3	0.4	0.0	0.0	20.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.7	9.3	9.2	2.0	0.0	0.0	25.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.1	6.7	13.0	14.9	6.8	0.0	0.0	30.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	7.9	15.0	20.0	25.3	14.0	2.8	0.0	40.1

Kiwitea – Mana 12d

Table 68: Number of days that the MALF occurs at Kiwitea at Spur Rd

Flow statistic	MALF	Flow	0.160																	
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL							
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.4	0.0	0.0	0.0	2.1							
1977	0.0	0.0	0.0	0.0	0.0	0.0	1.4	20.9	19.2	1.4	0.0	0.0	42.9							
1978	0.0	0.0	0.0	0.0	0.0	0.0	11.5	13.5	4.4	0.0	0.0	0.0	29.4							
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	7.0							
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.6							
1981	0.0	0.0	0.0	0.0	0.0	0.0	2.6	14.0	0.7	0.0	0.0	0.0	17.3							
1982	0.0	0.0	0.0	0.0	0.0	0.5	0.3	16.3	20.8	5.2	0.0	0.0	43.1							
1983	0.0	0.0	0.0	0.0	0.0	0.0	9.1	9.4	4.1	0.0	0.0	0.0	22.6							
1984	0.0	0.0	0.0	0.0	0.0	7.2	7.4	21.3	13.7	19.7	11.9	0.0	81.2							
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	2.0	0.0	0.0	0.0	8.5							
1986	0.0	0.0	0.0	0.0	0.0	0.0	10.2	9.4	0.0	0.0	0.0	0.0	19.6							
1987	0.0	0.0	0.0	0.0	0.0	0.0	26.5	4.0	0.3	0.3	0.0	0.0	31.2							
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	6.9	2.8	0.0	0.0	18.9							
1989	0.0	0.0	0.0	0.0	0.0	1.6	3.8	0.0	2.0	0.0	0.0	0.0	7.3							
1990	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	2.6	0.0	0.0	0.0	10.3							
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	5.7							
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.6	0.0	0.0	0.0	5.1							
1998	0.0	0.0	0.0	0.0	0.0	2.2	8.5	19.8	6.7	1.0	0.0	0.0	38.3							
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	12.4	0.0	0.0	0.0	17.8							
2000	0.0	0.0	0.0	0.0	0.0	0.0	4.5	7.7	18.6	0.0	0.0	0.0	30.8							
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9							
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
TOTAL	0.0	0.0	0.0	0.0	0.0	11.5	93.5	173.7	119.6	30.4	11.9	0.0	440.6							
Average	0.0	0.0	0.0	0.0	0.0	0.4	3.2	6.0	4.1	1.0	0.4	0.0	15.2							
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Maximum	0.0	0.0	0.0	0.0	0.0	7.2	26.5	21.3	20.8	19.7	11.9	0.0	81.2							
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7							
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.0	5.2							
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.9	0.0	0.0	0.0	7.3							
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	6.4	2.0	0.0	0.0	0.0	15.9							
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.3	8.6	3.5	0.0	0.0	0.0	19.3							
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	7.5	11.0	6.8	0.1	0.0	0.0	30.0							
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.7	9.3	17.0	14.7	1.7	0.0	0.0	39.2							
Percentile 100%	0.0	0.0	0.0	0.0	0.0	7.2	26.5	21.3	20.8	19.7	11.9	0.0	81.2							

Table 69: Number of days that the IFIM recommended minimum flow occurs at Kiwitea at Spur Rd

Flow statistic	IFIM	Flow	0.145											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.0	0.0	0.6
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.4	14.0	16.4	1.3	0.0	0.0	0.0	32.1
1978	0.0	0.0	0.0	0.0	0.0	0.0	8.9	11.9	3.2	0.0	0.0	0.0	0.0	23.9
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	0.0	0.0	0.0	0.0	12.1
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	14.3	2.3	0.0	0.0	0.0	30.6
1983	0.0	0.0	0.0	0.0	0.0	0.0	6.9	8.2	3.7	0.0	0.0	0.0	0.0	18.8
1984	0.0	0.0	0.0	0.0	0.0	5.6	5.8	20.0	11.2	18.9	11.3	0.0	0.0	72.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	5.2
1986	0.0	0.0	0.0	0.0	0.0	0.0	6.7	6.7	0.0	0.0	0.0	0.0	0.0	13.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	22.8	4.0	0.1	0.0	0.0	0.0	0.0	26.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	5.3	0.0	0.0	0.0	0.0	12.3
1989	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.9
1990	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.8	0.0	0.0	0.0	0.0	2.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	3.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
1998	0.0	0.0	0.0	0.0	0.0	0.0	7.7	17.5	6.0	0.0	0.0	0.0	0.0	31.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	8.8	0.0	0.0	0.0	0.0	10.8
2000	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.6	12.8	0.0	0.0	0.0	0.0	20.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	5.6	66.6	134.3	83.3	22.5	11.3	0.0	0.0	323.6
Average	0.0	0.0	0.0	0.0	0.0	0.2	2.3	4.6	2.9	0.8	0.4	0.0	0.0	11.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	5.6	22.8	20.0	16.4	18.9	11.3	0.0	0.0	72.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	3.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.3	0.0	0.0	0.0	0.0	9.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.3	6.1	2.2	0.0	0.0	0.0	0.0	13.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	4.6	9.7	5.6	0.0	0.0	0.0	0.0	21.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	7.1	14.0	11.5	0.3	0.0	0.0	0.0	30.7
Percentile 100%	0.0	0.0	0.0	0.0	0.0	5.6	22.8	20.0	16.4	18.9	11.3	0.0	0.0	72.8

Table 70: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 10% of the MALF occurs at Kiwitea at Spur Rd

Flow statistic	IFIM + 10% of MALF	Flow	0.16											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.4	0.0	0.0	0.0	2.1	
1977	0.0	0.0	0.0	0.0	0.0	0.0	1.4	20.9	19.2	1.4	0.0	0.0	42.9	
1978	0.0	0.0	0.0	0.0	0.0	0.0	11.5	13.5	4.4	0.0	0.0	0.0	29.4	
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7	0.0	0.0	0.0	0.0	7	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.6	
1981	0.0	0.0	0.0	0.0	0.0	0.0	2.6	14	0.7	0.0	0.0	0.0	17.3	
1982	0.0	0.0	0.0	0.0	0.0	0.5	0.3	16.3	20.8	5.2	0.0	0.0	43.1	
1983	0.0	0.0	0.0	0.0	0.0	0	9.1	9.4	4.1	0	0.0	0.0	22.6	
1984	0.0	0.0	0.0	0.0	0.0	7.2	7.4	21.3	13.7	19.7	11.9	0.0	81.2	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	2	0	0.0	0.0	8.5	
1986	0.0	0.0	0.0	0.0	0.0	0.0	10.2	9.4	0	0	0.0	0.0	19.6	
1987	0.0	0.0	0.0	0.0	0.0	0.0	26.5	4	0.3	0.3	0.0	0.0	31.2	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	6.9	2.8	0.0	0.0	18.9	
1989	0.0	0.0	0.0	0.0	0.0	1.6	3.8	0	2	0	0.0	0.0	7.3	
1990	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0	2.6	0	0.0	0.0	10.3	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	5.7	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.6	0.0	0.0	0.0	5.1	
1998	0.0	0.0	0.0	0.0	0.0	2.2	8.5	19.8	6.7	1	0.0	0.0	38.3	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	12.4	0.0	0.0	0.0	17.8	
2000	0.0	0.0	0.0	0.0	0.0	0.0	4.5	7.7	18.6	0.0	0.0	0.0	30.8	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL		0.0	0.0	0.0	0.0	0.0	11.5	93.5	173.7	119.6	30.4	11.9	0.0	440.6
Average		0.0	0.0	0.0	0.0	0.0	0.4	3.2	6.0	4.1	1.0	0.4	0.0	15.2
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum		0.0	0.0	0.0	0.0	0.0	7.2	26.5	21.3	20.8	19.7	11.9	0.0	81.2
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0	5.2	
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.9	0.0	0.0	7.3	
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	0.2	6.4	2.0	0.0	0.0	15.9	
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.0	3.3	8.6	3.5	0.0	0.0	19.3	
Percentile 80%		0.0	0.0	0.0	0.0	0.0	0.0	7.5	11.0	6.8	0.1	0.0	30.0	
Percentile 90%		0.0	0.0	0.0	0.0	0.0	0.7	9.3	17.0	14.7	1.7	0.0	0.0	39.2
Percentile 100%		0.0	0.0	0.0	0.0	0.0	7.2	26.5	21.3	20.8	19.7	11.9	0.0	81.2

Table 71: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 15% of the MALF occurs at Kiwitea at Spur Rd

Flow statistic	IFIM + 15% of MALF	Flow	0.167										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.4	0.0	0.0	0.0	3.8
1977	0.0	0.0	0.0	0.0	0.0	0.0	2.2	23.1	20.5	1.4	0.0	0.0	47.1
1978	0.0	0.0	0.0	0.0	0.0	0.0	12.8	14.3	5.0	0.0	0.0	0.0	32.1
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0	8.4
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.0	0.0	0.0	1.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	4.0	15.4	5.1	0.0	0.0	0.0	24.4
1982	0.0	0.0	0.0	0.0	0.0	0.7	0.4	16.7	22.0	6.2	0.0	0.0	45.9
1983	0.0	0.0	0.0	0.0	0.0	0.0	10.1	10.1	4.1	0.0	0.0	0.0	24.4
1984	0.0	0.0	0.0	0.0	0.0	8.3	8.0	22.0	15.7	20.1	12.3	0.0	86.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	3.8	0.0	0.0	0.0	10.9
1986	0.0	0.0	0.0	0.0	0.0	0.0	11.3	10.3	0.4	0.0	0.0	0.0	22.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	27.5	4.2	0.9	1.1	0.0	0.0	33.7
1988	0.0	0.0	0.0	0.0	0.0	2.5	0.0	10.0	7.6	4.9	0.0	0.0	25.0
1989	0.0	0.0	0.0	0.0	0.0	2.2	4.4	0.0	2.7	0.0	0.0	0.0	9.3
1990	0.0	0.0	0.0	0.0	0.0	0.2	10.0	0.3	5.6	0.0	0.0	0.0	16.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0	6.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	4.9	0.0	0.0	0.0	9.5
1998	0.0	0.0	0.0	0.0	0.0	3.1	8.6	20.5	7.6	3.0	0.0	0.0	42.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	12.7	0.0	0.0	0.0	18.3
2000	0.0	0.0	0.0	0.0	0.0	0.0	5.0	8.4	19.3	0.0	0.0	0.0	32.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	17.0	104.3	189.8	143.3	36.7	12.3	0.0	503.4
Average	0.0	0.0	0.0	0.0	0.0	0.6	3.6	6.5	4.9	1.3	0.4	0.0	17.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	8.3	27.5	23.1	22.0	20.1	12.3	0.0	86.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	7.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	2.4	0.0	0.0	0.0	9.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	7.0	4.0	0.0	0.0	0.0	17.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	4.2	9.4	5.1	0.0	0.0	0.0	24.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.1	8.2	11.9	7.6	0.4	0.0	0.0	32.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	2.3	10.3	17.5	16.4	3.4	0.0	0.0	43.4
Percentile 100%	0.0	0.0	0.0	0.0	0.0	8.3	27.5	23.1	22.0	20.1	12.3	0.0	86.5

Table 72: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 20% of the MALF occurs at Kiwitea at Spur Rd

Flow statistic	IFIM + 20% of MALF	Flow	0.174										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	3.5	0.0	0.0	0.0	5.6
1977	0.0	0.0	0.0	0.0	0.0	0.0	2.8	24.4	22.2	1.5	0.0	0.0	51.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	13.9	14.8	5.9	0.0	0.0	0.0	34.6
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	9.7
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.0	0.0	0.0	1.9
1981	0.0	0.0	0.0	0.0	0.0	0.0	4.6	16.2	7.3	0.0	0.0	0.0	28.1
1982	0.0	0.0	0.0	0.0	0.1	1.8	0.6	16.9	23.3	7.1	0.0	0.0	49.7
1983	0.0	0.0	0.0	0.0	0.0	0.0	11.2	10.6	4.1	0.0	0.0	0.0	25.9
1984	0.0	0.0	0.0	0.0	0.0	9.2	8.8	22.3	17.5	20.1	12.6	0.0	90.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	6.3	0.1	0.0	0.0	14.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	12.1	11.1	0.9	0.0	0.0	0.0	24.1
1987	0.0	0.0	0.0	0.0	0.0	0.0	28.0	4.2	1.6	2.8	0.0	0.0	36.6
1988	0.0	0.0	0.0	0.0	0.0	4.1	0.0	10.8	8.9	6.6	0.0	0.0	30.4
1989	0.0	0.0	0.0	0.0	0.0	2.6	5.2	0.0	3.4	0.0	0.0	0.0	11.2
1990	0.0	0.0	0.0	0.0	0.0	0.2	11.5	0.7	7.9	0.0	0.0	0.0	20.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0	7.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	6.5	0.0	0.0	0.0	12.1
1998	0.0	0.0	0.0	0.0	0.0	3.1	9.3	21.0	8.0	4.0	0.0	0.0	45.4
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	13.7	0.0	0.0	0.0	19.5
2000	0.0	0.0	0.0	0.0	0.0	0.0	5.6	9.5	20.5	1.9	0.0	0.0	37.5
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.1	21.1	113.8	202.2	167.3	44.0	12.6	0.0	561.0
Average	0.0	0.0	0.0	0.0	0.0	0.7	3.9	7.0	5.8	1.5	0.4	0.0	19.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.1	9.2	28.0	24.4	23.3	20.1	12.6	0.0	90.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.0	0.0	8.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	3.5	0.0	0.0	0.0	12.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	7.9	5.7	0.0	0.0	20.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	10.2	7.0	0.0	0.0	27.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.1	9.0	12.6	8.4	1.7	0.0	0.0	35.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	2.7	11.6	17.7	18.1	4.5	0.0	0.0	46.3
Percentile 100%	0.0	0.0	0.0	0.0	0.1	9.2	28.0	24.4	23.3	20.1	12.6	0.0	90.5

Table 73: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 25% of the MALF occurs at Kiwitea at Spur Rd

Flow statistic	IFIM + 25% of MALF	Flow	0.181										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	4.4	0.0	0.0	0.0	6.9
1977	0.0	0.0	0.0	0.0	0.0	0.0	4.2	25.5	23.4	2.2	0.0	0.0	55.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	14.7	15.3	6.4	0.0	0.0	0.0	36.4
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	11.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.7	0.0	0.0	0.0	3.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	5.1	17.1	11.8	0.0	0.0	0.0	34.0
1982	0.0	0.0	0.0	0.0	0.4	2.3	1.2	17.0	24.5	8.8	0.0	0.0	54.2
1983	0.0	0.0	0.0	0.0	0.0	0.0	12.7	11.4	4.1	0.0	0.0	0.0	28.2
1984	0.0	0.0	0.0	0.0	0.0	10.0	9.4	22.5	18.2	20.2	13.1	0.0	93.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	8.5	0.3	0.0	0.0	16.9
1986	0.0	0.0	0.0	0.0	0.0	0.0	13.1	11.8	1.3	0.0	0.0	0.0	26.2
1987	0.0	0.0	0.0	0.0	0.0	0.0	28.5	4.2	2.7	4.6	0.0	0.0	40.0
1988	0.0	0.0	0.0	0.0	0.0	5.0	1.9	11.2	10.4	7.3	0.0	0.0	35.9
1989	0.0	0.0	0.0	0.0	0.0	3.0	6.0	0.0	3.7	0.0	0.0	0.0	12.7
1990	0.0	0.0	0.0	0.0	0.0	0.4	12.3	2.1	9.4	0.0	0.0	0.0	24.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.3	0.0	0.0	0.0	9.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	8.2	0.0	0.0	0.0	15.3
1998	0.0	0.0	0.0	0.0	0.0	4.6	10.0	21.5	8.8	4.3	0.0	0.0	49.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	14.3	0.0	0.0	0.0	20.5
2000	0.0	0.0	0.0	0.0	0.0	0.0	6.1	10.9	21.4	2.9	0.0	0.0	41.3
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	10.7	0.0	0.0	0.0	10.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.4	25.4	125.3	216.4	195.4	50.6	13.1	0.0	626.7
Average	0.0	0.0	0.0	0.0	0.0	0.9	4.3	7.5	6.7	1.7	0.5	0.0	21.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.4	10.0	28.5	25.5	24.5	20.2	13.1	0.0	93.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	5.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.7	0.0	0.0	0.0	10.9
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	4.1	0.0	0.0	0.0	15.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.8	9.1	7.8	0.0	0.0	0.0	23.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	5.6	11.1	9.2	0.0	0.0	0.0	31.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.2	9.6	13.2	11.1	2.5	0.0	0.0	37.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	3.3	12.8	18.0	18.8	5.1	0.0	0.0	50.1
Percentile 100%	0.0	0.0	0.0	0.0	0.4	10.0	28.5	25.5	24.5	20.2	13.1	0.0	93.5

Table 74: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 30% of the MALF occurs at Kiwitea at Spur Rd

Flow statistic	IFIM + 30% of MALF	Flow	0.189										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	6.1	0.0	0.0	0.0	9.3
1977	0.0	0.0	0.0	0.0	0.0	0.0	5.6	26.3	24.8	2.7	0.0	0.0	59.4
1978	0.0	0.0	0.0	0.0	0.0	0.0	15.5	15.5	6.9	0.0	0.0	0.0	37.9
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	0.0	0.0	0.0	0.0	12.4
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.8	0.0	0.0	0.0	5.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	6.0	17.6	14.8	0.0	0.0	0.0	38.4
1982	0.0	0.0	0.0	0.0	0.5	3.4	1.8	17.1	25.2	9.4	0.0	0.0	57.3
1983	0.0	0.0	0.0	0.0	0.0	0.0	13.9	12.1	4.1	0.0	0.0	0.0	30.1
1984	0.0	0.0	0.0	0.0	0.2	10.4	10.2	22.7	18.9	20.3	13.6	0.0	96.4
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	10.7	0.8	0.0	0.0	19.9
1986	0.0	0.0	0.0	0.0	0.0	0.0	14.1	13.4	1.3	0.0	0.0	0.0	28.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	28.8	4.2	3.5	5.7	0.0	0.0	42.2
1988	0.0	0.0	0.0	0.0	0.0	6.5	3.9	11.7	11.6	10.5	0.0	0.0	44.3
1989	0.0	0.0	0.0	0.0	0.0	3.8	6.6	0.0	4.4	0.0	0.0	0.0	14.8
1990	0.0	0.0	0.0	0.0	0.0	0.5	13.6	3.9	10.7	0.0	0.0	0.0	28.7
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.5	10.8	0.8	0.0	0.0	0.0	12.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	10.0	0.0	0.0	0.0	18.9
1998	0.0	0.0	0.0	0.0	0.0	5.4	10.5	21.9	9.1	5.1	0.0	0.0	52.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	16.1	0.0	0.0	0.0	26.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	7.3	13.7	22.2	3.7	0.0	0.0	46.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	13.9	0.0	0.0	0.0	16.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.7	30.0	138.5	239.9	219.0	58.3	13.6	0.0	700.0
Average	0.0	0.0	0.0	0.0	0.0	1.0	4.8	8.3	7.5	2.0	0.5	0.0	24.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.5	10.4	28.8	26.3	25.2	20.3	13.6	0.0	96.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.3	0.0	0.0	0.0	7.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.6	0.0	0.0	0.0	12.9
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	4.4	0.0	0.0	0.0	18.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	3.5	10.7	8.7	0.0	0.0	0.0	28.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	6.4	12.3	10.7	0.0	0.0	0.0	34.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.2	10.3	14.4	14.3	3.1	0.0	0.0	43.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	4.1	13.9	18.5	19.6	6.4	0.0	0.0	53.1
Percentile 100%	0.0	0.0	0.0	0.0	0.5	10.4	28.8	26.3	25.2	20.3	13.6	0.0	96.4

Makino – Mana 12e**Table 75: Number of days the MALF occurs at Makino at Boness Rd**

Flow Statistic	MALF	Flow	0.080											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		TOTAL
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	2.9	2.1	0.0	0.0	0.0	17.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	8.9	0.0	0.0	0.0	0.0	20.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0	0.0	12.3
1998	0.0	0.0	0.0	0.0	0.0	0.0	5.6	15.3	6.3	0.0	0.0	0.0	0.0	27.3
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1	28.9	8.0	0.0	0.0	0.0	60.0
2000	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	2.1	8.5	24.1	0.0	0.0	0.0	0.0	34.8
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.7	0.0	0.0	0.0	0.0	5.1
TOTAL	0.0	0.0	0.0	0.0	0.0	1.1	8.3	71.6	74.9	22.4	0.0	0.0	0.0	178.2
Average	0.0	0.0	0.0	0.0	0.0	0.1	0.6	5.1	5.3	1.6	0.0	0.0	0.0	12.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Maximum	0.0	0.0	0.0	0.0	0.0	1.1	5.6	23.1	28.9	12.3	0.0	0.0	0.0	60.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.6							
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	3.1							
Percentile 60%	0.0	1.1	2.3	0.0	0.0	0.0	10.9							
Percentile 70%	0.0	8.8	4.0	0.0	0.0	0.0	0.0	17.5						
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	11.6	7.3	0.8	0.0	0.0	0.0	22.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.6	14.3	19.5	6.2	0.0	0.0	0.0	32.6
Percentile 100%	0.0	0.0	0.0	0.0	0.0	1.1	5.6	23.1	28.9	12.3	0.0	0.0	0.0	60.0

Table 76: Number of days that the IFIM recommended minimum flow occurs at Makino at Boness Rd

Flow Statistic	IFIM	Flow	0.1											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	2.9	2.1	0.0	0.0	17.2	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	8.9	0.0	0.0	0.0	20.0	
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0	12.3	
1998	0.0	0.0	0.0	0.0	0.0	0.0	5.6	15.3	6.3	0.0	0.0	0.0	27.3	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1	28.9	8.0	0.0	0.0	60.0	
2000	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	2.1	8.5	24.1	0.0	0.0	0.0	34.8	
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.7	0.0	0.0	0.0	5.1	
TOTAL	0.0	0.0	0.0	0.0	0.0	1.1	8.3	71.5	74.8	22.4	0.0	0.0	178.1	
Average	0.0	0.0	0.0	0.0	0.0	0.1	0.6	5.1	5.3	1.6	0.0	0.0	12.7	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	0.0	0.0	1.1	5.6	23.1	28.9	12.3	0.0	0.0	60.0	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.3	0.0	0.0	0.0	10.9	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	4.0	0.0	0.0	0.0	17.5	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	11.6	7.3	0.8	0.0	0.0	22.9	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.6	14.3	19.5	6.2	0.0	0.0	32.6	
Percentile 100%	0.0	0.0	0.0	0.0	0.0	1.1	5.6	23.1	28.9	12.3	0.0	0.0	60.0	

Table 77: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 10% of the MALF occurs at Makino at Boness Rd

Flow Statistic	IFIM + 10% of MALF	Flow	0.088										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.6	18.7	11.0	0.0	0.0	46.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.1	16.1	10.6	0.0	0.0	0.0	26.9
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	15.6	0.0	0.0	17.8
1998	0.0	0.0	0.0	0.0	0.0	0.0	15.3	20.7	12.7	1.0	0.0	0.0	49.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	6.9	24.1	29.1	10.4	1.7	0.0	72.3
2000	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	5.2	15.7	26.6	0.7	0.0	0.0	48.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	15.5	0.0	0.0	0.0	24.0
TOTAL	0.0	0.0	0.0	0.0	0.0	2.9	28.7	101.8	115.3	38.8	1.7	0.0	289.2
Average	0.0	0.0	0.0	0.0	0.0	0.2	2.1	7.3	8.2	2.8	0.1	0.0	20.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	2.9	15.3	24.1	29.1	15.6	1.7	0.0	72.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	10.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	8.9	0.0	0.0	0.0	22.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	15.7	13.0	0.7	0.0	0.0	28.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.8	16.3	16.8	4.8	0.0	0.0	47.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	6.4	19.5	24.2	10.8	0.0	0.0	49.2
Percentile 100%	0.0	0.0	0.0	0.0	0.0	2.9	15.3	24.1	29.1	15.6	1.7	0.0	72.3

Table 78: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 15% of the MALF occurs at Makino at Boness Rd

Flow Statistic	IFIM + 15% of MALF	Flow	0.092										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.7	19.4	21.2	14.0	0.0	0.0	55.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	1.4	17.3	10.7	0.0	0.0	0.0	29.4
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	17.6	2.5	0.0	29.3
1998	0.0	0.0	0.0	0.0	0.0	0.0	18.7	20.9	14.9	2.1	0.0	0.0	56.5
1999	0.0	0.0	0.0	0.0	0.0	0.0	10.6	25.1	29.3	16.0	5.9	0.0	86.9
2000	0.0	0.0	0.0	0.0	0.0	3.6	0.1	0.0	0.0	0.0	0.0	0.0	3.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	6.7	18.7	27.3	4.8	0.0	0.0	57.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	1.9
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	17.2	0.0	0.0	0.0	27.9
TOTAL	0.0	0.0	0.0	0.0	0.0	3.6	40.1	112.9	130.0	54.6	8.4	0.0	349.5
Average	0.0	0.0	0.0	0.0	0.0	0.3	2.9	8.1	9.3	3.9	0.6	0.0	24.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	3.6	18.7	25.1	29.3	17.6	5.9	0.0	86.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	4.7	0.0	0.0	0.0	15.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	8.7	10.4	0.0	0.0	0.0	29.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.5	17.4	15.1	2.4	0.0	0.0	32.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.8	19.0	18.8	8.5	0.0	0.0	55.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	9.4	20.5	25.5	15.4	1.8	0.0	57.2
Percentile 100%	0.0	0.0	0.0	0.0	0.0	3.6	18.7	25.1	29.3	17.6	5.9	0.0	86.9

Table 79: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 20% of the MALF occurs at Makino at Boness Rd

Flow Statistic	IFIM + 20% of MALF	Flow	0.096										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.6	0.0	0.0	0.0	3.1
1993	0.0	0.0	0.0	0.0	0.0	0.0	3.8	22.1	22.0	15.1	0.0	0.0	62.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	9.8	18.2	10.9	0.0	0.0	0.0	38.9
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	19.3	3.3	0.0	34.1
1998	0.0	0.0	0.0	0.0	0.0	0.6	20.0	22.2	18.1	5.5	0.0	0.0	66.4
1999	0.0	0.0	0.0	0.0	0.0	0.1	13.1	25.2	29.3	16.9	6.4	0.0	91.0
2000	0.0	0.0	0.0	0.0	0.0	4.3	0.9	0.0	0.0	0.0	0.0	0.0	5.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	10.4	21.7	28.0	8.9	0.0	0.0	69.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	2.7
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	17.8	0.0	0.0	0.0	29.9
TOTAL	0.0	0.0	0.0	0.0	0.0	4.9	60.9	124.9	138.4	65.7	9.6	0.0	404.4
Average	0.0	0.0	0.0	0.0	0.0	0.4	4.3	8.9	9.9	4.7	0.7	0.0	28.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	4.3	20.0	25.2	29.3	19.3	6.4	0.0	91.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	3.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.6	5.8	0.0	0.0	0.0	17.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	2.3	10.2	11.5	0.0	0.0	0.0	33.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	4.4	18.6	17.8	5.8	0.0	0.0	41.3
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	10.0	21.9	19.7	11.4	0.0	0.0	64.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.5	12.3	22.2	26.2	16.4	2.3	0.0	68.2
Percentile 100%	0.0	0.0	0.0	0.0	0.0	4.3	20.0	25.2	29.3	19.3	6.4	0.0	91.0

Table 80: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 25% of the MALF occurs at Makino at Boness Rd

Flow Statistic	IFIM + 25% of MALF	Flow	0.1										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	5.7	0.3	0.0	0.0	11.6
1993	0.0	0.0	0.0	0.0	0.0	0.0	11.0	23.3	22.5	16.5	0.0	0.0	73.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	14.4	19.0	11.0	0.0	0.0	0.0	44.4
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	3.9
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.6	19.6	3.9	0.0	39.1
1998	0.0	0.0	0.0	0.0	0.0	2.0	20.6	22.2	19.1	8.0	0.0	0.0	71.8
1999	0.0	0.0	0.0	0.0	0.0	1.1	14.6	25.7	29.4	18.8	6.7	0.0	96.2
2000	0.0	0.0	0.0	0.0	0.0	5.4	4.7	0.0	0.1	0.0	0.0	0.0	10.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	12.6	24.1	28.6	9.5	0.0	0.0	74.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	18.2	0.0	0.0	0.0	31.2
TOTAL	0.0	0.0	0.0	0.0	0.0	8.4	81.1	136.9	150.3	72.8	10.5	0.0	460.0
Average	0.0	0.0	0.0	0.0	0.0	0.6	5.8	9.8	10.7	5.2	0.8	0.0	32.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	5.4	20.6	25.7	29.4	19.6	6.7	0.0	96.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.2	0.0	0.0	0.0	10.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.8	8.4	0.0	0.0	0.0	21.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	4.4	11.5	14.7	0.2	0.0	0.0	37.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	11.2	19.3	18.3	8.2	0.0	0.0	47.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.4	13.3	22.6	20.5	12.3	0.0	0.0	72.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.7	14.5	23.9	26.8	18.1	2.7	0.0	74.4
Percentile 100%	0.0	0.0	0.0	0.0	0.0	5.4	20.6	25.7	29.4	19.6	6.7	0.0	96.2

Table 81: Number of days that a proposed management flow of the IFIM recommended minimum flow plus a core allocation of 30% of the MALF occurs at Makino at Boness Rd

Flow Statistic	IFIM + 30% of MALF	Flow	0.104										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	9.0	2.3	0.0	0.0	20.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	13.3	24.1	23.0	18.2	0.0	0.0	78.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	18.2	19.9	11.1	0.0	0.0	0.0	49.1
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	1.3	0.0	0.0	0.0	6.9
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.9	20.1	7.2	0.0	45.3
1998	0.0	0.0	0.0	0.0	0.0	3.3	21.1	23.3	20.4	11.3	0.0	0.0	79.4
1999	0.0	0.0	0.0	0.0	0.0	2.3	16.5	25.7	29.4	19.2	6.8	0.0	100.0
2000	0.0	0.0	0.0	0.0	0.0	6.0	9.4	2.0	0.8	0.0	0.0	0.0	18.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	16.8	25.1	29.4	10.9	0.0	0.0	82.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	1.5	16.3	19.3	0.0	0.0	0.0	37.1
TOTAL	0.0	0.0	0.0	0.0	0.0	11.7	99.9	150.8	161.6	82.1	14.0	0.0	520.1
Average	0.0	0.0	0.0	0.0	0.0	0.8	7.1	10.8	11.5	5.9	1.0	0.0	37.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	6.0	21.1	25.7	29.4	20.1	7.2	0.0	100.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	6.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.7	2.8	0.0	0.0	0.0	18.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	2.3	7.2	10.1	0.0	0.0	0.0	28.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	8.1	14.8	16.5	1.8	0.0	0.0	43.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	13.6	20.2	19.4	10.9	0.0	0.0	52.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.9	16.6	23.6	21.4	14.1	0.0	0.0	78.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	3.0	17.8	24.8	27.5	18.9	4.8	0.0	81.4
Percentile 100%	0.0	0.0	0.0	0.0	0.0	6.0	21.1	25.7	29.4	20.1	7.2	0.0	100.0

Middle Rangitikei Water Management Zone – Rang 2

Upper Hautapu – Rang 2f

Table 82: Number of days that the MALF occurs at Hautapu at Taihape All

Flow Statistic	MALF	Flow	0.745											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.3	5.9	0.0	0.0	17.5	
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	5.7	0.0	0.0	18.8	
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1981	0.0	0.0	0.0	0.0	0.0	0.0	2.0	23.2	0.0	0.0	0.0	0.0	25.2	
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	27.9	20.6	1.3	0.0	60.1	
1983	0.0	0.0	0.0	0.0	0.0	0.0	6.0	8.6	4.7	1.6	0.0	0.0	20.9	
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.2	23.8	23.9	26.1	13.8	0.0	90.7	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1986	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4	
1987	0.0	0.0	0.0	0.0	0.0	0.0	7.8	3.8	0.0	0.0	0.0	0.0	11.6	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	5.4	
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	0.0	0.0	0.0	0.0	0.0	0.0	8.6	9.3	16.9	5.1	0.0	0.0	39.9	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1995	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.3	0.0	0.0	0.0	4.5	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	24.6	23.4	28.8	20.5	0.7	0.0	97.9	
1998	0.0	0.0	0.0	0.0	0.0	10.4	15.6	10.0	18.0	7.9	0.0	0.0	62.0	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	25.8	10.6	0.0	0.0	40.9	
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.8	16.7	16.6	0.0	56.1	
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	0.0	0.0	10.5	73.5	128.6	182.7	126.1	32.4	0.0	553.6	
Average	0.0	0.0	0.0	0.0	0.0	0.3	1.8	3.1	4.5	3.1	0.8	0.0	13.5	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	0.0	0.0	10.4	24.6	23.8	28.8	26.1	16.6	0.0	97.9	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.5	4.7	5.4	0.0	0.0	20.9	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	6.0	10.3	22.8	10.6	0.0	0.0	56.1	
Percentile 100%	0.0	0.0	0.0	0.0	0.0	10.4	24.6	23.8	28.8	26.1	16.6	0.0	97.9	

Table 83: Number of days that a proposed management flow of the MALF plus a core allocation of 10% of the MALF occurs at Hautapu at Taihape All

Flow Statistic	MALF + 10% of MALF	Flow	0.820										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.8	1.8	15.3	0.0	0.0	36.9
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	5.3
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	26.3	8.4	0.0	0.0	35.7
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	3.1	23.3	0.0	0.0	0.0	0.0	26.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	1.6	13.3	29.1	22.8	2.5	0.0	69.4
1983	0.0	0.0	0.0	0.0	0.0	0.0	11.7	11.3	4.7	6.2	0.0	0.0	33.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	5.5	24.8	25.5	27.4	14.0	0.0	97.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	3.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	13.1	4.0	0.0	0.0	0.0	0.0	17.1
1988	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	23.7	0.0	0.0	24.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	1.5	19.7	14.6	22.4	5.2	0.0	0.0	63.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0	0.0	0.0	0.0	4.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.6	0.0	0.0	0.0	6.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	27.7	24.3	29.8	22.9	2.7	0.0	107.2
1998	0.0	0.0	0.0	0.0	0.0	13.2	15.8	14.4	20.7	9.4	0.0	0.0	73.5
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.7	28.5	13.5	0.0	0.0	48.7
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	29.5	21.8	18.6	0.0	72.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	15.6	108.7	160.8	221.9	183.9	37.7	0.0	728.6
Average	0.0	0.0	0.0	0.0	0.0	0.4	2.7	3.9	5.4	4.5	0.9	0.0	17.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	13.2	27.7	24.8	29.8	27.4	18.6	0.0	107.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.8	0.0	17.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	5.7	4.7	8.4	0.0	35.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	11.7	14.6	26.3	21.8	0.0	0.0	69.4
Percentile 100%	0.0	0.0	0.0	0.0	0.0	13.2	27.7	24.8	29.8	27.4	18.6	0.0	107.2

Table 84: Number of days that a proposed management flow of the MALF plus a core allocation of 15% of the MALF occurs at Hautapu at Taihape All

Flow Statistic	MALF + 10% of Flow	0.857											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.5	2.3	18.6	4.1	0.0	45.5
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	8.1
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	27.7	8.8	0.0	0.0	41.5
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	5.0	23.3	1.2	0.0	0.0	0.0	29.5
1982	0.0	0.0	0.0	0.0	0.0	0.0	3.0	14.9	30.0	23.6	3.3	0.0	74.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	15.0	12.7	4.7	8.9	0.0	0.0	41.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	6.8	25.0	26.4	28.3	14.0	0.0	100.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	6.1	0.0	0.0	6.3
1986	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	6.2
1987	0.0	0.0	0.0	0.0	0.0	0.0	16.6	5.9	0.0	0.0	1.2	0.0	23.8
1988	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.4	25.2	0.0	0.0	26.9
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	2.1	20.7	16.5	23.0	5.3	0.0	0.0	67.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	5.8	0.0	0.0	8.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.7	0.0	0.0	0.0	6.6
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.8	27.9	24.5	29.8	24.5	4.0	0.0	111.3
1998	0.0	0.0	0.0	0.0	0.0	14.4	15.8	15.4	21.4	9.8	0.0	0.0	76.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.1	7.2	29.4	13.8	0.0	0.0	52.5
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	30.1	23.0	19.4	0.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	18.6	125.1	182.4	234.3	204.0	46.1	0.6	811.1
Average	0.0	0.0	0.0	0.0	0.0	0.5	3.0	4.4	5.7	5.0	1.1	0.0	19.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	14.4	27.9	25.0	30.1	28.3	19.4	0.6	111.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.2	5.3	0.0	0.0	23.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	5.0	9.1	5.8	8.9	0.0	0.0	41.5
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	15.0	16.5	27.7	23.0	3.3	0.0	74.8
Percentile 100%	0.0	0.0	0.0	0.0	0.0	14.4	27.9	25.0	30.1	28.3	19.4	0.6	111.3

Table 85: Number of days that a proposed management flow of the MALF plus a core allocation of 20% of the MALF occurs at Hautapu at Taihape All

Flow Statistic	MALF + 20% of MALF	Flow	0.894										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.3	3.3	22.7	5.0	0.0	52.3
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0	15.1
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	27.9	9.0	0.0	0.0	45.2
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.0	4.2	0.9	0.0	10.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	8.2	23.4	1.9	0.0	0.0	0.0	33.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	4.6	17.4	30.3	24.1	4.2	0.0	80.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	17.1	13.6	5.1	12.4	0.0	0.0	48.3
1984	0.0	0.0	0.0	0.0	0.0	0.0	8.3	25.1	26.8	29.1	14.1	0.0	103.4
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	10.2	4.7	0.0	18.3
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	9.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	17.3	7.0	0.0	2.6	2.6	0.0	29.5
1988	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	1.4	26.6	0.0	0.0	31.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.3
1990	0.0	0.0	0.0	0.0	0.0	3.0	22.6	17.4	23.8	5.5	0.0	0.0	72.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	0.0	0.0	0.0	2.7
1993	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.8	7.7	0.0	0.0	0.0	13.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.7	0.0	0.0	0.0	7.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	1.9	28.1	24.6	30.0	24.8	6.7	0.0	116.2
1998	0.0	0.0	0.0	0.0	0.0	15.0	15.9	17.5	21.9	10.2	0.0	0.0	80.5
1999	0.0	0.0	0.0	0.0	0.2	0.0	2.7	7.9	29.7	14.0	0.0	0.0	54.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5	30.5	23.9	19.8	2.6	93.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.2	23.3	142.1	205.5	252.2	234.7	57.9	2.6	918.4
Average	0.0	0.0	0.0	0.0	0.0	0.6	3.5	5.0	6.1	5.7	1.4	0.1	22.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.2	15.0	28.1	25.1	30.5	29.1	19.8	2.6	116.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	10.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3	5.5	0.0	0.0	29.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	6.8	13.6	7.7	12.4	0.0	0.0	48.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	15.9	17.5	27.9	23.9	4.7	0.0	80.5
Percentile 100%	0.0	0.0	0.0	0.0	0.2	15.0	28.1	25.1	30.5	29.1	19.8	2.6	116.2

Table 86: Number of days that a proposed management flow of the MALF plus a core allocation of 25% of the MALF occurs at Hautapu at Taihape All

Flow Statistic	MALF + 25% of MALF	Flow	0.931										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5	4.3	25.2	7.7	0.0	59.8
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.6	0.0	0.0	16.6
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	28.2	9.2	0.0	0.0	46.6
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	6.3	5.6	2.9	0.0	17.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	11.8	23.4	2.4	0.4	0.0	0.0	38.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	5.2	18.4	30.9	24.4	4.7	0.0	83.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	18.4	14.6	5.9	16.7	0.0	0.0	55.7
1984	0.0	0.0	0.0	0.0	0.0	0.1	10.5	25.4	27.1	29.3	14.1	0.0	106.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	11.4	8.3	0.0	26.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	11.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	17.5	7.5	0.0	7.3	5.7	0.0	38.1
1988	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	2.7	27.3	0.0	0.0	36.5
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.1	0.0	0.0	0.0	4.8
1990	0.0	0.0	0.0	0.0	0.0	3.9	23.8	18.6	24.7	5.6	0.0	0.0	76.7
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.0	0.0	0.0	0.0	5.6
1993	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.4	9.0	0.0	0.0	0.0	20.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	1.0	0.0	0.0	0.0	8.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	2.6	28.2	24.8	30.5	25.1	8.2	0.0	119.5
1998	0.0	0.0	0.0	0.0	0.0	16.3	15.9	20.4	22.4	10.8	0.0	0.0	85.9
1999	0.0	0.0	0.0	0.0	4.0	0.0	4.3	8.9	29.9	15.4	0.0	0.0	62.5
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.5	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	31.0	24.6	20.3	4.5	101.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	4.0	29.4	158.0	228.1	270.8	257.4	71.9	4.5	1024.2	
Average	0.0	0.0	0.0	0.0	0.1	0.7	3.9	5.6	6.6	6.3	1.8	0.1	25.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	4.0	16.3	28.2	25.4	31.0	29.3	20.3	4.5	119.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.4	0.4	0.0	0.0	16.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	4.3	7.3	0.0	0.0	36.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	14.6	9.0	15.4	0.0	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.1	15.9	21.0	28.2	24.6	7.7	0.0	83.5
Percentile 100%	0.0	0.0	0.0	4.0	16.3	28.2	25.4	31.0	29.3	20.3	4.5	119.5	

Table 87: Number of days that a proposed management flow of the MALF plus a core allocation of 30% of the MALF occurs at Hautapu at Taihape All

Flow Statistic	MALF + 30% of MALF	Flow	0.969										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.8	5.1	27.5	10.2	0.0	66.6
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	19.3	0.0	0.0	19.8
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	28.4	9.3	0.0	0.0	48.1
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	7.1	9.5	5.9	0.0	26.2
1981	0.0	0.0	0.0	0.0	0.0	0.0	14.1	23.7	2.6	2.8	0.2	0.0	43.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	5.7	19.2	31.0	24.5	5.2	0.0	85.6
1983	0.0	0.0	0.0	0.0	0.0	0.0	21.0	15.8	6.7	19.3	0.0	0.0	62.7
1984	0.0	0.0	0.0	0.0	0.0	1.1	11.8	25.5	27.4	29.6	14.1	0.0	109.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	14.0	11.5	0.0	35.6
1986	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	12.5
1987	0.0	0.0	0.0	0.0	0.0	0.0	18.2	8.9	0.0	10.6	6.6	0.0	44.3
1988	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0	6.1	28.1	0.6	0.0	44.5
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	5.0	0.0	0.0	0.0	9.3
1990	0.0	0.0	0.0	0.0	0.0	4.5	24.8	19.8	25.2	6.1	0.0	0.0	80.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	6.4	0.0	0.0	0.0	9.7
1993	0.0	0.0	0.0	0.0	0.0	0.0	5.1	10.1	9.8	0.0	0.0	0.0	25.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5
1995	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.3	1.6	0.0	0.0	0.0	10.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	3.1	28.3	25.0	30.9	25.4	9.5	0.0	122.2
1998	0.0	0.0	0.0	0.0	0.0	17.5	15.9	21.0	22.9	11.4	0.0	0.0	88.8
1999	0.0	0.0	0.0	0.0	5.2	0.0	5.5	14.2	30.2	16.9	0.8	0.0	72.8
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	5.3	0.0	0.0	11.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.9	31.0	25.3	20.8	5.0	107.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	5.2	35.8	171.8	255.1	294.0	285.1	85.2	5.0	1137.2
Average	0.0	0.0	0.0	0.0	0.1	0.9	4.2	6.2	7.2	6.9	2.1	0.1	27.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	5.2	17.5	28.3	25.5	31.0	29.6	20.8	5.0	122.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.0	2.8	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	8.9	6.4	9.5	0.0	43.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	8.3	15.8	10.2	16.9	0.8	0.0	62.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.1	15.9	23.7	28.4	25.3	9.5	0.0	85.6
Percentile 100%	0.0	0.0	0.0	0.0	5.2	17.5	28.3	25.5	31.0	29.6	20.8	5.0	122.2

Table 88: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Hautapu at Taihape All

Flow statistic	MALF* 0.9	Flow	0.671										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.2
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	2.2	0.0	0.0	8.7
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	1.4	17.4	0.0	0.0	0.0	0.0	18.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	23.7	15.0	0.0	0.0	41.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	4.8	4.0	0.0	0.0	12.6
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	21.3	24.9	13.5	0.0	78.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.7	0.0	0.0	0.0	6.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.4	6.5	0.3	0.0	0.0	12.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	1.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	22.1	21.9	28.3	14.1	0.0	0.0	86.3
1998	0.0	0.0	0.0	0.0	0.0	9.4	15.6	5.4	13.8	5.6	0.0	0.0	49.7
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	21.6	8.9	0.0	0.0	30.7
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.1	1.1	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	9.4	46.9	85.2	134.5	71.0	14.7	0.0	361.7
Average	0.0	0.0	0.0	0.0	0.0	0.2	1.1	2.1	3.3	1.7	0.4	0.0	8.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	9.4	22.1	21.9	28.3	24.9	13.5	0.0	86.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	4.0	0.0	0.0	0.0	10.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	5.4	13.8	5.6	0.0	30.7
Percentile 100%	0.0	0.0	0.0	0.0	0.0	9.4	22.1	21.9	28.3	24.9	13.5	0.0	86.3

Table 89: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Hautapu at Taihape All

Flow statistic	(MALF* 0.9) + 10% of MALF	Flow	0.745										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.3	5.9	0.0	0.0	17.5
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	5.7	0.0	0.0	18.8
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	2.0	23.2	0.0	0.0	0.0	0.0	25.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	27.9	20.6	1.3	0.0	60.1
1983	0.0	0.0	0.0	0.0	0.0	0.0	6.0	8.6	4.7	1.6	0.0	0.0	20.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.2	23.8	23.9	26.1	13.8	0.0	90.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	7.8	3.8	0.0	0.0	0.0	0.0	11.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	5.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	8.6	9.3	16.9	5.1	0.0	0.0	39.9
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.3	0.0	0.0	0.0	4.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	24.6	23.4	28.8	20.5	0.7	0.0	97.9
1998	0.0	0.0	0.0	0.0	0.0	10.4	15.6	10.0	18.0	7.9	0.0	0.0	62.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	25.8	10.6	0.0	0.0	40.9
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.8	16.7	16.6	0.0	56.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	10.5	73.5	128.5	182.7	126.1	32.4	0.0	553.6
Average	0.0	0.0	0.0	0.0	0.0	0.3	1.8	3.1	4.5	3.1	0.8	0.0	13.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	10.4	24.6	23.8	28.8	26.1	16.6	0.0	97.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.5	4.7	5.4	0.0	0.0	20.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	6.0	10.3	22.8	10.6	0.0	0.0	56.1
Percentile 100%	0.0	0.0	0.0	0.0	0.0	10.4	24.6	23.8	28.8	26.1	16.6	0.0	97.9

Table 90: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Hautapu at Taihape All

Flow statistic	(MALF* 0.9) +15% of MALF	Flow	0.782										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963		0.0	0.0	0.0	0.0	0.0	0.0	16.8	1.1	11.0	0.0	0.0	28.9
1964		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5
1967		0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.4	7.2	0.0	0.0	27.6
1968		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981		0.0	0.0	0.0	0.0	0.0	0.0	2.1	23.3	0.0	0.0	0.0	25.4
1982		0.0	0.0	0.0	0.0	0.0	0.0	0.5	12.3	28.4	21.8	1.9	0.0
1983		0.0	0.0	0.0	0.0	0.0	0.0	7.6	9.4	4.7	4.2	0.0	0.0
1984		0.0	0.0	0.0	0.0	0.0	0.0	4.0	24.5	24.8	26.7	13.9	0.0
1985		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986		0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3
1987		0.0	0.0	0.0	0.0	0.0	0.0	9.3	3.8	0.0	0.0	0.0	13.1
1988		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	0.0	0.0	13.9
1989		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990		0.0	0.0	0.0	0.0	0.0	0.0	13.5	10.8	21.0	5.2	0.0	0.0
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.0	0.0	0.0	2.6
1994		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.6	0.0	0.0
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997		0.0	0.0	0.0	0.0	0.0	0.0	25.8	23.8	29.4	21.8	1.4	0.0
1998		0.0	0.0	0.0	0.0	0.0	11.5	15.7	11.9	19.2	8.3	0.0	0.0
1999		0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.4	27.0	11.9	0.0	0.0
2000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.4	20.0	17.6	0.0
2003		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL		0.0	0.0	0.0	0.0	0.0	11.5	86.0	143.7	205.1	153.5	34.9	0.0
Average		0.0	0.0	0.0	0.0	0.0	0.3	2.1	3.5	5.0	3.7	0.8	0.0
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum		0.0	0.0	0.0	0.0	0.0	11.5	25.8	24.5	29.4	26.7	17.6	0.0
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1
Percentile 80%		0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.4	4.7	7.2	0.0	0.0
Percentile 90%		0.0	0.0	0.0	0.0	0.0	0.0	7.6	12.3	24.8	13.9	0.0	0.0
Percentile 100%		0.0	0.0	0.0	0.0	0.0	11.5	25.8	24.5	29.4	26.7	17.6	0.0

Table 91: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Hautapu at Taihape All

Flow statistic	(MALF* 0.9)+ 20% of MALF	Flow	0.8										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.8	1.8	15.3	0.0	0.0	36.9
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	5.3
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	26.3	8.4	0.0	0.0	35.7
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	3.1	23.3	0.0	0.0	0.0	0.0	26.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	1.6	13.3	29.1	22.8	2.5	0.0	69.4
1983	0.0	0.0	0.0	0.0	0.0	0.0	11.7	11.3	4.7	6.2	0.0	0.0	33.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	5.5	24.8	25.5	27.4	14.0	0.0	97.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	3.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	13.1	4.0	0.0	0.0	0.0	0.0	17.1
1988	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	23.7	0.0	0.0	24.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	1.5	19.7	14.6	22.4	5.2	0.0	0.0	63.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0	0.0	0.0	0.0	4.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.6	0.0	0.0	0.0	6.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	27.7	24.3	29.8	22.9	2.7	0.0	107.2
1998	0.0	0.0	0.0	0.0	0.0	13.2	15.8	14.4	20.7	9.4	0.0	0.0	73.5
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.7	28.5	13.5	0.0	0.0	48.7
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	29.5	21.8	18.6	0.0	72.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	15.6	108.7	160.8	221.9	183.9	37.7	0.0	728.6
Average	0.0	0.0	0.0	0.0	0.0	0.4	2.7	3.9	5.4	4.5	0.9	0.0	17.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	13.2	27.7	24.8	29.8	27.4	18.6	0.0	107.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.8	0.0	17.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.1	5.7	4.7	8.4	0.0	0.0	35.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	11.7	14.6	26.3	21.8	0.0	0.0	69.4
Percentile 100%	0.0	0.0	0.0	0.0	0.0	13.2	27.7	24.8	29.8	27.4	18.6	0.0	107.2

Table 92: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Hautapu at Taihape All

Flow statistic	(MALF* 0.9) + 25% of MALF	Flow	0.857										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963		0.0	0.0	0.0	0.0	0.0	0.0	20.5	2.3	18.6	4.1	0.0	45.5
1964		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	8.1
1967		0.0	0.0	0.0	0.0	0.0	0.0	4.9	27.7	8.8	0.0	0.0	41.5
1968		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4
1981		0.0	0.0	0.0	0.0	0.0	0.0	5.0	23.3	1.2	0.0	0.0	29.5
1982		0.0	0.0	0.0	0.0	0.0	0.0	3.0	14.9	30.0	23.6	3.3	0.0
1983		0.0	0.0	0.0	0.0	0.0	0.0	15.0	12.7	4.7	8.9	0.0	0.0
1984		0.0	0.0	0.0	0.0	0.0	0.0	6.8	25.0	26.4	28.3	14.0	0.0
1985		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	6.1	0.0	0.0
1986		0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0
1987		0.0	0.0	0.0	0.0	0.0	0.0	16.6	5.9	0.0	0.0	1.2	0.0
1988		0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.4	25.2	0.0	0.0
1989		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990		0.0	0.0	0.0	0.0	0.0	2.1	20.7	16.5	23.0	5.3	0.0	0.0
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	5.8	0.0	0.0	8.3
1994		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995		0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.7	0.0	0.0	6.6
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997		0.0	0.0	0.0	0.0	0.0	0.8	27.9	24.5	29.8	24.5	4.0	0.0
1998		0.0	0.0	0.0	0.0	0.0	14.4	15.8	15.4	21.4	9.8	0.0	0.0
1999		0.0	0.0	0.0	0.0	0.0	0.0	2.1	7.2	29.4	13.8	0.0	0.0
2000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	30.1	23.0	19.4	0.6
2003		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	18.6	125.1	182.4	234.3	204.0	46.1	0.6	811.1
Average	0.0	0.0	0.0	0.0	0.0	0.5	3.0	4.4	5.7	5.0	1.1	0.0	19.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	14.4	27.9	25.0	30.1	28.3	19.4	0.6	111.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.2	5.3	0.0	0.0	23.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	5.0	9.1	5.8	8.9	0.0	0.0	41.5
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	15.0	16.5	27.7	23.0	3.3	0.0	74.8
Percentile 100%	0.0	0.0	0.0	0.0	0.0	14.4	27.9	25.0	30.1	28.3	19.4	0.6	111.3

Table 93: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Hautapu at Taihape All

Flow statistic	(MALF* 0.9) + 30% of MALF	Flow	0.895										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	3.4	22.7	5.1	0.0	52.5
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0	15.1
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	27.9	9.0	0.0	0.0	45.2
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.1	4.2	0.9	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	8.2	23.4	1.9	0.0	0.0	0.0	33.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	4.6	17.4	30.3	24.1	4.2	0.0	80.6
1983	0.0	0.0	0.0	0.0	0.0	0.0	17.2	13.6	5.1	12.4	0.0	0.0	48.3
1984	0.0	0.0	0.0	0.0	0.0	0.0	8.3	25.1	26.8	29.1	14.1	0.0	103.4
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	10.2	4.7	0.0	18.3
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	9.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	17.3	7.0	0.0	2.6	2.6	0.0	29.5
1988	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	1.4	26.6	0.0	0.0	31.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.3
1990	0.0	0.0	0.0	0.0	0.0	3.0	22.6	17.4	23.8	5.5	0.0	0.0	72.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	0.0	0.0	0.0	2.7
1993	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.8	7.7	0.0	0.0	0.0	13.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.7	0.0	0.0	0.0	7.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	1.9	28.1	24.6	30.0	24.8	6.7	0.0	116.2
1998	0.0	0.0	0.0	0.0	0.0	15.0	15.9	17.5	21.9	10.2	0.0	0.0	80.5
1999	0.0	0.0	0.0	0.0	0.2	0.0	2.7	7.9	29.7	14.0	0.0	0.0	54.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.6	30.5	23.9	19.8	2.6	93.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.2	23.3	142.2	205.6	252.3	234.9	58.0	2.6	919.0
Average	0.0	0.0	0.0	0.0	0.0	0.6	3.5	5.0	6.1	5.7	1.4	0.1	22.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.2	15.0	28.1	25.1	30.5	29.1	19.8	2.6	116.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	10.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.4	5.5	0.0	29.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	6.8	13.6	7.7	12.4	0.0	0.0	48.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	15.9	17.5	27.9	23.9	4.7	0.0	80.5
Percentile 100%	0.0	0.0	0.0	0.0	0.2	15.0	28.1	25.1	30.5	29.1	19.8	2.6	116.2

Lower Rangitikei Water Management Zone

Makohine – Rang 3b

Table 94: Number of days that the MALF occurs at Makohine at Viaduct

Flow Statistic	MALF	Flow	0.040										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	6.8	26.9	10.1	12.8	0.0	0.0	56.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	3.5	0.0	0.0	0.0	13.6
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.8	0.0	0.0	0.0	6.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	0.0	0.0	0.0	11.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.0	0.5	0.0	0.0	0.0	7.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.7	9.4	0.0	0.0	14.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.4	0.0	0.0	0.0	8.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.8	1.0	0.0	0.0	0.0	0.0	10.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	25.1	3.7	0.0	0.0	0.0	0.0	28.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	5.5
1989	0.0	0.0	0.0	0.0	0.4	1.4	4.4	1.1	7.1	0.0	0.0	0.0	14.5
1990	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0	18.0	0.0	0.0	0.0	27.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	2.4
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	3.9
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.8	13.0	3.6	0.0	0.0	0.0	17.4
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.2	0.0	0.0	0.0	0.0	8.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.4	1.4	65.3	88.8	53.9	27.7	0.0	0.0	237.6
Average	0.0	0.0	0.0	0.0	0.0	0.1	2.4	3.3	2.0	1.0	0.0	0.0	8.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.4	1.4	25.1	26.9	18.0	12.8	0.0	0.0	56.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	5.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	8.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.6	0.5	0.0	0.0	10.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.1	3.6	0.0	0.0	14.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	10.6	6.3	2.2	0.0	0.0
Percentile 100%	0.0	0.0	0.0	0.0	0.4	1.4	25.1	26.9	18.0	12.8	0.0	0.0	56.6

Table 95: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Makohine at Viaduct

Flow Statistic	MALF * 0.9	Flow	0.036											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1977	0.0	0.0	0.0	0.0	0.0	0.0	2.4	26.6	9.1	12.7	0.0	0.0	50.7	
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	3.1	0.0	0.0	0.0	11.4	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.9	0.0	0.0	0.0	5.0	
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	9.0	
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0	0.0	0.0	0.0	0.0	2.3	
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.4	0.3	0.0	0.0	3.9	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	0.0	2.9	
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.3	0.0	0.0	0.0	0.0	9.7	
1987	0.0	0.0	0.0	0.0	0.0	0.0	20.4	3.6	0.0	0.0	0.0	0.0	24.0	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1989	0.0	0.0	0.0	0.0	0.4	0.0	3.5	0.5	3.7	0.0	0.0	0.0	8.2	
1990	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.0	4.7	0.0	0.0	0.0	12.7	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	2.8	0.0	0.0	0.0	13.8	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	0.0	0.4	0.0	44.1	67.8	29.5	12.9	0.0	0.0	154.8	
Average	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.5	1.1	0.5	0.0	0.0	5.7	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	0.0	0.4	0.0	20.4	26.6	9.1	12.7	0.0	0.0	50.7	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.7	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1	0.0	0.0	5.6	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.0	2.4	0.0	0.0	0.0	9.6	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	5.3	8.6	4.1	0.0	0.0	0.0	13.1	
Percentile 100%	0.0	0.0	0.0	0.0	0.4	0.0	20.4	26.6	9.1	12.7	0.0	0.0	50.7	

Table 96: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Makohine at Viaduct

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	0.040										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	6.8	26.9	10.1	12.8	0.0	0.0	56.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	3.5	0.0	0.0	0.0	13.6
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.8	0.0	0.0	0.0	6.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	0.0	0.0	0.0	11.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.0	0.5	0.0	0.0	0.0	7.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.7	9.4	0.0	0.0	14.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.4	0.0	0.0	0.0	8.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.8	1.0	0.0	0.0	0.0	0.0	10.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	25.1	3.7	0.0	0.0	0.0	0.0	28.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	5.5
1989	0.0	0.0	0.0	0.0	0.4	1.4	4.4	1.1	7.1	0.0	0.0	0.0	14.5
1990	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0	18.0	0.0	0.0	0.0	27.3
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	2.4
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	3.9
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.8	13.0	3.6	0.0	0.0	0.0	17.4
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.2	0.0	0.0	0.0	0.0	8.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.4	1.4	65.2	88.8	53.9	27.7	0.0	0.0	237.4
Average	0.0	0.0	0.0	0.0	0.0	0.1	2.4	3.3	2.0	1.0	0.0	0.0	8.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.4	1.4	25.1	26.9	18.0	12.8	0.0	0.0	56.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	5.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	8.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.6	0.5	0.0	0.0	0.0	10.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.1	3.6	0.0	0.0	14.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	7.8	10.6	6.3	2.2	0.0	0.0	21.4
Percentile 100%	0.0	0.0	0.0	0.0	0.4	1.4	25.1	26.9	18.0	12.8	0.0	0.0	56.6

Table 97: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Makohine at Viaduct

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	0.042										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	9.0	27.0	10.6	12.9	0.0	0.0	59.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	3.8	0.0	0.0	0.0	14.8
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	6.3	0.0	0.0	0.0	6.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	1.9	0.0	0.0	0.0	13.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.0	0.5	0.0	0.0	0.0	7.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.7	9.4	0.0	0.0	14.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.9	0.0	0.0	0.0	8.5
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.8	1.0	0.0	0.0	0.0	0.0	10.8
1987	0.0	0.0	0.0	0.0	0.0	0.0	27.1	3.7	0.0	0.0	0.0	0.0	30.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	6.5	0.0	0.0	6.7
1989	0.0	0.0	0.0	0.0	0.5	1.4	4.5	2.2	7.1	0.0	0.0	0.0	15.7
1990	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.5	18.6	0.0	0.0	0.0	29.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	2.9
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	5.9
1993	0.0	0.0	0.0	0.0	0.0	0.0	1.9	14.5	5.1	0.0	0.0	0.0	21.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	1.5
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	3.6	10.0	13.4	0.9	0.0	0.0	0.0	27.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.5	5.0	77.0	106.3	60.8	28.8	0.0	0.0	278.3
Average	0.0	0.0	0.0	0.0	0.0	0.2	2.8	3.9	2.2	1.1	0.0	0.0	10.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.5	3.6	27.1	27.0	18.6	12.9	0.0	0.0	59.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	6.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.4	0.0	0.0	0.0	8.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.6	1.1	0.0	0.0	0.0	13.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	4.5	5.7	4.7	0.0	0.0	0.0	15.5
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	9.9	12.1	6.6	2.6	0.0	0.0	28.3
Percentile 100%	0.0	0.0	0.0	0.0	0.5	3.6	27.1	27.0	18.6	12.9	0.0	0.0	59.6

Table 98: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Makohine at Viaduct

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	0.044										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	9.5	27.1	10.7	13.3	2.2	0.0	62.8
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	4.1	0.0	0.0	0.0	16.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	6.6	0.0	0.0	0.0	6.7
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.1	11.4	4.2	0.0	0.0	0.0	15.8
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	7.1	4.6	3.1	0.0	0.0	0.0	14.8
1984	0.0	0.0	0.0	0.0	0.0	0.8	0.1	5.1	1.9	15.8	6.6	0.0	30.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	6.0	0.4	0.0	0.0	10.9
1986	0.0	0.0	0.0	0.0	0.0	0.5	9.9	2.2	0.0	0.0	0.0	0.0	12.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	27.4	3.7	0.2	0.0	0.0	0.0	31.3
1988	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.7	0.4	8.7	0.0	0.0	13.5
1989	0.0	0.0	0.0	0.0	2.6	5.0	4.6	3.6	8.1	0.0	0.0	0.0	23.9
1990	0.0	0.0	0.0	0.0	0.0	0.3	11.7	2.4	22.5	0.9	0.0	0.0	37.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	3.9
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	6.2
1993	0.0	0.0	0.0	0.0	0.0	0.0	4.3	15.6	5.2	0.0	0.0	0.0	25.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	3.8	13.1	16.2	1.3	0.0	0.0	0.0	34.4
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	2.6	14.2	87.9	121.7	74.2	39.1	8.8	0.0	348.3
Average	0.0	0.0	0.0	0.0	0.1	0.5	3.3	4.5	2.8	1.4	0.3	0.0	12.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	2.6	5.0	27.4	27.1	22.5	15.8	6.6	0.0	62.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	2.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	6.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.9	0.0	0.0	13.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.6	3.3	0.0	0.0	15.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.2	6.6	6.0	5.0	0.0	0.0	0.0	24.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	2.0	10.6	13.4	7.2	4.0	0.0	0.0	32.5
Percentile 100%	0.0	0.0	0.0	0.0	2.6	5.0	27.4	27.1	22.5	15.8	6.6	0.0	62.8

Table 99: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Makohine at Viaduct

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	0.046										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.4	10.1	27.2	11.5	14.4	4.4	0.0	67.9
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	2.1	0.0	12.8	4.4	0.0	0.0	0.0	19.3
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	6.8	0.0	0.0	0.0	7.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.1	11.4	6.2	0.0	0.0	0.0	17.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	7.1	4.6	3.1	0.0	0.0	0.0	14.8
1984	0.0	0.0	0.0	0.0	0.0	0.8	0.1	5.4	1.9	15.8	6.6	0.0	30.4
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	6.5	0.4	0.0	0.0	11.4
1986	0.0	0.0	0.0	0.0	0.0	1.5	9.9	2.2	0.0	0.0	0.0	0.0	13.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	27.8	3.7	0.2	0.0	0.0	0.0	31.7
1988	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.7	0.4	9.6	0.0	0.0	14.5
1989	0.0	0.0	0.0	0.0	4.9	6.0	5.2	4.1	8.1	0.0	0.0	0.0	28.3
1990	0.0	0.0	0.0	0.0	0.0	0.3	11.7	3.4	22.5	0.9	0.0	0.0	38.9
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	4.4
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	7.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	5.0	16.1	6.1	0.0	0.0	0.0	27.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	4.4	13.9	17.6	3.2	0.0	0.0	0.0	39.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	0.0	0.0	0.0	1.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	4.9	19.2	91.0	128.1	82.1	41.1	11.0	0.0	377.3
Average	0.0	0.0	0.0	0.0	0.2	0.7	3.4	4.8	3.0	1.5	0.4	0.0	14.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	4.9	6.0	27.8	27.2	22.5	15.8	6.6	0.0	67.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	3.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.2	0.0	0.0	0.0	7.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	1.7	0.0	0.0	0.0	14.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.1	1.1	4.6	3.4	0.0	0.0	0.0	18.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.7	6.7	6.7	6.2	0.0	0.0	0.0	28.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	2.8	10.7	14.1	7.3	4.4	0.0	0.0	34.6
Percentile 100%	0.0	0.0	0.0	0.0	4.9	6.0	27.8	27.2	22.5	15.8	6.6	0.0	67.9

Table 100: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Makohine at Viaduct

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	0.048										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	1.0	10.6	27.3	14.1	15.1	5.8	0.0	73.9
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	3.2	0.0	13.6	4.7	0.0	0.0	0.0	21.6
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	8.0	0.0	0.0	0.0	8.2
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.4	11.4	8.1	0.0	0.0	0.0	19.9
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	7.1	4.6	3.1	0.0	0.0	0.0	14.8
1984	0.0	0.0	0.0	0.0	0.0	0.8	0.1	5.6	1.9	15.8	6.6	0.0	30.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	7.0	0.4	0.0	0.0	11.9
1986	0.0	0.0	0.0	0.0	0.0	2.1	9.9	2.2	0.0	0.0	0.0	0.0	14.1
1987	0.0	0.0	0.0	0.0	0.0	0.0	28.7	3.7	0.2	0.0	0.0	0.0	32.6
1988	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.7	2.6	11.6	0.0	0.0	18.6
1989	0.0	0.0	0.0	0.0	6.9	6.1	5.8	4.6	8.1	0.0	0.0	0.0	31.4
1990	0.0	0.0	0.0	0.0	0.0	0.3	11.7	4.5	22.6	0.9	0.0	0.0	40.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.8	0.0	0.0	0.0	0.0	4.9
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.5	0.0	0.0	0.0	8.1
1993	0.0	0.0	0.0	0.0	0.0	0.0	5.3	16.9	6.8	0.0	0.0	0.0	28.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.8	0.0	0.0	0.0	0.0	4.6
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4
1998	0.0	0.0	0.0	0.0	0.0	4.9	15.4	19.2	4.2	0.0	0.0	0.0	43.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.6	0.0	0.0	0.0	5.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	6.9	22.2	96.9	135.6	97.9	43.7	12.4	0.0	415.6
Average	0.0	0.0	0.0	0.0	0.3	0.8	3.6	5.0	3.6	1.6	0.5	0.0	15.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	6.9	6.1	28.7	27.3	22.6	15.8	6.6	0.0	73.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.3
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.0	0.0	5.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.4	0.0	0.0	8.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.6	2.9	0.0	0.0	0.0	14.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.1	2.5	4.6	4.6	0.0	0.0	0.0	20.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	1.0	6.8	7.2	7.0	0.0	0.0	0.0	30.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	3.4	11.0	14.9	8.1	5.2	0.0	0.0	35.6
Percentile 100%	0.0	0.0	0.0	0.0	6.9	6.1	28.7	27.3	22.6	15.8	6.6	0.0	73.9

Upper Whangaehu Water Management Zone – Whau 1

Upper Whangaehu – Whau 1a

Table 101: Number of days that the MALF occurs at Whangaehu at Karioi

Flow statistic	MALF	Flow	8.2										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	13.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	12.6	5.7	0.0	29.2
1982	5.9	0.0	0.0	0.0	0.0	0.3	4.5	13.8	21.3	18.8	4.8	0.0	69.3
1983	0.0	0.0	0.0	0.0	0.0	1.2	10.8	8.5	13.2	22.8	13.4	20.3	90.4
1984	0.0	0.0	0.0	0.0	0.0	0.5	9.0	19.4	20.2	25.4	20.0	15.5	110.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	10.9	11.8	0.0	22.9
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	6.6	5.7	24.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.3	0.0	2.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	9.6	0.6	0.0	19.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.3	0.0	4.1	4.6	3.5	2.2	14.8	
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.4	0.0	0.0	0.0	3.3
1999	0.0	0.0	0.0	11.3	7.1	0.0	0.2	0.7	19.8	8.2	19.7	0.0	67.0
2000	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	2.1	0.0	23.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	10.2	0.0	22.1
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	16.0	0.9	30.0
TOTAL	19.1	0.0	0.0	11.3	7.1	2.0	24.8	45.3	100.5	159.4	127.5	44.7	541.6
Average	0.5	0.0	0.0	0.3	0.2	0.1	0.6	1.1	2.5	4.0	3.2	1.1	13.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	13.2	0.0	0.0	11.3	7.1	1.2	10.8	19.4	21.3	25.4	20.0	20.3	110.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.1	0.0	13.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	9.9	5.9	0.0	23.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1	11.4	12.7	13.1	1.2	37.4
Percentile 100%	13.2	0.0	0.0	11.3	7.1	1.2	10.8	19.4	21.3	25.4	20.0	20.3	110.0

Table 102: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Whangaehu at Karioi

Flow statistic	MALF * 0.9	Flow	7.4											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.7	1.5	0.0	
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.7	2.1	4.5	
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	18.9	13.6	0.6	34.1	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1999	0.0	0.0	0.0	0.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	
2000	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.2	0.0	0.0	0.3	1.0	0.0	0.0	0.2	0.9	40.3	17.2	5.1	65.2	
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.1	1.6	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.1	0.0	0.0	0.3	1.0	0.0	0.0	0.2	0.8	18.9	13.6	4.5	34.1	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
Percentile 100%	0.1	0.0	0.0	0.3	1.0	0.0	0.0	0.2	0.8	18.9	13.6	4.5	34.1	

Table 103: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Whangaehu at Karioi

Flow statistic	(MALF *0.9) + 10% of MALF	Flow	8.2										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	13.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	12.6	5.7	0.0	29.2
1982	5.9	0.0	0.0	0.0	0.0	0.3	4.5	13.8	21.3	18.8	4.8	0.0	69.3
1983	0.0	0.0	0.0	0.0	0.0	1.2	10.8	8.5	13.2	22.8	13.4	20.3	90.4
1984	0.0	0.0	0.0	0.0	0.0	0.5	9.0	19.4	20.2	25.4	20.0	15.5	110.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	10.9	11.8	0.0	22.9
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	6.6	5.7	24.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.3	0.0	2.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	9.6	0.6	0.0	19.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	4.1	4.6	3.5	2.2	14.8
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.4	0.0	0.0	0.0	3.3
1999	0.0	0.0	0.0	11.3	7.1	0.0	0.2	0.7	19.8	8.2	19.7	0.0	67.0
2000	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	2.1	0.0	23.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	10.2	0.0	22.1
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	16.0	0.9	30.0
TOTAL	19.1	0.0	0.0	11.3	7.1	2.0	24.8	45.3	100.5	159.4	127.5	44.7	541.6
Average	0.5	0.0	0.0	0.3	0.2	0.1	0.6	1.1	2.5	4.0	3.2	1.1	13.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	13.2	0.0	0.0	11.3	7.1	1.2	10.8	19.4	21.3	25.4	20.0	20.3	110.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.1	0.0	13.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	9.9	5.9	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	12.7	13.1	1.2	37.4
Percentile 100%	13.2	0.0	0.0	11.3	7.1	1.2	10.8	19.4	21.3	25.4	20.0	20.3	110.0

Table 104: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Whangaehu at Karioi

Flow statistic	(MALF *0.9) + 15% of MALF	Flow	8.7										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.1	0.0	21.1
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.4	0.0	2.9
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1	15.6	9.6	0.1	42.5
1982	10.6	0.0	0.0	0.0	0.0	2.1	12.5	21.3	25.6	21.7	5.0	0.0	98.8
1983	0.0	0.0	0.0	0.0	0.2	6.1	21.5	14.8	15.2	23.8	16.2	24.3	122.1
1984	0.0	0.0	0.0	0.0	1.4	3.4	14.1	20.2	24.7	25.9	23.2	17.0	130.0
1985	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	16.9	16.1	6.8	53.5
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	14.3	8.0	8.2	30.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	8.2	0.0	17.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	3.6	0.0	0.0	25.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	1.8	3.0	0.0	0.7	3.6	16.6	15.3	8.1	0.0	49.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
1997	0.0	0.0	0.0	0.0	0.0	0.1	3.7	1.7	13.1	13.3	9.5	6.1	47.7
1998	0.1	0.0	0.0	0.0	0.0	0.0	0.0	13.8	5.0	0.0	0.0	0.0	18.9
1999	0.0	0.0	0.0	20.2	11.2	0.0	4.6	5.1	28.7	15.6	23.3	3.1	111.8
2000	16.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	19.2	4.0	0.0	41.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	15.9	13.3	0.0	34.4
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.1	18.0	2.7	41.8
TOTAL	33.6	0.4	0.0	22.1	15.8	11.8	57.4	80.6	182.0	233.1	186.2	68.4	891.3
Average	0.8	0.0	0.0	0.6	0.4	0.3	1.4	2.0	4.5	5.8	4.7	1.7	22.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	16.7	0.4	0.0	20.2	11.2	6.1	21.5	21.3	28.7	25.9	23.3	24.3	130.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	8.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	10.5	5.9	0.0	26.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	15.6	9.5	0.0	42.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	19.6	16.6	6.2	62.6
Percentile 100%	16.7	0.4	0.0	20.2	11.2	6.1	21.5	21.3	28.7	25.9	23.3	24.3	130.0

Table 105: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Whangaehu at Karioi

Flow statistic	(MALF *0.9) + 20% of MALF	Flow	9.1										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.6	0.0	23.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	11.5	0.3	18.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	23.4	18.4	13.2	6.2	63.1
1982	13.3	0.0	1.4	2.1	1.5	5.8	18.9	23.8	28.1	23.2	6.1	0.0	124.1
1983	0.0	0.0	0.0	0.0	3.2	13.6	25.7	17.4	16.6	24.8	17.8	27.0	146.2
1984	1.8	0.0	0.0	0.0	7.5	7.7	17.5	20.7	26.9	27.1	24.8	17.6	151.5
1985	11.9	0.0	0.0	1.1	0.5	0.0	0.0	0.0	15.1	22.8	19.2	15.7	86.3
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.8	2.3	0.0	0.0	0.0	6.4
1987	0.0	0.0	0.0	0.0	0.0	0.0	4.5	1.3	0.0	23.8	10.7	10.3	50.5
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.8	15.1	0.0	39.8
1989	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	5.8	7.9	0.0	0.0	14.2
1990	0.0	0.0	0.0	0.0	0.0	0.0	4.4	1.7	25.5	5.3	0.0	0.0	36.9
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	10.3	0.0	17.9
1993	0.0	0.0	0.0	6.5	9.0	1.5	5.8	13.8	21.3	18.8	9.2	0.0	85.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.5
1997	0.1	0.3	0.4	0.0	0.0	1.1	10.3	6.1	20.0	18.9	14.8	11.3	83.3
1998	0.4	0.0	0.0	0.0	0.0	0.0	1.5	23.3	8.1	0.0	0.0	0.0	33.3
1999	0.0	0.0	0.0	25.9	14.4	0.0	11.1	14.1	30.2	19.7	24.9	7.6	147.9
2000	19.9	6.9	1.0	0.0	0.0	0.0	0.0	0.0	10.9	22.4	9.7	0.0	70.8
2001	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	9.8	18.0	16.5	0.0	44.6
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	24.4	21.6	2.7	59.0
TOTAL	47.4	7.2	2.9	35.6	36.3	29.8	100.0	128.3	255.0	314.4	249.3	98.9	1305.2
Average	1.2	0.2	0.1	0.9	0.9	0.7	2.5	3.2	6.4	7.9	6.2	2.5	32.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	19.9	6.9	1.4	25.9	14.4	13.6	25.7	23.8	30.2	27.1	24.9	27.0	151.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	5.8	2.6	0.0	20.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	8.6	18.1	10.4	0.0	41.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.3	15.4	20.2	14.9	0.8	64.6
Percentile 90%	0.7	0.0	0.0	0.2	1.8	1.2	10.5	14.8	23.8	23.9	19.7	10.5	93.9
Percentile 100%	19.9	6.9	1.4	25.9	14.4	13.6	25.7	23.8	30.2	27.1	24.9	27.0	151.5

Table 106: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Whangaehu at Karioi

Flow statistic	(MALF *0.9) + 25% of MALF	Flow	9.5										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.5	0.0	24.5
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	17.9	19.3	0.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.3	9.5	25.4	20.4	15.1	15.8	86.5
1982	13.3	1.8	8.7	9.6	7.8	11.6	23.3	24.8	29.4	24.3	7.7	0.0	162.3
1983	0.0	0.0	0.5	0.0	5.5	17.0	27.6	20.0	17.6	25.7	20.6	27.7	162.1
1984	3.2	0.0	4.7	0.3	15.3	12.1	19.2	21.3	27.7	27.6	25.9	20.2	177.4
1985	15.9	1.2	0.0	7.9	7.2	0.0	0.0	0.7	21.8	24.8	21.6	20.7	121.8
1986	0.0	0.0	0.0	0.0	0.0	0.5	7.7	14.1	4.9	0.0	0.0	0.0	27.3
1987	0.0	3.9	6.6	2.0	1.2	0.0	11.2	3.0	6.5	27.0	14.4	11.7	87.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	28.8	18.2	0.0	50.2
1989	0.0	0.0	1.6	0.0	0.0	3.0	0.0	4.4	13.2	16.7	0.0	0.0	38.9
1990	0.0	0.0	0.0	0.0	0.0	0.3	14.6	6.6	26.6	6.9	2.9	0.0	57.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	8.7	8.6	4.6	1.5	23.8
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	12.5	13.3	4.9	34.1
1993	0.0	9.7	3.5	11.4	12.1	10.8	12.1	19.8	23.5	21.3	9.6	0.0	133.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	4.0	0.0	4.2
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.7	2.7
1997	0.3	3.2	3.9	0.0	0.0	2.8	15.5	11.5	23.9	21.3	18.5	14.9	115.7
1998	0.6	0.0	0.0	0.0	0.0	0.0	7.3	25.3	9.8	2.9	0.1	0.2	46.2
1999	0.1	0.0	1.4	28.2	16.2	4.3	14.8	22.3	30.7	21.8	26.0	10.3	176.0
2000	22.6	11.5	3.7	0.0	0.0	0.0	0.0	0.3	17.7	24.6	12.3	0.0	92.7
2001	0.0	0.0	0.0	3.2	3.5	0.0	0.0	0.1	19.5	19.6	19.3	0.0	65.3
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1	25.8	23.2	2.7	68.9
TOTAL	56.0	31.3	34.5	62.7	68.8	62.4	153.7	184.1	335.1	378.5	302.2	132.7	1802.0
Average	1.4	0.8	0.9	1.6	1.7	1.6	3.8	4.6	8.4	9.5	7.6	3.3	45.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	22.6	11.5	8.7	28.2	16.2	17.0	27.6	25.3	30.7	28.8	26.0	27.7	177.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.6	0.0	24.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	10.2	5.8	0.0	40.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	14.4	19.8	13.6	0.3	60.1
Percentile 80%	0.0	0.0	0.7	0.0	0.2	0.3	8.4	9.9	20.0	22.3	18.7	3.1	88.8
Percentile 90%	1.1	2.1	3.7	4.1	7.3	5.6	14.9	20.3	25.6	25.7	21.9	15.1	139.5
Percentile 100%	22.6	11.5	8.7	28.2	16.2	17.0	27.6	25.3	30.7	28.8	26.0	27.7	177.4

Table 107: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Whangaehu at Karioi

Flow statistic	(MALF *0.9) + 30% of MALF	Flow	9.9										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	9.4	0.0	12.2
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.1	0.0	26.1
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	20.4	23.4	0.8	55.7
1981	0.0	0.0	0.0	0.0	0.0	0.0	4.3	17.2	26.9	21.9	17.3	20.6	108.2
1982	13.4	6.3	16.3	13.6	12.4	14.8	24.7	25.1	29.9	25.4	8.7	0.0	190.4
1983	0.0	3.4	5.0	0.0	6.7	20.6	28.3	22.6	18.1	26.3	23.1	28.1	182.3
1984	5.2	0.1	12.2	3.8	19.7	16.5	21.1	21.8	28.3	27.8	26.4	22.1	204.9
1985	18.0	3.3	0.0	15.3	11.4	0.0	0.3	4.8	25.3	25.9	23.5	22.8	150.6
1986	0.0	0.0	0.0	0.0	0.1	3.9	12.1	19.8	6.9	0.0	0.0	0.0	42.8
1987	0.0	15.3	10.4	3.6	6.3	1.3	19.1	3.7	13.2	27.7	16.1	13.8	130.5
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	8.8	29.0	18.8	0.0	56.7
1989	0.0	2.1	7.8	2.3	0.0	10.4	0.2	13.5	17.8	19.7	0.0	0.0	73.8
1990	0.0	0.0	0.0	0.0	0.0	7.0	19.0	14.9	27.6	9.2	10.3	0.0	87.9
1991	3.3	0.0	0.0	0.0	0.0	0.0	0.0	1.6	13.9	17.7	9.9	7.7	54.2
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	16.9	18.1	6.9	54.9
1993	3.2	17.2	6.3	17.7	14.2	21.2	16.3	23.7	25.2	23.1	10.0	0.0	178.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.0	9.4	0.0	18.3
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.6	8.8
1997	1.3	5.1	6.2	0.0	0.7	6.6	19.5	16.6	26.7	23.1	21.9	18.1	146.0
1998	0.7	0.0	0.0	0.1	0.0	0.1	13.3	25.8	11.3	10.0	2.0	3.4	66.7
1999	1.2	0.0	7.4	29.2	17.6	12.9	19.2	26.3	30.9	23.3	26.8	12.6	207.1
2000	23.8	14.7	7.6	0.0	0.0	0.0	0.0	2.4	23.1	25.7	13.4	0.0	110.7
2001	5.1	0.0	4.1	11.2	7.7	0.0	0.0	3.9	23.5	21.2	21.5	0.0	98.2
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	23.8	26.6	24.4	2.7	80.4
TOTAL	78.8	67.5	83.3	96.8	96.8	115.3	197.3	246.7	414.4	424.5	365.3	164.4	2351.1
Average	2.0	1.7	2.1	2.4	2.4	2.9	4.9	6.2	10.4	10.6	9.1	4.1	58.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	23.8	17.2	16.3	29.2	19.7	21.2	28.3	26.3	30.9	29.0	26.8	28.1	207.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	1.8	6.5	0.0	34.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	11.9	17.2	9.9	0.0	56.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.2	17.9	21.4	16.5	1.4	82.7
Percentile 80%	1.7	0.5	5.2	0.5	1.8	4.4	13.9	16.7	24.1	23.7	21.6	7.1	114.7
Percentile 90%	5.1	5.3	7.6	11.7	11.6	13.3	19.3	22.8	27.0	26.4	23.7	18.6	178.9
Percentile 100%	23.8	17.2	16.3	29.2	19.7	21.2	28.3	26.3	30.9	29.0	26.8	28.1	207.1

Waitangi – Whau 1b

Table 108: Number of days that the MALF occurs at Waitangi at Tangiwai

Flow Statistic	MALF	Flow	0.526										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	1.1	0.0	0.0	10.1
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	8.9	25.6	22.5	26.2	18.3	0.1	101.7
1970	0.0	0.0	0.0	0.0	0.0	0.3	3.1	0.0	5.0	5.6	0.0	0.0	14.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	7.4	0.0	0.0	9.0
1973	0.0	0.0	0.0	0.0	0.0	12.3	27.4	25.8	24.4	20.2	0.0	0.0	110.1
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.9	1.2	0.2	3.2	8.2
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.8	0.0	0.1	0.0	5.1
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	14.6	19.3	0.6	34.9
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.2	9.7	4.0	1.9	0.0	19.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.3	4.6	6.9	11.9	0.0	0.0	24.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.9	20.0	17.8	27.0	16.0	0.0	81.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.9	0.0	0.0
TOTAL	0.1	0.1	0.1	0.1	0.1	12.7	41.8	81.3	105.2	122.3	56.1	4.1	424.0
Average	0.0	0.0	0.0	0.0	0.0	0.5	1.7	3.4	4.4	5.1	2.3	0.2	17.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	12.3	27.4	25.8	24.4	27.0	19.3	3.2	110.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.2	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.2	0.0	0.0	10.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.1	7.7	9.2	0.1	0.0	21.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	2.6	15.4	15.4	18.5	11.8	0.1	67.7
Percentile 100%	0.0	0.0	0.0	0.0	0.0	12.3	27.4	25.8	24.4	27.0	19.3	3.2	110.1

Table 109: Number of day that a proposed minimum flow of 0.9 of the MALF occurs at Waitangi at Tangiwai

Flow Statistic	MALF * 0.9	Flow	0.473										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	12.7	24.0	14.5	0.0	62.1
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	2.5	22.4	19.6	20.6	18.4	0.0	0.0	83.6
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	11.7	10.7	0.0	30.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	2.5	22.6	38.9	33.3	54.2	27.2	0.0	178.8
Average	0.0	0.0	0.0	0.0	0.1	0.9	1.6	1.4	2.3	1.1	0.0	0.0	7.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Maximum	0.0	0.0	0.0	0.0	0.0	2.5	22.4	19.6	20.6	24.0	14.5	0.0	83.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.1						
Percentile 90%	0.0	0.0	5.9	0.0	8.2	1.4	0.0						
Percentile 100%	0.0	0.0	0.0	0.0	0.0	2.5	22.4	19.6	20.6	24.0	14.5	0.0	83.6

Table 110: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Waitangi at Tangiwai

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	0.526										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	1.1	0.0	0.0	10.1
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	8.9	25.6	22.5	26.2	18.3	0.1	101.7
1970	0.0	0.0	0.0	0.0	0.0	0.3	3.1	0.0	5.0	5.6	0.0	0.0	14.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	7.4	0.0	0.0	9.0
1973	0.0	0.0	0.0	0.0	0.0	12.3	27.4	25.8	24.4	20.2	0.0	0.0	110.1
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.9	1.2	0.2	3.2	8.2
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.8	0.0	0.1	0.0	5.1
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	14.6	19.3	0.6
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.2	9.7	4.0	1.9	0.0	19.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.3	4.6	6.9	11.9	0.0	0.0	24.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.9	20.0	17.8	27.0	16.0	0.0	81.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.9	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	12.6	41.7	81.1	105.0	122.2	55.9	3.9	422.3
Average	0.0	0.0	0.0	0.0	0.0	0.5	1.7	3.4	4.4	5.1	2.3	0.2	17.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	12.3	27.4	25.8	24.4	27.0	19.3	3.2	110.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.2	0.0	7.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.2	0.0	10.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.1	7.7	9.2	0.1	21.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	15.4	15.4	18.5	11.8	0.1
Percentile 100%	0.0	0.0	0.0	0.0	0.0	12.3	27.4	25.8	24.4	27.0	19.3	3.2	110.1

Table 111: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Waitangi at Tangiwai

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	0.552										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	4.3	0.0	0.0	16.2
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	13.2	26.9	24.3	27.1	19.8	1.3	112.6
1970	0.0	0.0	0.0	0.0	0.0	3.2	3.5	0.4	11.8	15.0	1.5	0.0	35.3
1971	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	12.2	0.9	0.0	15.3
1973	0.0	0.0	0.0	0.0	0.0	17.7	28.1	26.4	25.7	20.2	0.0	0.0	118.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.9
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	26.5	14.5	8.9	18.3	78.7
1978	0.0	0.0	0.0	0.0	0.0	0.0	7.9	7.3	7.2	0.0	2.3	0.0	24.7
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	18.6	23.0	2.2	51.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	3.0	18.9	27.9	21.1	5.0	0.0	76.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	10.2	13.0	18.0	23.0	0.0	0.0	64.3
1984	0.0	0.0	0.0	0.0	0.0	2.7	9.1	23.6	24.3	27.7	21.3	2.1	110.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	2.1
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	6.6	0.0	0.0	15.1
TOTAL	0.4	0.0	0.0	0.0	0.0	23.6	75.0	127.0	196.8	194.2	83.3	23.9	724.3
Average	0.0	0.0	0.0	0.0	0.0	1.0	3.1	5.3	8.2	8.1	3.5	1.0	30.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.4	0.0	0.0	0.0	0.0	17.7	28.1	26.9	27.9	27.7	23.0	18.3	118.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.0	0.0	0.0	8.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	6.1	0.0	0.0	16.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	11.8	14.6	1.0	0.0	37.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	5.3	11.4	20.5	19.2	3.4	0.0	69.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.9	9.9	22.2	25.3	22.4	16.5	1.9	101.2
Percentile 100%	0.4	0.0	0.0	0.0	0.0	17.7	28.1	26.9	27.9	27.7	23.0	18.3	118.0

Table 112: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Waitangi at Tangiwai

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	0.578										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	6.1	0.0	0.0	20.2
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	17.9	28.0	25.4	27.7	20.6	1.9	121.5
1970	0.0	0.0	0.0	0.0	0.0	8.9	3.8	3.1	18.5	22.9	2.4	0.0	59.5
1971	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.1	0.0	0.0	6.2
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	20.2	1.9	0.0	30.1
1973	0.0	0.0	0.0	0.0	0.2	23.1	28.4	26.7	26.2	20.2	0.0	0.0	124.7
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	5.3	0.0	7.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.9	0.0	0.0	3.4
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	29.2	16.6	15.6	20.6	101.0
1978	0.4	0.0	0.0	0.0	0.0	0.0	14.8	12.5	10.6	7.1	7.4	0.0	52.7
1979	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.4	22.6	25.7	2.7	68.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	11.4	4.2	0.7	0.0	24.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	13.1	22.0	29.3	25.0	5.1	0.0	94.4
1983	0.0	0.0	0.0	0.0	0.0	0.0	22.6	18.1	23.4	25.1	1.3	0.2	90.6
1984	0.0	0.0	0.0	0.0	0.0	5.3	14.2	24.7	26.7	29.6	23.9	11.4	135.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.1	12.2	0.0	17.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.5	9.1	0.0	34.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	12.7	7.6	0.0	0.0	24.3
TOTAL	4.6	0.0	0.0	0.0	0.2	37.2	114.7	166.6	256.0	270.1	131.2	36.8	1017.3
Average	0.2	0.0	0.0	0.0	0.0	1.6	4.8	6.9	10.7	11.3	5.5	1.5	42.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	4.1	0.0	0.0	0.0	0.2	23.1	28.4	28.0	29.3	29.6	25.7	20.6	135.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	5.9
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.4	0.0	0.0	18.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	6.6	1.0	0.0	24.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	12.4	14.8	2.3	0.0	33.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	8.8	17.5	20.4	5.5	0.0	60.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	13.5	18.5	24.2	23.7	10.3	0.1	92.1
Percentile 90%	0.1	0.0	0.0	0.0	0.0	3.7	17.0	23.9	26.6	25.4	19.1	2.5	115.4
Percentile 100%	4.1	0.0	0.0	0.0	0.2	23.1	28.4	28.0	29.3	29.6	25.7	20.6	135.6

Table 113: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Waitangi at Tangiwai

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	0.605										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9	8.9	0.0	0.0	31.8
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	5.1	21.7	28.0	27.2	28.8	22.3	3.2	136.5
1970	0.0	0.0	0.0	0.0	0.0	13.9	4.0	11.5	24.9	26.0	4.9	0.2	85.4
1971	7.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	9.9	14.1	0.0	0.0	31.8
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	19.0	23.5	4.5	2.1	56.2
1973	1.1	1.2	0.0	0.0	4.1	25.1	28.6	26.8	26.7	20.3	0.0	0.0	133.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	1.6	6.5	3.0	4.2	11.1	0.0	26.3
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	7.1	0.0	0.0	8.9
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.1	23.9	29.7	17.0	19.3	23.6	113.5
1978	1.9	0.0	0.0	0.0	0.0	0.0	15.5	17.3	13.2	14.3	7.4	0.0	69.6
1979	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	23.1	24.8	26.5	2.8	80.9
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	14.9	11.5	6.1	0.0	45.8
1982	0.0	0.0	0.0	0.0	0.0	4.3	21.4	24.1	31.0	26.2	6.1	0.0	113.1
1983	0.0	0.0	0.0	0.0	0.0	1.4	27.7	21.1	26.8	26.1	7.7	2.8	113.5
1984	0.0	0.0	0.0	0.0	0.0	11.2	18.7	25.3	27.7	30.0	24.7	18.3	155.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	16.2	18.1	0.0	43.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	15.7	6.3	0.0	24.4
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	27.9	17.7	0.0	58.2
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	8.6	15.3	24.8	8.3	0.0	0.0	56.9
TOTAL	11.2	2.0	0.0	0.0	4.1	61.0	150.0	226.3	348.8	350.9	182.8	53.1	1390.2
Average	0.5	0.1	0.0	0.0	0.2	2.5	6.2	9.4	14.5	14.6	7.6	2.2	57.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	7.0	1.2	0.0	0.0	4.1	25.1	28.6	28.0	31.0	30.0	26.5	23.6	155.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	6.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	8.2	0.0	0.0	26.1
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	10.4	12.0	0.9	0.0	34.2
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	14.1	15.0	5.5	0.0	51.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.3	10.6	22.1	16.8	6.3	0.0	57.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	4.5	15.5	24.8	23.6	8.0	0.0	81.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	2.6	16.8	22.2	26.7	26.0	17.9	2.4	113.3
Percentile 90%	1.2	0.0	0.0	0.0	0.0	9.4	21.6	24.9	27.6	27.4	21.4	3.1	127.8
Percentile 100%	7.0	1.2	0.0	0.0	4.1	25.1	28.6	28.0	31.0	30.0	26.5	23.6	155.9

Table 114: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Waitangi at Tangiwai

Flow Statistic	(MALF * 0.9) + 30% of MALF	Flow	0.631											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	28.4	9.9	0.0	0.0	39.0	
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	5.6	6.2	
1969	0.0	0.0	0.0	0.0	0.0	15.0	24.1	28.0	27.6	29.1	23.1	4.9	152.0	
1970	0.0	0.0	0.0	0.0	0.0	17.1	4.3	16.1	27.1	27.4	6.7	0.2	98.9	
1971	10.4	10.3	0.0	0.0	0.0	0.0	0.0	0.1	13.5	16.6	4.1	0.0	54.9	
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	20.7	24.7	5.9	2.6	61.4	
1973	6.8	2.4	0.0	0.3	10.2	26.0	28.9	26.9	27.2	20.3	0.0	0.0	148.9	
1974	0.0	0.0	0.0	0.0	0.0	0.0	3.6	9.9	11.0	6.4	15.3	0.0	46.2	
1975	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	1.2	0.0	0.0	1.5	
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	19.4	0.0	0.0	26.7	
1977	0.0	0.0	0.0	0.0	0.0	0.0	2.9	26.5	31.0	20.5	23.8	27.2	132.0	
1978	2.9	0.0	0.0	0.0	0.0	0.0	16.4	21.5	15.7	20.4	7.8	0.0	84.7	
1979	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	5.5	
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	25.9	25.8	27.5	2.9	90.4	
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.4	18.4	19.4	15.2	10.7	0.0	64.0	
1982	0.0	0.0	0.0	0.0	0.0	11.9	25.4	24.9	31.0	26.7	8.6	0.0	128.5	
1983	0.0	0.0	0.0	0.0	0.0	5.0	29.4	22.3	28.8	26.7	14.2	8.1	134.4	
1984	0.0	0.0	0.0	0.0	0.0	12.9	21.5	25.7	28.2	30.0	25.3	19.3	162.9	
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	21.5	19.9	0.0	56.5	
1986	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	7.7	
1987	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.5	7.5	23.2	7.7	0.0	44.1	
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	21.8	28.8	19.1	0.0	72.8	
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.9	0.0	0.0	0.0	4.5	
1990	0.0	0.0	0.0	0.0	0.0	0.0	12.0	19.2	25.9	8.4	0.0	0.0	65.5	
TOTAL	22.7	12.8	0.0	0.3	10.2	88.2	178.9	263.3	419.9	402.7	219.7	71.0	1689.6	
Average	0.9	0.5	0.0	0.0	0.4	3.7	7.5	11.0	17.5	16.8	9.2	3.0	70.4	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	
Maximum	10.4	10.3	0.0	0.3	10.2	26.0	29.4	28.0	31.0	30.0	27.5	27.2	162.9	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.2	0.0	0.0	5.7	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	4.3	0.0	0.0	19.1	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	10.7	9.8	0.0	0.0	43.6	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	15.2	17.2	4.5	0.0	55.2	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	1.3	7.9	20.1	20.4	7.2	0.0	62.7	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	3.5	14.9	25.1	21.3	8.4	0.0	71.3	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	8.1	19.4	27.1	24.8	14.3	0.4	91.3	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	7.8	18.4	23.3	27.8	26.7	19.4	3.7	129.9
Percentile 90%	2.8	0.0	0.0	0.0	0.0	0.0	14.4	25.0	26.3	28.7	28.4	23.6	7.4	144.6
Percentile 100%	10.4	10.3	0.0	0.3	10.2	26.0	29.4	28.0	31.0	30.0	27.5	27.2	162.9	

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Table 115: Number of days that the MALF occurs at Tokiahuru at Whangaehu Junction

Flow statistic	MALF	Flow	4.820										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.3	0.0	2.5
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	6.4	1.6	0.0	10.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.5	13.7	20.9	9.7	12.9	62.8
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.0	13.6	16.4	26.1	18.2	9.8	85.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	8.2	6.6	0.0	16.4
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	5.4	0.1	8.2
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	4.2	0.0	0.0	18.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	3.1	17.2	48.0	68.7	43.9	22.7	203.6
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1	3.2	4.6	2.9	1.5	13.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0							
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	2.0	13.6	16.4	26.1	18.2	12.9	85.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0							
Percentile 60%	0.0	0.0	1.2	0.6	0.0	4.8							
Percentile 70%	0.0	1.3	3.9	2.2	0.0	9.6							
Percentile 80%	0.0	4.3	6.8	5.6	0.0	16.8							
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	13.9	15.8	8.5	5.9	45.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	2.0	13.6	16.4	26.1	18.2	12.9	85.1

Table 116: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Tokiahuru at Whangaehu Junction

Flow statistic	MALF *0.9	Flow	4.338										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.7	9.1	0.0	10.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	3.2	9.1	0.0	12.5
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.7	9.1	0.0	10.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.7	9.1	0.0	10.9

Table 117: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Tokiahuru at Whangaehu Junction

Flow statistic	(MALF * 0.9) + 10% of MALF	Flow	4.820										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.3	0.0	2.5
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	6.4	1.6	0.0	10.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.5	13.7	20.9	9.7	12.9	62.8
1984	0.0	0.0	0.0	0.0	0.0	0.0	1.0	13.6	16.4	26.1	18.2	9.8	85.1
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	8.2	6.6	0.0	16.4
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	5.4	0.1	8.2
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	4.2	0.0	0.0	18.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	3.0	17.1	47.9	68.7	43.9	22.7	203.3
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1	3.2	4.6	2.9	1.5	13.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	2.0	13.6	16.4	26.1	18.2	12.9	85.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.9	2.2	0.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	6.8	5.6	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	13.9	15.8	8.5	5.9	45.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	2.0	13.6	16.4	26.1	18.2	12.9	85.1

Table 118: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Tokiahuru at Whangaehu Junction

Flow statistic	(MALF *0.9) + 15% of MALF	Flow	5.061										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	8.8	4.0	0.0	15.3
1982	0.8	0.0	0.0	0.0	0.0	0.0	0.0	7.4	15.5	15.4	2.9	0.0	42.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	12.2	12.3	21.5	22.4	11.7	19.8	99.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	4.0	21.6	24.4	27.0	21.6	14.1	112.8
1985	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	14.0	10.8	3.4	44.2
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	17.9	6.9	5.6	30.7
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	4.8	0.0	12.1
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	7.6	10.2	0.0	0.0	19.4
1990	0.0	0.0	0.0	0.0	0.0	0.0	5.6	3.4	22.9	6.1	0.0	0.0	38.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL		2.5	0.0	0.0	0.0	0.0	21.9	46.9	108.6	129.2	62.7	42.9	414.7
Average		0.2	0.0	0.0	0.0	0.0	1.5	3.1	7.2	8.6	4.2	2.9	27.6
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum		1.7	0.0	0.0	0.0	0.0	12.2	21.6	24.4	27.0	21.6	19.8	112.8
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.5	9.4	3.3	0.0	23.9
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.0	1.3	12.9	13.2	4.6	0.0	36.5
Percentile 80%		0.0	0.0	0.0	0.0	0.0	0.8	4.2	16.7	15.9	7.7	3.8	42.4
Percentile 90%		0.5	0.0	0.0	0.0	0.0	5.0	10.3	22.3	20.6	11.3	10.7	77.6
Percentile 100%		1.7	0.0	0.0	0.0	0.0	12.2	21.6	24.4	27.0	21.6	19.8	112.8

Table 119: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Tokiahuru at Whangaeahu Junction

Flow statistic	(MALF * 0.9) + 20% of MALF	Flow	5.302										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.4	2.4	0.0	4.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	12.8	6.3	1.3	33.9
1982	7.1	0.0	0.0	0.0	0.0	0.0	2.7	17.1	25.0	20.6	4.3	0.0	76.8
1983	0.0	0.0	0.0	0.0	0.0	2.3	22.3	15.7	23.3	23.5	12.8	23.7	123.6
1984	0.5	0.0	0.0	0.0	0.0	0.0	13.1	23.5	26.3	27.3	22.8	16.9	130.5
1985	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	24.5	19.4	16.7	8.7	77.4
1986	0.3	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	6.1
1987	0.0	0.0	0.7	0.1	0.0	0.0	8.3	3.2	6.4	25.0	7.9	8.8	60.3
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	26.2	12.1	0.0	39.7
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.8	11.1	11.6	14.5	0.0	0.0	38.0
1990	0.0	0.0	0.0	0.0	0.0	0.8	17.2	12.6	24.6	7.2	4.4	0.0	66.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.4	0.0	5.6
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	15.7	0.0	0.7	0.1	0.0	3.0	64.4	89.5	156.5	179.1	95.4	59.5	663.9
Average	1.0	0.0	0.0	0.0	0.0	0.2	4.3	6.0	10.4	11.9	6.3	4.0	44.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	7.8	0.0	0.7	0.1	0.0	2.3	22.3	23.5	26.3	27.3	22.8	23.7	130.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.0	5.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	5.3	3.5	0.0	22.8
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	6.4	12.8	4.4	0.0	38.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.2	12.3	16.5	5.8	0.0	47.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.3	10.0	21.3	20.4	7.6	1.0	65.5
Percentile 80%	0.3	0.0	0.0	0.0	0.0	0.0	9.3	13.2	24.5	23.8	12.2	8.7	76.9
Percentile 90%	4.5	0.0	0.0	0.0	0.0	0.5	15.6	16.5	24.8	25.7	15.1	13.7	105.1
Percentile 100%	7.8	0.0	0.7	0.1	0.0	2.3	22.3	23.5	26.3	27.3	22.8	23.7	130.5

Table 120: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Tokiahuru at Whangaeahu Junction

Flow statistic	(MALF * 0.9) + 25% of MALF	Flow	5.543										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	5.5	14.3	7.7	0.0	32.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	15.5	7.9	5.7	5.7	50.8
1982	13.3	1.1	4.9	0.6	0.0	2.4	6.7	22.2	27.0	23.4	4.7	0.0	106.3
1983	0.0	0.0	0.0	0.0	3.2	7.9	26.4	17.4	24.7	24.8	14.2	26.5	145.2
1984	2.1	0.0	0.2	0.0	0.2	0.0	19.3	24.8	27.3	27.5	24.5	19.9	145.9
1985	12.8	0.0	0.0	1.4	0.0	0.0	0.0	8.6	27.1	23.0	18.2	15.9	107.1
1986	2.2	0.0	0.0	0.0	0.0	0.0	4.7	17.4	3.0	0.0	0.0	0.0	27.4
1987	0.0	3.6	5.2	2.2	0.0	0.0	14.2	4.1	12.8	26.6	10.6	10.5	89.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	9.0	29.0	17.4	0.0	57.1
1989	0.0	0.0	2.0	0.1	0.0	0.6	4.8	19.6	13.6	18.3	0.0	0.0	59.0
1990	0.0	0.0	0.0	0.0	0.0	9.1	21.9	16.8	25.5	7.4	10.2	0.0	90.9
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.7	2.3	5.5	12.6
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	7.8	11.1	0.5	26.4
1993	0.0	4.8	1.2	0.6	2.5	3.5	1.9	0.0	0.0	0.0	0.0	0.0	14.5
TOTAL	30.5	9.5	13.5	4.9	6.0	23.5	99.8	137.2	207.5	219.4	128.9	84.5	965.2
Average	2.0	0.6	0.9	0.3	0.4	1.6	6.7	9.1	13.8	14.6	8.6	5.6	64.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	13.3	4.8	5.2	2.2	3.2	9.1	26.4	24.8	27.3	29.0	24.5	26.5	145.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	13.4
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.4	0.0	0.0	24.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.8	7.5	2.8	0.0	28.3
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	8.2	11.7	6.5	0.0	43.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	1.9	4.5	12.8	15.5	7.9	0.0	57.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	4.7	11.9	16.8	20.2	10.4	2.5	71.2
Percentile 70%	0.0	0.0	0.2	0.1	0.0	0.5	6.3	17.3	24.1	23.3	11.0	5.7	90.6
Percentile 80%	2.1	0.2	1.4	0.6	0.0	2.6	15.2	17.8	25.8	25.2	14.8	11.6	106.5
Percentile 90%	8.6	2.6	3.7	1.1	1.6	6.1	20.9	21.2	27.1	27.1	17.9	18.3	130.0
Percentile 100%	13.3	4.8	5.2	2.2	3.2	9.1	26.4	24.8	27.3	29.0	24.5	26.5	145.9

Table 121: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Tokiahuru at Whangaeahu Junction

Flow statistic	(MALF *0.9) + 30% of MALF	Flow	5.784										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.6	14.5	11.9	17.8	15.0	0.0	59.8
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.4	17.4	9.9	11.8	62.4
1982	14.1	6.8	0.0	4.0	0.0	7.7	13.3	23.8	28.6	25.7	5.9	0.0	138.9
1983	0.0	0.0	0.0	0.0	6.9	15.2	27.7	19.6	25.6	25.3	18.6	27.3	166.1
1984	2.6	0.0	0.0	0.4	3.4	0.0	24.3	25.9	28.1	27.7	25.8	20.8	160.9
1985	15.1	0.0	0.0	9.4	2.1	0.0	0.8	15.1	28.8	24.8	21.1	18.1	135.3
1986	5.8	0.0	0.0	0.0	0.0	1.5	15.4	20.3	7.6	0.0	0.0	0.0	50.5
1987	0.4	12.6	10.4	3.4	5.1	0.2	20.6	5.4	17.4	27.3	12.4	14.3	129.5
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	20.5	29.4	18.5	0.0	76.1
1989	0.0	5.2	8.2	2.1	0.0	5.7	8.2	21.9	16.1	21.0	0.6	0.0	89.0
1990	0.0	0.0	0.0	0.0	0.0	16.1	24.6	19.0	26.3	8.7	14.0	0.0	108.6
1991	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	9.4	10.8	10.7	6.6	37.7
1992	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	19.5	14.5	13.5	4.6	52.3
1993	1.4	13.2	3.5	5.8	7.5	13.4	4.1	0.0	0.0	0.0	0.0	0.0	49.0
TOTAL	39.6	37.8	33.3	25.2	25.1	59.8	139.6	173.4	263.2	250.4	166.1	103.6	1317.0
Average	2.6	2.5	2.2	1.7	1.7	4.0	9.3	11.6	17.5	16.7	11.1	6.9	87.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	15.1	13.2	10.4	9.4	7.5	16.1	27.7	25.9	28.8	29.4	25.8	27.3	166.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	42.2
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	9.0	7.0	0.5	0.0	50.2
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2	12.7	11.5	6.7	0.0	53.8
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.7	6.8	16.9	16.2	10.4	0.0	61.4
Percentile 50%	0.1	0.0	0.0	0.0	0.0	0.0	4.1	14.5	19.5	17.8	12.4	0.0	76.1
Percentile 60%	0.3	0.0	0.0	0.2	0.0	0.7	10.2	16.7	21.7	22.5	13.7	5.4	96.8
Percentile 70%	1.2	0.0	1.6	1.8	1.7	4.9	15.0	19.5	25.2	25.2	14.8	10.8	125.3
Percentile 80%	3.2	5.5	4.4	3.5	3.7	8.8	21.3	20.6	26.7	26.0	18.5	15.1	136.0
Percentile 90%	10.8	10.3	8.7	5.1	6.2	14.5	24.5	23.0	28.4	27.5	20.1	19.7	152.1
Percentile 100%	15.1	13.2	10.4	9.4	7.5	16.1	27.7	25.9	28.8	29.4	25.8	27.3	166.1

Lower Whangaehu Water Management Zone – Whau 3

Lower Whangaehu – Whau 3a

Table 122: Number of days that the MALF occurs at Whangaehu at Kauangaroa

Flow Statistic	MALF	Flow	13.650										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8	15.3	0.0	0.0	17.4
1973	0.0	0.0	0.0	0.0	0.0	0.0	3.2	5.3	12.9	17.1	0.0	0.0	38.5
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	0.0	15.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	8.4	1.5	0.0	11.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	5.3	16.8	23.3	15.6	4.9	0.0	65.9
1982	0.0	0.0	0.0	0.0	0.0	0.0	1.5	13.8	24.9	18.2	1.6	0.0	59.9
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.0	7.1	9.1	19.6	0.0	0.0	37.8
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	24.2	24.7	17.2	5.8	85.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	7.8	0.0	0.0	12.9
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.9	0.0	8.7	6.6	0.0	18.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	27.9	7.9	0.0	40.0
1989	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	6.1	0.0	0.0	0.0	6.3
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	4.8	3.0	0.0	0.0	8.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	5.0	6.1	0.0	0.0	13.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.5	20.3	3.5	0.0	0.0	27.2
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	4.8	0.6	0.0	0.0	22.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	19.0	1.4	0.3	0.0	22.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	15.4	11.8	0.5	42.4
2003	0.0	1.7	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.0	0.0	3.9
TOTAL	0.0	1.7	0.0	0.0	0.0	0.2	16.8	81.7	180.9	193.4	69.2	6.4	550.1
Average	0.0	0.1	0.0	0.0	0.0	0.0	0.5	2.5	5.5	5.9	2.1	0.2	16.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	1.7	0.0	0.0	0.0	0.2	5.3	17.2	24.9	27.9	17.2	5.8	85.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	3.1	0.0	13.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	5.0	8.0	0.1	0.0	20.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.4	11.4	15.4	1.8	0.0	33.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.9	12.5	20.0	18.0	7.6	0.0	41.9
Percentile 100%	0.0	1.7	0.0	0.0	0.0	0.2	5.3	17.2	24.9	27.9	17.2	5.8	85.8

Table 123: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Whangaehu at Kauangaroa

Flow Statistic	MALF *0.9	Flow	12.285										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	14.8	0.0	0.0	17.4
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	9.1
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	13.6	10.0	0.5	0.0	26.8
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	13.8	7.4	0.0	0.0	23.9
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	11.9	0.0	0.0	12.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	16.7	22.2	14.1	3.6	64.4
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0	11.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0	11.8
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.3	0.0	2.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	58.9	78.7	27.7	3.6	182.3
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8	2.4	0.8	0.1	5.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	16.7	22.2	14.1	3.6	64.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	10.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	11.4	1.4	0.0	16.4
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	16.7	22.2	14.1	3.6	64.4

Table 124: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Whangaehu at Kauangaroa

Flow Statistic	(MALF * 0.9) + 10% of MALF	Flow	13.650										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8	15.3	0.0	0.0	17.4
1973	0.0	0.0	0.0	0.0	0.0	0.0	3.2	5.3	12.9	17.1	0.0	0.0	38.5
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	0.0	15.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	8.4	1.5	0.0	11.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	5.3	16.8	23.3	15.6	4.9	0.0	65.9
1982	0.0	0.0	0.0	0.0	0.0	0.0	1.5	13.8	24.9	18.2	1.6	0.0	59.9
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.0	7.1	9.1	19.6	0.0	0.0	37.8
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	24.2	24.7	17.2	5.8	85.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	7.8	0.0	0.0	12.9
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.9	0.0	8.7	6.6	0.0	18.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	27.9	7.9	0.0	40.0
1989	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	6.1	0.0	0.0	0.0	6.3
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	4.8	3.0	0.0	0.0	8.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	5.0	6.1	0.0	0.0	13.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.5	20.3	3.5	0.0	0.0	27.2
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	4.8	0.6	0.0	0.0	22.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	19.0	1.4	0.3	0.0	22.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	15.4	11.8	0.5	42.4
2003	0.0	1.7	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.0	0.0	3.9
TOTAL	0.0	1.7	0.0	0.0	0.0	0.2	16.7	81.6	180.8	193.3	69.2	6.4	549.8
Average	0.0	0.1	0.0	0.0	0.0	0.5	2.5	5.5	5.9	2.1	0.2	0.2	16.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	1.7	0.0	0.0	0.0	0.2	5.3	17.2	24.9	27.9	17.2	5.8	85.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	3.1	0.0	0.0	13.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	5.0	8.0	0.1	0.0	20.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.4	11.4	15.4	1.8	0.0	33.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.9	12.5	20.0	18.0	7.6	0.0	41.9
Percentile 100%	0.0	1.7	0.0	0.0	0.2	5.3	17.2	24.9	27.9	17.2	5.8	85.8	

Table 125: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Whangaehu at Kauangaroa

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	14.333										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	13.4	17.6	0.0	0.0	45.1
1973	0.0	0.0	0.0	0.0	0.0	0.0	8.6	12.0	17.8	17.5	0.0	0.0	55.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0	9.3
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	17.2	0.0	18.2
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.8
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.4	9.4	2.0	0.0	16.1
1981	0.0	0.0	0.0	0.0	0.0	0.0	9.3	22.4	24.9	16.5	5.4	0.0	78.5
1982	5.9	0.0	0.0	0.0	0.0	0.0	2.4	17.3	27.4	19.1	2.4	0.0	74.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	9.1	10.3	10.3	20.9	0.0	0.0	50.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.4	15.3	25.2	25.3	17.9	5.9	92.9
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.8	13.3	3.9	0.0	28.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	8.3	3.8	0.0	15.5	7.2	0.0	34.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.5	29.4	10.2	0.0	48.1
1989	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.2	8.3	0.0	0.0	0.0	10.6
1990	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.6	15.5	3.5	0.0	0.0	27.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.9	11.0	9.2	8.1	0.0	0.0	29.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	9.1	7.1	22.1	10.1	0.0	0.0	48.3
1998	0.0	0.0	0.0	0.0	0.0	0.0	5.4	21.9	5.3	6.7	0.3	0.0	39.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	26.4	9.3	3.9	0.0	45.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.1	0.0	4.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	19.0	19.5	13.6	1.8	55.1
2003	0.0	7.4	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.1	0.0	13.9
TOTAL	5.9	7.4	0.0	0.0	0.0	2.2	68.6	145.8	247.2	254.9	90.2	7.6	829.9
Average	0.2	0.2	0.0	0.0	0.0	0.1	2.1	4.4	7.5	7.7	2.7	0.2	25.2
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	5.9	7.4	0.0	0.0	0.0	2.2	9.3	22.4	27.4	29.4	17.9	5.9	92.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.5	0.0	0.0	16.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	6.9	9.3	0.1	0.0	28.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.4	10.5	11.4	2.2	0.0	41.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	4.6	10.7	16.9	17.1	4.0	0.0	48.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	8.5	15.1	24.3	19.4	9.6	0.0	55.7
Percentile 100%	5.9	7.4	0.0	0.0	0.0	2.2	9.3	22.4	27.4	29.4	17.9	5.9	92.9

Table 126: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Whangaehu at Kauangaroa

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	15.015										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2	18.9	18.7	0.0	0.0	52.8
1973	7.9	0.9	0.0	0.0	0.0	0.0	11.9	15.1	19.9	17.6	0.0	0.0	73.4
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.0	10.5
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	20.2	5.7	29.4
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	2.6	0.0	0.0	0.0	8.5
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	6.1	11.7	2.4	0.0	22.1
1981	0.0	0.0	0.0	0.0	0.0	0.0	12.5	22.6	25.5	17.4	6.3	0.8	85.1
1982	6.7	0.0	0.0	0.0	0.0	0.0	3.9	18.4	27.9	21.6	2.8	0.0	81.3
1983	0.0	0.0	0.0	0.0	0.0	0.1	16.1	12.7	11.2	22.1	1.7	0.0	64.0
1984	0.0	0.0	0.0	0.0	0.0	1.1	6.8	16.0	26.5	25.9	18.4	8.0	102.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	12.8	15.2	6.8	0.0	38.1
1986	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	10.9	4.1	4.7	19.6	7.5	0.0	46.7
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.5	9.4	29.8	12.6	0.0	55.6
1989	0.0	0.0	0.0	0.0	0.0	5.3	0.0	2.5	8.9	0.0	0.0	0.0	16.7
1990	0.0	0.0	0.0	0.0	0.0	0.1	13.2	3.3	19.9	3.9	0.0	0.0	40.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.9	0.0	0.0	0.0	8.8
1993	0.0	0.0	0.0	0.0	0.0	0.0	3.3	15.5	13.0	9.6	0.0	0.0	41.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	15.2	11.3	24.2	12.5	0.0	0.0	63.1
1998	0.0	0.0	0.0	0.0	0.0	0.1	13.0	23.9	6.8	9.6	1.3	0.0	54.7
1999	0.0	0.0	0.0	0.0	4.3	0.0	2.8	11.0	27.9	10.8	5.8	0.0	62.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	7.0	2.3	0.0	17.6
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	23.6	22.4	14.9	2.7	71.2
2003	0.0	13.8	0.0	0.0	0.0	0.0	4.4	0.0	0.0	4.6	8.8	0.0	31.6
TOTAL	14.6	14.7	0.0	0.0	4.3	6.7	121.3	195.8	305.0	294.3	111.9	17.2	1085.8
Average	0.4	0.4	0.0	0.0	0.1	0.2	3.7	5.9	9.2	8.9	3.4	0.5	32.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	7.9	13.8	0.0	0.0	4.3	5.3	16.1	23.9	27.9	29.8	20.2	8.0	102.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.9	0.0	0.0	15.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.8	7.0	0.0	0.0	29.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.6	9.0	10.6	1.4	0.0	40.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	4.1	9.0	12.9	13.6	2.6	0.0	53.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	9.3	14.1	19.9	18.3	6.6	0.0	62.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.1	12.9	15.9	25.2	22.0	11.8	0.6	73.0
Percentile 100%	7.9	13.8	0.0	0.0	4.3	5.3	16.1	23.9	27.9	29.8	20.2	8.0	102.6

Table 127: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Whangaehu at Kauangaroa

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	15.698										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1971		1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
1972		0.0	0.0	0.0	0.0	0.0	0.0	18.0	21.3	20.5	0.0	0.0	59.8
1973		9.3	2.2	0.0	0.0	0.0	0.1	16.7	18.7	21.8	18.1	0.0	86.9
1974		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	11.7	0.0	0.0	12.8
1975		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977		0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	9.6	22.4	10.9	61.2
1978		0.0	0.0	0.0	0.0	0.0	1.5	9.4	3.5	0.0	0.0	0.0	14.3
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	7.1	13.6	2.9	0.0
1981		0.0	0.0	0.0	0.0	0.0	14.6	22.8	26.1	18.4	7.4	2.7	92.0
1982		7.4	0.0	0.0	0.0	1.1	0.0	6.2	19.6	28.1	22.2	3.1	0.0
1983		0.0	0.0	0.0	0.0	0.0	1.0	21.1	13.6	11.7	22.9	4.5	0.0
1984		0.0	0.0	0.0	0.0	0.3	4.2	9.5	16.5	27.0	26.1	18.8	9.3
1985		0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	16.6	17.1	10.9	0.0
1986		0.0	0.0	0.0	0.0	0.0	0.0	10.6	2.6	0.0	0.0	0.0	13.2
1987		0.0	0.0	0.0	0.0	0.0	0.0	16.9	4.2	11.1	21.4	7.7	0.0
1988		0.0	0.0	0.0	0.0	0.0	1.9	2.5	6.0	12.5	30.0	14.7	0.0
1989		0.0	0.0	0.0	0.0	0.0	7.3	0.3	4.6	9.0	0.0	0.0	21.2
1990		0.0	0.0	0.0	0.0	0.0	3.3	16.4	7.1	22.5	4.8	0.0	0.0
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	15.9	0.0	3.3	0.0
1993		0.0	0.0	0.0	0.0	1.3	0.0	8.0	18.2	14.9	10.6	0.0	0.0
1994		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.2	0.0	0.0
1997		0.0	0.0	0.0	0.0	0.0	0.1	18.6	14.1	25.0	13.8	0.0	0.0
1998		0.0	0.0	0.0	0.0	0.0	2.6	17.2	24.9	8.1	11.9	2.9	0.0
1999		0.0	0.0	0.0	3.6	7.5	3.1	7.9	17.2	29.4	12.8	8.5	0.0
2000		5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.2	14.5	11.5	2.5	0.0
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	26.3	23.8	16.5	3.9
2003		0.0	18.2	0.7	0.0	0.0	0.0	7.7	0.0	0.0	9.2	10.8	0.0
TOTAL		24.5	20.5	0.7	3.6	10.2	23.5	175.7	248.6	374.8	334.4	137.1	26.8
Average		0.7	0.6	0.0	0.1	0.3	0.7	5.3	7.5	11.4	10.1	4.1	0.8
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum		9.3	18.2	0.7	3.6	7.5	7.3	21.1	24.9	29.4	30.0	22.4	10.9
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	13.0
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.4	4.7	0.0	0.0
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	11.1	10.6	0.0	46.7
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	3.2	6.7	14.6	12.1	2.9	0.0
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.0	7.9	13.8	17.2	15.1	3.8	0.0
Percentile 80%		0.0	0.0	0.0	0.0	0.0	0.6	13.0	17.6	22.2	19.7	8.2	0.0
Percentile 90%		1.5	0.0	0.0	0.0	0.2	3.0	16.9	18.6	26.3	22.8	13.9	2.2
Percentile 100%		9.3	18.2	0.7	3.6	7.5	7.3	21.1	24.9	29.4	30.0	22.4	10.9

Table 128: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Whangaehu at Kauangaroa

Flow Statistic	(MALF * 0.9) + 30% of MALF	Flow	16.380										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1971		3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	7.3
1972		0.0	0.0	0.0	0.0	0.0	2.2	23.4	22.6	21.8	0.0	0.0	70.0
1973		12.3	3.3	0.0	0.0	0.0	1.6	19.7	20.4	23.2	18.5	0.0	99.0
1974		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	14.8	0.0	0.0	18.8
1975		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2
1976		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977		0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.7	15.3	23.8	15.4	77.1
1978		0.0	0.0	0.0	0.0	0.0	11.3	10.5	7.8	0.0	1.1	0.0	30.8
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980		0.0	0.0	0.0	0.0	0.0	0.0	3.9	8.9	15.7	5.5	0.0	34.0
1981		0.0	0.0	0.0	0.0	0.0	15.9	23.1	26.8	19.0	8.1	3.9	96.8
1982		8.0	0.0	0.0	0.6	3.3	0.0	8.0	20.9	28.9	22.6	3.4	0.0
1983		0.0	0.0	0.0	0.0	0.0	4.5	22.6	14.5	13.6	23.8	6.6	0.5
1984		0.0	0.0	0.0	0.0	2.6	6.1	11.8	17.1	27.4	26.4	19.6	10.4
1985		0.0	0.0	0.0	0.0	1.5	0.0	1.1	9.1	19.8	19.1	12.4	0.0
1986		0.0	0.0	0.0	0.0	0.0	1.8	12.8	6.2	0.0	0.0	0.0	20.7
1987		0.0	0.0	0.0	0.0	1.9	0.0	21.4	4.3	13.8	22.1	8.4	0.0
1988		0.0	0.0	0.0	0.0	0.0	6.9	4.7	9.4	14.9	30.0	16.3	0.0
1989		0.0	0.0	0.0	0.0	0.0	9.0	1.7	9.3	9.0	4.3	0.0	33.4
1990		0.0	0.0	0.0	0.0	0.0	7.9	19.1	9.4	23.3	6.3	0.0	66.0
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.4	0.0	0.0	5.9
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	21.1	1.4	5.3	0.0
1993		0.0	0.0	0.0	0.0	3.0	0.0	10.6	19.4	17.2	11.3	0.5	0.0
1994		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	6.8	0.0	13.1
1997		0.0	0.0	0.0	0.0	0.0	1.5	20.9	15.7	25.9	15.9	1.4	0.0
1998		0.0	0.0	0.0	0.0	0.0	6.0	18.5	25.6	11.6	13.0	3.9	0.0
1999		0.0	0.0	0.0	6.7	8.9	3.5	11.0	21.3	30.2	14.5	13.2	0.0
2000		9.3	0.0	0.0	0.0	0.0	0.0	0.0	2.9	17.4	14.8	2.6	0.0
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	5.7	1.8	0.0
2002		0.0	0.0	0.0	0.0	0.0	0.0	0.4	24.7	27.9	24.6	17.9	4.5
2003		0.7	22.4	1.0	0.0	0.0	0.0	9.9	0.0	0.0	11.3	12.4	0.0
TOTAL		34.3	25.8	1.0	7.2	21.2	48.7	223.5	299.0	429.6	382.8	164.3	34.7
Average		1.0	0.8	0.0	0.2	0.6	1.5	6.8	9.1	13.0	11.6	5.0	1.1
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum		12.3	22.4	1.0	6.7	8.9	9.0	22.6	25.6	30.2	30.0	23.8	15.4
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	3.9	0.0	0.0
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	8.7	6.7	0.0	0.0
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.3	13.6	13.0	1.4	0.0
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	8.4	9.4	17.2	14.9	3.5	0.0
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.6	11.1	15.0	21.7	16.9	5.9	0.0
Percentile 80%		0.0	0.0	0.0	0.0	0.0	2.8	14.7	20.0	23.3	20.7	10.8	0.0
Percentile 90%		3.3	0.0	0.0	0.0	2.5	6.1	19.6	22.7	27.3	23.6	15.7	3.2
Percentile 100%		12.3	22.4	1.0	6.7	8.9	9.0	22.6	25.6	30.2	30.0	23.8	15.4

Upper Makotuku – Whau 3b

Table 129: Number of days that the MALF occurs at Makotuku at SH49 Bridge

Flow Statistic	MALF	Flow	0.120										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.5	46.9	14.1	0.0	0.0	74.5
1969	0.0	0.0	0.0	0.0	0.0	0.0	1.6	22.0	14.4	5.0	7.8	0.0	50.9
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	13.9	26.4	2.6	0.0	50.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	0.0	11.3
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.6	28.0	22.9	21.3	0.0	0.0	72.8
1973	0.0	0.0	0.0	0.0	0.0	0.0	8.8	25.2	16.7	19.9	0.0	0.0	70.6
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	0.0	10.2
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.5	28.3	15.1	6.6	7.9	79.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	9.9	0.0	0.0	0.0	10.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.7
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	3.5	0.0	14.2
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.2	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.4	2.0	0.0	18.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.0	0.0	0.0	2.7
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.9	0.0	0.0	0.0	4.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	4.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	11.4	6.5	0.0	0.0	26.6
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	7.4	21.7	14.6	8.6	0.0	0.0	52.3
1999	0.0	0.0	0.0	0.0	0.0	0.0	4.6	6.9	30.5	9.7	1.3	0.0	53.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.8	6.2	2.0	0.0	28.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2	16.8	1.6	0.0	33.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
TOTAL	0.0	0.0	0.8	0.0	0.0	0.0	24.8	159.7	249.1	199.7	31.6	7.9	673.5
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.2	6.6	5.3	0.8	0.2	17.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.8	0.0	0.0	0.0	8.8	28.0	46.9	26.4	7.8	7.9	79.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	10.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	9.3	8.4	0.0	0.0	18.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	14.5	11.1	1.5	0.0	43.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.7	21.6	20.7	16.5	2.9	0.0	58.3
Percentile 100%	0.0	0.0	0.8	0.0	0.0	0.0	8.8	28.0	46.9	26.4	7.8	7.9	79.3

Table 130: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Makotuku at SH49 Bridge

Flow Statistic	MALF *0.9	Flow	0.108											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1968		0.0	0.0	0.0	0.0	0.0	0.0	4.5	34.6	11.8	0.0	0.0	51.0	
1969		0.0	0.0	0.0	0.0	0.0	0.0	19.3	9.9	2.4	4.4	0.0	36.0	
1970		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	24.8	2.6	0.0	29.4	
1971		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1972		0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	15.4	20.4	0.0	44.0	
1973		0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.8	16.6	18.1	0.0	47.5	
1974		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1975		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1976		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1977		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	12.2	0.0	31.0	
1978		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1981		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1982		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1983		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1984		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1985		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1986		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1987		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1988		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.4	
1989		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1993		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1994		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1995		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	2.7	
1997		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1998		0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	8.7	5.5	0.0	29.6	
1999		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	28.6	7.8	0.0	36.8	
2000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	1.1	0.0	
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2003		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2004		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2005		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.6	150.2	107.3	8.1	0.0	326.2	
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.9	2.8	0.2	0.0	8.6	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	34.6	24.8	4.4	0.0	51.0	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	2.6	0.0	24.3	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	15.8	11.9	0.0	0.0	36.2	
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	34.6	24.8	4.4	0.0	51.0	

Table 131: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Makotuku at SH49 Bridge

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	0.120										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.5	46.9	14.1	0.0	0.0	74.5
1969	0.0	0.0	0.0	0.0	0.0	0.0	1.6	22.0	14.4	5.0	7.8	0.0	50.9
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	13.9	26.4	2.6	0.0	50.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	0.0	11.3
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.6	28.0	22.9	21.3	0.0	0.0	72.8
1973	0.0	0.0	0.0	0.0	0.0	0.0	8.8	25.2	16.7	19.9	0.0	0.0	70.6
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.5	28.3	15.1	6.6	7.9	79.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	9.9	0.0	0.0	0.0	10.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.7
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	3.5	0.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.2	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.4	2.0	0.0	18.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.0	0.0	0.0	2.7
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.9	0.0	0.0	0.0	4.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	4.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	11.4	6.5	0.0	0.0	26.6
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	7.4	21.7	14.6	8.6	0.0	0.0	52.3
1999	0.0	0.0	0.0	0.0	0.0	0.0	4.6	6.9	30.5	9.7	1.3	0.0	53.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.8	6.2	2.0	0.0	28.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2	16.8	1.6	0.0	33.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
TOTAL	0.0	0.0	0.8	0.0	0.0	0.0	24.7	159.6	249.0	199.7	31.6	7.9	673.3
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.2	6.6	5.3	0.8	0.2	17.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.8	0.0	0.0	0.0	8.8	28.0	46.9	26.4	7.8	7.9	79.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	10.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	9.3	8.4	0.0	0.0	18.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	14.5	11.1	1.5	0.0	43.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.7	21.6	20.7	16.5	2.9	0.0	58.3
Percentile 100%	0.0	0.0	0.8	0.0	0.0	0.0	8.8	28.0	46.9	26.4	7.8	7.9	79.3

Table 132: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Makotuku at SH49 Bridge

Flow Statistic	(MALF * 0.9) + 15% of MALF	Flow	0.126										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	49.1	15.1	0.0	0.0	79.5
1969	0.0	0.0	0.0	0.0	0.0	0.0	3.1	23.3	15.6	7.0	9.1	0.0	58.1
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	15.9	27.3	2.7	0.0	58.5
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	0.0	0.0	11.4
1972	0.0	0.0	0.0	0.0	0.0	0.0	1.5	28.0	23.4	21.3	0.0	0.0	74.2
1973	0.0	0.0	0.0	0.0	0.0	0.0	15.4	25.4	17.2	19.9	0.0	0.0	77.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	15.3	0.0	0.0	19.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.5	0.0	0.0	8.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1	28.3	15.5	10.6	8.1	85.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	13.7	5.9	0.4	0.0	0.0	0.0	19.9
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	14.2	8.6	0.0	0.0	34.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.0	0.0	0.0	8.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	5.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	19.4	6.7	0.0	26.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	4.2	0.0	8.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	23.7	2.4	0.0	32.1
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0	8.4	3.6	0.0	0.0	21.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	13.5	0.0	0.0	0.0	22.2
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	2.3	0.0	0.0	0.0	16.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	12.9	7.2	0.0	0.0	31.8
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1
1998	0.0	0.0	0.0	0.0	0.0	0.0	9.6	22.8	17.6	9.7	2.3	0.0	62.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	5.4	8.5	30.7	10.3	2.6	0.0	57.4
2000	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.1	7.9	2.0	0.0	33.6
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	18.5	19.6	2.9	0.0	42.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9
TOTAL	2.6	0.0	4.9	0.0	0.0	0.0	58.1	212.1	321.4	256.1	45.4	8.1	908.6
Average	0.1	0.0	0.1	0.0	0.0	0.0	1.5	5.6	8.5	6.7	1.2	0.2	23.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	2.6	0.0	4.9	0.0	0.0	0.0	15.4	28.0	49.1	27.3	10.6	8.1	85.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	7.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.1	0.0	0.0	13.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	7.0	0.0	0.0	21.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	13.4	9.6	0.0	0.0	32.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	16.7	15.2	2.4	0.0	51.5
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	6.6	22.9	21.8	19.7	3.3	0.0	65.7
Percentile 100%	2.6	0.0	4.9	0.0	0.0	0.0	15.4	28.0	49.1	27.3	10.6	8.1	85.6

Table 133: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Makotuku at SH49 Bridge

Flow Statistic	(MALF * 0.9) + 20% of MALF	Flow	0.132										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.1	17.1	50.5	15.7	0.0	0.0	83.4
1969	0.0	0.0	0.0	0.0	0.0	0.0	4.3	24.6	16.6	8.7	10.0	0.0	64.3
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	18.0	28.2	2.7	0.0	62.3
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.1	11.4	0.0	0.0	12.9
1972	0.0	0.0	0.0	0.0	0.0	0.0	2.5	28.0	24.0	21.3	0.0	0.0	75.8
1973	0.0	0.0	0.0	0.0	0.0	0.0	15.7	25.6	17.7	20.0	0.0	0.0	78.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5	17.4	0.0	0.0	31.9
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	1.8	0.0	0.0	11.1
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.7	27.1	28.3	16.6	11.1	8.6	92.4
1978	0.0	0.0	0.0	0.0	0.0	0.0	14.1	6.0	1.5	0.0	0.0	0.0	21.6
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	14.2	8.6	0.0	0.0	34.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.0	0.0	0.0	8.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	5.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	19.4	6.7	0.0	26.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	4.2	0.0	8.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	23.7	2.4	0.0	32.1
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0	8.4	3.6	0.0	0.0	21.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	13.5	0.0	0.0	0.0	22.2
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	2.3	0.0	0.0	0.0	16.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	13.8	7.7	0.0	0.0	35.3
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	14.2	23.3	19.0	10.7	2.4	0.0	69.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	6.9	8.9	30.9	10.6	3.2	0.0	60.5
2000	5.8	0.0	0.0	0.0	0.0	0.0	0.0	1.6	21.7	9.1	2.0	0.0	40.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	20.5	20.1	3.8	0.0	47.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
2005	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9
TOTAL	5.8	0.0	4.9	0.0	0.0	0.0	67.8	227.1	349.2	268.5	48.5	8.6	980.5
Average	0.2	0.0	0.1	0.0	0.0	0.0	1.8	6.0	9.2	7.1	1.3	0.2	25.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	5.8	0.0	4.9	0.0	0.0	0.0	15.7	28.0	50.5	28.2	11.1	8.6	92.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	7.8
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.1	0.0	0.0	14.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	8.7	7.9	0.0	0.0	23.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	14.2	10.5	0.0	0.0	34.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.5	13.6	17.9	16.2	2.4	0.0	55.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	7.7	23.7	22.4	20.0	3.9	0.0	71.5
Percentile 100%	5.8	0.0	4.9	0.0	0.0	0.0	15.7	28.0	50.5	28.2	11.1	8.6	92.4

Table 134: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Makotuku at SH49 Bridge

Flow Statistic	(MALF * 0.9) + 25% of MALF	Flow	0.138										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.5	18.8	52.0	16.0	0.0	0.0	87.3
1969	0.0	0.0	0.0	0.0	0.2	0.0	6.1	25.9	17.6	9.4	10.9	0.0	70.2
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	20.0	28.3	2.8	0.0	65.4
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	3.9	11.9	0.0	0.0	20.4
1972	0.0	0.0	0.0	0.0	0.0	0.0	3.5	28.0	24.5	21.3	0.0	0.0	77.3
1973	0.0	0.0	0.0	0.0	0.0	0.0	16.0	25.8	18.2	20.0	0.0	0.0	79.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.8
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.3	19.5	0.0	0.0	44.8
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	3.2	0.0	0.0	14.2
1977	0.0	0.0	0.0	0.0	0.0	0.0	5.2	27.3	28.3	17.7	11.6	9.2	99.3
1978	0.0	0.0	0.0	0.0	0.0	0.0	14.5	6.1	2.6	0.0	0.0	0.0	23.2
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	14.2	8.6	0.0	0.0	34.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.0	0.0	0.0	8.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	5.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	19.4	6.7	0.0	26.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	5.8	0.0	13.4
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4	26.6	5.9	0.0	46.9
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	7.2	0.0	0.0	0.0	8.6
1990	0.0	0.0	0.0	0.0	0.0	0.4	17.9	0.0	12.6	5.0	0.0	0.0	35.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	20.2	0.0	0.0	0.0	34.3
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.6	18.9	5.0	2.6	0.0	0.0	27.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.6	0.0	0.0	0.0	5.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	15.6	7.8	0.0	0.0	41.7
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	5.5
1998	0.0	0.0	0.0	0.0	0.0	2.1	18.7	24.0	21.1	12.7	2.4	0.0	81.1
1999	0.0	0.0	0.0	0.3	0.0	0.0	10.2	11.2	31.0	11.4	4.4	0.0	68.5
2000	8.6	0.0	0.0	0.0	0.0	0.0	0.0	5.8	22.9	11.6	2.1	0.0	51.0
2001	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	3.5	3.9	0.0	0.0	11.6
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	22.6	21.2	5.2	0.0	59.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	4.9
2005	0.0	0.0	6.300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4
TOTAL	8.6	0.0	6.300	4.6	0.2	2.6	93.2	269.0	417.6	295.8	57.8	9.2	1165.0
Average	0.2	0.0	0.2	0.1	0.0	0.1	2.5	7.1	11.0	7.8	1.5	0.2	30.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	8.6	0.0	6.3	4.2	0.2	2.1	18.7	28.0	52.0	28.3	11.6	9.2	99.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	5.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	2.6	0.0	0.0	11.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	4.5	0.0	0.0	21.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	12.9	8.0	0.0	0.0	34.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	17.4	11.6	0.0	0.0	44.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.3	16.7	20.7	17.0	2.6	0.0	63.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	11.5	24.5	24.7	20.4	5.8	0.0	78.1
Percentile 100%	8.6	0.0	6.3	4.2	0.2	2.1	18.7	28.0	52.0	28.3	11.6	9.2	99.3

Table 135: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Makotuku at SH49 Bridge

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	0.144										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.7	20.7	52.6	16.3	0.0	0.0	90.3
1969	0.0	0.0	0.0	0.0	0.5	0.2	7.2	26.5	18.4	10.1	11.9	0.0	74.8
1970	0.0	0.0	0.0	0.0	0.0	0.0	2.4	17.0	21.8	28.6	2.8	0.0	72.6
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	3.9	15.0	0.0	0.0	29.2
1972	0.0	0.0	0.0	0.0	0.0	0.0	4.4	28.0	25.1	21.3	0.0	0.0	78.8
1973	0.0	0.0	0.0	0.0	0.0	1.0	16.2	26.0	18.9	20.0	0.6	0.0	82.7
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4.2	0.0	0.0	5.9
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	27.9	20.6	0.0	0.0	48.5
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	12.7	4.6	0.0	0.0	17.8
1977	0.0	0.0	0.0	0.0	0.0	0.0	7.6	27.4	28.4	19.1	12.3	9.8	104.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	14.9	8.5	3.1	0.0	0.0	0.0	26.5
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.7	0.0	4.6
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	16.7	12.1	0.0	0.0	47.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	19.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.4	2.7	9.2	0.0	0.0	18.3
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	19.9	14.2	0.3	41.3
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	11.1	0.0	0.0	15.3
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.6	0.0	8.8	5.8	0.0	18.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4	26.6	5.9	0.0	46.9
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	7.2	0.0	0.0	0.0	8.6
1990	0.0	0.0	0.0	0.0	0.0	0.4	17.9	0.0	12.6	5.0	0.0	0.0	35.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	20.2	0.0	0.0	0.0	34.3
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.6	20.6	5.0	2.6	0.0	0.0	28.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	3.1	0.0	0.0	0.0	6.8
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.4	16.9	7.8	0.0	0.0	44.1
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	6.3
1998	0.0	0.0	0.0	0.0	0.0	3.2	19.4	24.7	22.0	13.6	2.4	0.0	85.4
1999	0.0	0.0	0.0	3.0	1.9	0.0	11.2	13.0	31.0	11.9	5.2	0.0	77.1
2000	9.7	0.0	0.0	0.0	0.0	0.0	0.0	7.8	23.2	12.6	2.4	0.0	55.7
2001	0.0	0.0	1.8	6.0	0.0	0.0	0.0	1.0	6.1	4.4	0.0	0.0	19.3
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5	23.4	21.7	6.1	0.0	65.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.9
2005	0.0	0.0	7.8	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8
TOTAL	9.7	0.0	9.6	8.9	2.4	5.8	107.0	310.1	462.9	330.8	69.6	10.1	1327.0
Average	0.3	0.0	0.3	0.2	0.1	0.2	2.8	8.2	12.2	8.7	1.8	0.3	34.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	9.7	0.0	7.8	6.0	1.9	3.2	19.4	28.0	52.6	28.6	14.2	9.8	104.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	6.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	9.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	5.7	4.1	0.0	0.0	18.5
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	7.1	6.4	0.0	0.0	27.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	14.9	10.3	0.0	0.0	36.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	14.0	18.9	12.6	0.0	0.0	47.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	4.2	18.9	21.9	18.0	2.6	0.0	69.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.3	12.3	25.1	25.9	20.8	6.0	0.0	80.0
Percentile 100%	9.7	0.0	7.8	6.0	1.9	3.2	19.4	28.0	52.6	28.6	14.2	9.8	104.6

Lower Mangawhero – Whau 3e

Table 136: Number of days that the MALF occurs at Mangawhero at Ore Ore

Flow Statistic	MALF	Flow	2.8										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0	14.6
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.3	7.8	0.0	0.0	28.1
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	4.2	0.0	0.0	19.3
1969	0.0	0.0	0.0	0.0	2.1	1.8	18.4	27.5	18.8	21.4	10.5	0.0	100.4
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	9.6	25.2	2.6	0.0	44.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.2	16.0	16.4	0.0	0.0	56.6
1973	0.0	0.0	0.0	0.0	0.0	0.0	6.7	20.0	16.9	16.9	0.0	0.0	60.5
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	17.7	0.0	0.0	38.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	19.2	7.5	0.0	0.0	33.6
1977	0.0	0.0	0.0	0.0	0.0	0.0	22.0	27.6	28.9	20.1	16.5	12.6	127.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	13.4	0.0	0.0	0.0	17.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	3.8	7.5	0.0	0.0	14.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	20.3	13.2	0.0	38.3
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.6	0.0	0.0	2.2
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.4	7.9	3.9	0.0	0.0	0.0	12.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.7	14.9	7.4	0.0	0.0	42.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.6	25.4	6.9	0.0	0.0	36.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	4.8	0.0	0.0	18.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.2	11.9	4.9	0.0	37.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
TOTAL	0.0	0.0	0.0	0.0	2.1	1.8	49.7	165.7	266.8	203.2	47.8	12.6	749.6
Average	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.9	6.2	4.7	1.1	0.3	17.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	2.1	1.8	22.0	27.6	28.9	25.2	16.5	12.6	127.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.7	0.0	0.0	12.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	11.1	5.6	0.0	0.0	19.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	15.6	7.7	0.0	0.0	36.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	18.7	20.0	17.5	2.1	0.0	43.6
Percentile 100%	0.0	0.0	0.0	0.0	2.1	1.8	22.0	27.6	28.9	25.2	16.5	12.6	127.6

Table 137: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Mangawhero at Ore Ore

Flow Statistic	MALF *0.9	Flow	2.520										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	5.9	0.0	0.0	9.1
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.7	14.5	26.3	16.5	17.9	7.9	0.0	83.8
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	2.5	0.0	12.4
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.7	5.5	8.6	0.0	0.0	29.8
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	13.4	16.8	0.0	0.0	39.4
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	11.6	0.0	0.0	25.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	13.3	4.4	0.0	0.0	17.9
1977	0.0	0.0	0.0	0.0	0.0	0.0	15.1	27.2	28.8	18.5	12.6	11.5	113.7
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	2.4	0.0	10.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	9.0	3.7	0.0	0.0	22.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.1	0.0	0.0	8.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	5.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.1	0.6	0.0	5.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.7	29.6	88.3	122.7	105.8	26.1	11.5	384.5
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.1	2.9	2.5	0.6	0.3	8.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.7	15.1	27.2	28.8	18.5	12.6	11.5	113.7
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	4.1	0.0	10.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	12.4	9.6	0.5	0.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.7	15.1	27.2	28.8	18.5	12.6	11.5	113.7

Table 138: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Mangawhero at Ore Ore

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	2.8										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0	14.6
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.3	7.8	0.0	0.0	28.1
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	4.2	0.0	0.0	19.3
1969	0.0	0.0	0.0	0.0	2.1	1.8	18.4	27.5	18.8	21.4	10.5	0.0	100.4
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	9.6	25.2	2.6	0.0	44.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.2	16.0	16.4	0.0	0.0	56.6
1973	0.0	0.0	0.0	0.0	0.0	0.0	6.7	20.0	16.9	16.9	0.0	0.0	60.5
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	17.7	0.0	0.0	38.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	19.2	7.5	0.0	0.0	33.6
1977	0.0	0.0	0.0	0.0	0.0	0.0	22.0	27.6	28.9	20.1	16.5	12.6	127.6
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	13.4	0.0	0.0	0.0	17.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	3.8	7.5	0.0	0.0	14.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	20.3	13.2	0.0	38.3
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.6	0.0	0.0	2.2
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.4	7.9	3.9	0.0	0.0	0.0	12.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.7	14.9	7.4	0.0	0.0	42.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.6	25.4	6.9	0.0	0.0	36.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	4.8	0.0	0.0	18.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.2	11.9	4.9	0.0	37.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
TOTAL	0.0	0.0	0.0	0.0	2.1	1.8	49.7	165.6	266.7	203.1	47.8	12.6	749.3
Average	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.9	6.2	4.7	1.1	0.3	17.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	2.1	1.8	22.0	27.6	28.9	25.2	16.5	12.6	127.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.7	0.0	0.0	12.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	11.1	5.6	0.0	0.0	19.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	15.6	7.7	0.0	0.0	36.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.6	18.7	20.0	17.5	2.1	0.0	43.6
Percentile 100%	0.0	0.0	0.0	0.0	2.1	1.8	22.0	27.6	28.9	25.2	16.5	12.6	127.6

Table 139: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Mangawhero at Ore Ore

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	2.940										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.4	0.0	0.0	6.0
1963	0.0	0.0	0.0	0.0	0.0	0.1	0.0	21.9	0.0	0.2	0.0	0.0	22.2
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	23.6	9.1	0.0	0.0	35.4
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	5.4	0.0	0.0	23.6
1969	0.0	0.0	0.0	0.0	5.0	3.1	20.5	27.7	20.6	22.6	11.5	0.0	111.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.8	18.1	26.2	2.7	0.0	57.8
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.4	28.0	17.1	17.1	0.0	0.0	62.6
1973	0.0	0.0	0.0	0.0	0.0	0.0	7.6	21.1	18.3	17.5	0.0	0.0	64.5
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.6	20.0	0.0	0.0	43.6
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	20.7	8.7	0.0	0.0	38.5
1977	0.0	0.0	0.0	0.0	0.0	0.0	25.1	27.8	28.9	20.5	17.9	12.8	133.1
1978	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.4	0.0	0.0	0.0	0.0	4.9
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	17.3	0.6	0.0	0.0	26.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.2	4.2	8.9	0.0	0.0	19.3
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	12.3	22.4	13.4	0.2	48.3
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	5.3	0.0	0.0	12.2
1986	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	5.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.3	2.5	0.0	5.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	1.8	2.7	0.0	0.0	10.2
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.3	0.0	0.0	0.0	3.6
1993	0.0	0.0	0.0	0.0	0.0	0.0	1.4	11.2	5.8	0.0	0.0	0.0	18.4
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.1	0.0	0.0	5.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.8	0.0	0.0	0.0	3.5
1998	0.0	0.0	0.0	0.0	0.0	0.0	2.4	22.0	18.0	9.2	0.0	0.0	51.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	4.7	5.8	27.6	6.9	0.0	0.0	45.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3	6.8	0.5	0.0	23.6
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	22.3	16.1	8.2	0.0	48.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
TOTAL	0.0	0.0	0.0	0.0	5.0	3.2	77.2	209.0	335.5	236.1	56.8	13.0	935.9
Average	0.0	0.0	0.0	0.0	0.1	0.1	1.8	4.9	7.8	5.5	1.3	0.3	21.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	5.0	3.1	25.1	28.0	28.9	26.2	17.9	12.8	133.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.2	0.0	0.0	5.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.5	4.2	0.0	0.0	18.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	16.6	6.8	0.0	0.0	24.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	1.5	8.9	18.1	9.2	0.0	0.0	44.5
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	5.5	21.7	22.0	19.5	2.7	0.0	56.6
Percentile 100%	0.0	0.0	0.0	0.0	5.0	3.1	25.1	28.0	28.9	26.2	17.9	12.8	133.1

Table 140: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Mangawhero at Ore Ore

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	3.080										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	5.3	0.1	0.0	9.1
1963	0.0	0.0	0.0	0.0	0.0	4.0	0.0	24.3	0.0	9.9	0.0	0.0	38.1
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	25.4	9.1	0.0	0.0	42.7
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	20.5	5.9	0.0	0.0	27.4
1969	0.0	0.0	0.0	0.0	5.8	5.2	21.7	27.9	21.6	22.9	11.9	0.0	117.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.2	20.7	26.9	2.7	0.0	63.5
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	2.0	28.0	17.9	17.6	0.0	0.0	65.6
1973	0.0	0.0	0.0	0.0	0.0	0.0	13.5	22.3	19.8	17.9	0.0	0.0	73.4
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	7.7	0.0	0.0	8.8
1975	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	25.6	21.8	0.0	0.0	47.4
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	21.5	9.5	0.0	0.0	42.6
1977	0.0	0.0	0.0	0.0	0.0	0.0	26.2	28.0	29.0	20.7	19.3	13.4	136.5
1978	0.0	0.0	0.0	0.0	0.0	0.0	4.2	6.6	0.0	0.0	0.0	0.0	10.8
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	18.5	6.6	0.0	0.0	35.5
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	5.2
1983	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.8	4.3	12.9	0.0	0.0	28.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	17.9	23.3	13.5	1.7	57.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	10.4	9.5	0.0	0.0	20.1
1986	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	5.1	4.2	0.0	12.3
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	3.5
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
1990	0.0	0.0	0.0	0.0	0.0	0.8	12.1	0.0	7.1	2.7	0.0	0.0	22.7
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.2	0.0	0.0	0.0	11.1
1993	0.0	0.0	0.0	0.0	0.0	0.0	2.6	13.0	7.3	0.0	0.0	0.0	22.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	5.1	0.0	0.0	9.8
1997	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.5	6.5	0.0	0.0	0.0	11.4
1998	0.0	0.0	0.0	0.0	0.0	0.0	8.8	23.7	20.2	11.6	0.2	0.0	64.4
1999	0.0	0.0	0.0	0.0	0.0	0.0	7.1	6.5	28.4	7.0	0.0	0.0	49.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	19.1	8.6	2.0	0.0	31.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	23.4	18.8	10.1	0.0	58.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.8	0.0	0.0	0.0	6.0
TOTAL	0.0	0.0	0.0	0.0	5.8	10.0	115.0	250.8	392.9	290.0	63.9	15.1	1143.4
Average	0.0	0.0	0.0	0.0	0.1	0.2	2.7	5.8	9.1	6.7	1.5	0.4	26.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	5.8	5.2	26.2	28.0	29.0	26.9	19.3	13.4	136.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	9.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.2	5.1	0.0	0.0	11.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7.2	6.7	0.0	0.0	23.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	18.1	9.3	0.0	0.0	36.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	3.6	11.2	20.4	12.4	0.1	0.0	48.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	9.8	23.4	23.0	20.3	3.9	0.0	64.2
Percentile 100%	0.0	0.0	0.0	0.0	5.8	5.2	26.2	28.0	29.0	26.9	19.3	13.4	136.5

Table 141: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Mangawhero at Ore Ore

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	3.220										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	5.7	1.5	0.0	13.2
1963	0.0	0.0	0.0	0.0	0.0	5.6	0.0	25.9	0.0	13.0	0.0	0.0	44.5
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	26.6	9.1	0.0	0.0	44.9
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	23.1	6.2	0.0	0.0	33.8
1969	0.0	0.0	0.0	0.0	6.5	7.2	23.0	28.0	22.5	23.3	12.4	0.0	122.8
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	21.6	27.7	2.8	0.0	67.1
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.9	0.3	0.0	0.0	5.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	3.5	28.0	18.8	18.2	0.0	0.0	68.5
1973	0.0	0.0	0.0	0.0	0.0	0.0	16.1	23.6	21.4	18.2	0.0	0.0	79.2
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	10.0	0.0	0.0	11.7
1975	0.0	0.0	0.0	0.0	0.0	2.4	0.0	1.5	27.5	22.9	0.0	0.0	54.3
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	23.3	10.1	0.0	0.0	46.3
1977	0.0	0.0	0.0	0.0	0.0	0.4	26.6	28.0	29.1	21.0	20.1	14.1	139.2
1978	0.0	0.0	0.0	0.0	0.0	0.0	8.1	7.9	0.5	0.0	0.0	0.0	16.4
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	19.8	8.9	0.0	0.0	42.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.4	0.0	0.0	10.2
1983	0.0	0.0	0.0	0.0	0.0	0.0	9.7	6.5	4.8	16.6	0.0	0.0	37.6
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	20.7	23.8	13.5	4.2	65.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	12.4	11.4	0.0	0.0	25.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	12.5
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.7	0.0	9.2	4.4	0.0	17.4
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	0.0	0.0	10.9
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
1990	0.0	0.0	0.0	0.0	0.0	2.6	14.8	0.0	13.0	2.9	0.0	0.0	33.2
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	16.3	0.0	0.0	0.0	22.4
1993	0.0	0.0	0.0	0.0	0.0	0.0	4.4	14.5	8.3	1.3	0.0	0.0	28.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	5.9	0.0	16.2
1997	0.0	0.0	0.0	0.0	0.0	0.0	4.7	5.8	8.4	0.0	0.0	0.0	18.9
1998	0.0	0.0	0.0	0.0	0.0	0.0	13.7	24.5	21.6	12.6	1.2	0.0	73.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	9.1	8.2	29.1	7.0	0.6	0.0	54.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	20.7	11.0	2.0	0.0	37.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	25.1	20.6	11.6	0.0	67.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	8.1	0.0	0.0	11.6
TOTAL	0.0	0.0	0.0	0.0	6.5	18.1	146.3	291.4	456.4	328.1	70.1	18.3	1335.2
Average	0.0	0.0	0.0	0.0	0.2	0.4	3.4	6.8	10.6	7.6	1.6	0.4	31.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	6.5	7.2	26.6	28.0	29.1	27.7	20.1	14.1	139.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.4	0.0	13.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	8.3	5.9	0.0	0.0	18.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	12.5	9.1	0.0	0.0	33.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	20.2	10.9	0.0	0.0	43.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	6.7	13.6	21.6	15.2	1.0	0.0	54.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.3	13.5	24.3	24.7	20.9	4.1	0.0	68.3
Percentile 100%	0.0	0.0	0.0	0.0	6.5	7.2	26.6	28.0	29.1	27.7	20.1	14.1	139.2

Table 142: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Mangawhero at Ore Ore

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	3.360										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	7.9	7.6	1.8	0.0	18.4
1963	0.0	0.0	0.0	0.0	0.0	6.3	0.8	26.7	0.0	17.1	0.0	0.0	50.9
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.2	0.0	0.0	2.3
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	27.6	9.1	0.0	0.0	50.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	1.4	8.6	24.2	7.1	0.0	0.0	41.3
1969	0.0	0.0	0.0	0.0	11.3	11.3	23.7	28.0	23.1	23.6	14.3	0.0	135.1
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.7	19.1	23.5	28.3	2.8	0.0	74.3
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	4.0	4.0	0.0	0.0	13.1
1972	0.0	0.0	0.0	0.0	0.0	0.0	5.4	28.0	19.9	18.6	0.0	0.0	71.9
1973	0.0	0.0	0.0	0.0	0.0	0.0	16.8	24.2	22.8	18.4	0.0	0.0	82.2
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	11.2	0.0	0.0	13.8
1975	0.0	0.0	0.0	0.0	0.0	5.0	0.0	2.2	27.6	23.7	0.0	0.0	58.5
1976	0.0	0.0	0.0	0.0	0.0	0.0	2.3	14.2	24.2	10.8	0.0	0.0	51.5
1977	0.0	0.0	0.0	0.0	0.0	1.1	27.3	28.0	29.3	21.2	20.9	14.7	142.4
1978	0.0	0.0	0.0	0.0	0.0	0.0	10.5	8.6	2.6	0.0	0.0	0.0	21.6
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.4	21.6	11.8	0.6	0.0	50.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	17.5	2.5	0.0	0.0	21.2
1983	0.0	0.0	0.0	0.0	0.0	0.0	12.6	8.2	6.8	18.4	0.0	0.0	46.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	22.8	24.6	15.6	4.9	75.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	15.5	13.9	0.0	0.0	35.2
1986	0.0	0.0	0.0	0.0	0.0	0.0	14.9	0.0	0.0	0.0	0.0	0.0	14.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	4.4	3.8	0.5	13.1	5.9	0.0	27.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0	17.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	4.8
1990	0.0	0.0	0.0	0.0	0.0	3.6	17.3	0.0	14.4	3.6	0.0	0.0	38.9
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	19.1	0.0	0.0	0.0	26.3
1993	0.0	0.0	0.0	0.0	0.0	5.6	15.6	9.1	5.3	0.0	0.0	0.0	35.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	15.3	5.9	0.0	0.0	25.5
1997	0.0	0.0	0.0	0.0	0.0	0.0	7.1	8.4	10.0	0.0	0.0	0.0	25.4
1998	0.0	0.0	0.0	0.0	0.0	0.0	15.9	24.9	22.9	13.8	3.6	0.0	80.9
1999	0.0	0.0	0.0	0.0	3.5	0.0	11.0	8.9	29.6	8.7	2.4	0.0	64.2
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	21.6	12.6	2.1	0.0	42.5
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	27.5	22.0	12.6	0.0	80.8
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	10.1	0.0	0.0	0.0	16.1
TOTAL	0.0	0.0	0.0	0.0	14.7	27.3	177.6	350.4	509.4	378.0	82.5	19.6	1559.5
Average	0.0	0.0	0.0	0.0	0.3	0.6	4.1	8.1	11.8	8.8	1.9	0.5	36.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	11.3	11.3	27.3	28.0	29.6	28.3	20.9	14.7	142.4
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	14.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.6	3.4	0.0	0.0	20.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	10.0	7.1	0.0	0.0	26.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	7.7	15.9	10.9	0.0	0.0	39.4
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.1	8.7	21.6	13.4	0.0	0.0	50.1
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	9.1	16.1	23.0	18.1	2.0	0.0	61.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.9	15.7	24.8	26.8	21.8	5.4	0.0	79.8
Percentile 100%	0.0	0.0	0.0	0.0	11.3	11.3	27.3	28.0	29.6	28.3	20.9	14.7	142.4

Turakina Water Management Zone – Tura 1

Upper Turakina – Tura 1a

Table 143: Number of days that the MALF occurs at Turakina at Otairi

Flow Statistic	MALF	Flow	0.380											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.1	17.1	11.6	0.0	0.0	0.0	0.0	28.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.9	0.0	5.6	2.7	0.0	0.0	0.0	0.0	9.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.1
1997	0.0	0.0	0.0	0.0	0.0	0.0	5.9	18.5	7.5	0.0	0.0	0.0	0.0	31.9
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.9	2.3	0.0	0.0	0.0	0.0	10.0
1999	0.0	0.0	0.0	0.0	0.0	2.7	5.5	9.8	17.3	7.6	0.0	0.0	0.0	42.9
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.9	20.8	10.8	0.0	0.0	0.0	35.9
2001	0.0	0.0	0.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.3	19.5	3.6	0.8	0.0	0.0	31.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.4	1.9	0.0	3.6	19.2	63.2	82.8	22.1	0.8	0.0	0.0	194.0
Average	0.0	0.0	0.0	0.1	0.0	0.3	1.4	4.5	5.9	1.6	0.1	0.0	0.0	13.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.4	1.9	0.0	2.7	6.8	18.5	20.8	10.8	0.8	0.0	0.0	42.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.7	0.0	0.0	0.0	0.0	5.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.3	2.6	0.0	0.0	0.0	0.0	9.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.8	7.9	0.0	0.0	0.0	0.0	29.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.6	8.3	13.9	1.4	0.0	0.0	0.0	31.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.6	5.8	14.9	18.8	6.4	0.0	0.0	0.0	34.7
Percentile 100%	0.0	0.0	0.4	1.9	0.0	2.7	6.8	18.5	20.8	10.8	0.8	0.0	0.0	42.9

Table 144: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Turakina at Otairi

Flow Statistic	MALF * 0.9	Flow	0.342											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		TOTAL
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	0.0	0.0	0.0	0.0	18.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.2	0.0	0.0	0.0	0.0	4.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999	0.0	0.0	0.0	0.0	0.0	1.8	1.7	4.5	9.4	4.8	0.0	0.0	0.0	22.3
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	20.7	9.9	0.0	0.0	0.0	32.6
2001	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	6.0	0.0	0.0	0.0	0.0	6.9
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	1.1	0.0	1.8	1.7	26.7	47.7	14.7	0.0	0.0	0.0	93.7
Average	0.0	0.0	0.0	0.1	0.0	0.1	0.1	1.9	3.4	1.1	0.0	0.0	0.0	6.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	1.1	0.0	1.8	1.7	9.3	20.7	9.9	0.0	0.0	0.0	32.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	3.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	0.0	0.0	0.0	0.0	7.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	7.3	0.0	0.0	0.0	0.0	12.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	9.4	3.4	0.0	0.0	0.0	21.2
Percentile 100%	0.0	0.0	0.0	1.1	0.0	1.8	1.7	9.3	20.7	9.9	0.0	0.0	0.0	32.6

Table 145: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Turakina at Otairi

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	0.380										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.1	17.1	11.6	0.0	0.0	0.0	28.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.9	0.0	5.6	2.7	0.0	0.0	0.0	9.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1
1997	0.0	0.0	0.0	0.0	0.0	0.0	5.9	18.5	7.5	0.0	0.0	0.0	31.9
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.9	2.3	0.0	0.0	0.0	10.0
1999	0.0	0.0	0.0	0.0	0.0	2.7	5.5	9.8	17.3	7.6	0.0	0.0	42.9
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.9	20.8	10.8	0.0	0.0	35.9
2001	0.0	0.0	0.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.3	19.5	3.6	0.8	0.0	31.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.4	1.9	0.0	3.6	19.1	63.2	82.8	22.1	0.8	0.0	193.8
Average	0.0	0.0	0.0	0.1	0.0	0.3	1.4	4.5	5.9	1.6	0.1	0.0	13.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.4	1.9	0.0	2.7	6.8	18.5	20.8	10.8	0.8	0.0	42.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.7	0.0	0.0	0.0	5.7
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.3	2.6	0.0	0.0	0.0	9.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.8	7.9	0.0	0.0	0.0	29.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.6	8.3	13.9	1.4	0.0	0.0	31.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.6	5.8	14.9	18.8	6.4	0.0	0.0	34.7
Percentile 100%	0.0	0.0	0.4	1.9	0.0	2.7	6.8	18.5	20.8	10.8	0.8	0.0	42.9

Table 146: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Turakina at Otairi

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	0.399										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	1.1	18.6	12.9	0.0	0.0	0.0	32.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	1.5	0.0	7.4	4.7	0.0	0.0	0.0	13.6
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	4.7
1997	0.0	0.0	0.0	0.0	0.0	0.0	14.7	20.5	15.5	0.0	0.0	0.0	50.6
1998	0.0	0.0	0.0	0.0	0.0	0.9	14.3	12.6	4.9	0.0	0.0	0.0	32.8
1999	0.0	0.0	0.0	0.0	0.0	3.1	7.2	11.8	20.0	8.7	0.3	0.0	51.0
2000	0.0	0.0	0.0	0.0	0.0	0.3	0.5	5.3	21.7	11.2	0.0	0.0	39.0
2001	0.0	0.0	0.6	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
2002	0.0	0.0	0.0	0.0	0.0	0.0	1.3	10.6	22.1	7.0	2.4	0.0	43.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.6	2.2	0.0	5.8	39.0	86.9	106.6	26.9	2.7	0.0	270.8
Average	0.0	0.0	0.0	0.2	0.0	0.4	2.8	6.2	7.6	1.9	0.2	0.0	19.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.6	2.2	0.0	3.1	14.7	20.5	22.1	11.2	2.4	0.0	51.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	3.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	4.7	0.0	0.0	0.0	9.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	7.0	4.9	0.0	0.0	0.0	28.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.1	10.7	13.2	0.0	0.0	0.0	33.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.5	3.7	12.1	17.3	2.8	0.0	0.0	40.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.3	12.2	16.8	21.2	8.2	0.2	0.0	48.5
Percentile 100%	0.0	0.0	0.6	2.2	0.0	3.1	14.7	20.5	22.1	11.2	2.4	0.0	51.0

Table 147: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Turakina at Otairi

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	0.418										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	2.4	19.2	13.6	0.0	0.0	0.0	35.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	3.0	0.0	9.6	5.5	0.0	0.0	0.0	18.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	6.3
1997	0.0	0.0	0.0	0.0	0.0	0.0	21.8	20.9	18.6	0.0	0.0	0.0	61.3
1998	0.0	0.0	0.0	0.0	0.0	4.7	14.6	19.5	6.5	0.0	0.0	0.0	45.3
1999	0.0	0.0	0.0	0.0	0.0	3.6	8.9	13.8	23.3	9.8	0.4	0.0	59.7
2000	0.0	0.0	0.0	0.0	0.0	0.7	1.1	6.7	22.0	11.4	0.0	0.0	41.8
2001	0.0	0.0	0.6	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
2002	0.0	0.0	0.0	0.0	0.0	0.0	2.1	13.4	24.9	11.9	4.0	0.0	56.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.4	0.0	0.0	0.0	3.0
TOTAL	0.0	0.0	0.6	2.4	0.0	12.0	50.8	105.7	121.2	33.2	4.4	0.0	330.4
Average	0.0	0.0	0.0	0.2	0.0	0.9	3.6	7.6	8.7	2.4	0.3	0.0	23.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.6	2.4	0.0	4.7	21.8	20.9	24.9	11.9	4.0	0.0	61.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.4	0.0	0.0	0.0	3.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	5.9	0.0	0.0	0.0	12.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.9	9.0	6.5	0.0	0.0	0.0	31.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.1	2.1	13.4	14.1	0.0	0.0	0.0	42.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	1.6	5.0	16.0	20.0	3.9	0.0	0.0	49.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	3.4	12.9	19.4	22.9	10.9	0.3	0.0	58.7
Percentile 100%	0.0	0.0	0.6	2.4	0.0	4.7	21.8	20.9	24.9	11.9	4.0	0.0	61.3

Table 148: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Turakina at Otairi

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	0.475										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.7	0.0	0.0	0.0	8.7
1993	0.0	0.0	0.0	0.0	0.0	0.0	9.2	21.1	14.1	2.6	0.0	0.0	46.9
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	3.6	0.0	0.0	0.0	3.9
1995	0.0	0.0	0.0	0.0	0.0	5.0	0.1	13.5	6.6	0.0	0.0	0.0	25.2
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	8.3	6.1	0.0	0.0	17.0
1997	0.0	0.0	0.0	0.0	0.0	0.2	26.6	20.9	25.3	6.6	0.0	0.0	79.6
1998	0.0	0.0	0.0	0.0	0.0	7.3	15.8	25.6	11.0	4.6	0.0	0.0	64.3
1999	0.0	0.0	0.0	0.0	0.0	5.3	12.4	18.7	29.5	14.0	0.7	0.0	80.6
2000	0.0	0.0	0.0	0.0	0.0	2.3	2.6	10.7	23.3	11.8	0.0	0.0	50.6
2001	0.0	0.0	0.9	3.8	0.1	0.1	0.0	0.0	0.7	0.1	0.0	0.0	5.6
2002	0.0	0.0	0.0	0.0	0.0	0.0	4.5	21.9	28.7	20.1	8.8	0.8	84.9
2003	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	9.0	0.4	0.0	0.0	18.9
TOTAL	0.0	0.2	0.9	3.8	0.1	20.2	71.5	148.6	164.8	66.3	9.5	0.8	486.6
Average	0.0	0.0	0.1	0.3	0.0	1.4	5.1	10.6	11.8	4.7	0.7	0.1	34.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.2	0.9	3.8	0.1	7.3	26.6	25.6	29.5	20.1	8.8	0.8	84.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.3
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.9
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.6	0.0	0.0	0.0	8.4
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	6.9	0.2	0.0	0.0	17.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	10.1	8.7	1.5	0.0	0.0	22.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.1	2.1	12.9	10.6	4.2	0.0	0.0	42.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.4	5.0	18.9	15.0	6.2	0.0	0.0	52.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	3.4	10.5	21.0	24.1	8.7	0.0	0.0	70.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	5.2	14.8	21.7	27.7	13.3	0.5	0.0	80.3
Percentile 100%	0.0	0.2	0.9	3.8	0.1	7.3	26.6	25.6	29.5	20.1	8.8	0.8	84.9

Table 149: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Turakina at Otairi

Flow Statistic	(MALF ^0.9) + 30% of MALF	Flow	0.456										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	0.0	0.0	0.0	4.6
1993	0.0	0.0	0.0	0.0	0.0	0.0	7.9	20.7	13.9	2.0	0.0	0.0	44.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.8
1995	0.0	0.0	0.0	0.0	0.0	4.7	0.0	12.8	6.3	0.0	0.0	0.0	23.7
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	7.9	4.6	0.0	0.0	13.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	26.1	20.9	23.5	2.3	0.0	0.0	72.9
1998	0.0	0.0	0.0	0.0	0.0	6.8	14.8	24.8	10.0	1.6	0.0	0.0	58.0
1999	0.0	0.0	0.0	0.0	0.0	4.6	11.2	16.6	28.3	12.6	0.6	0.0	73.9
2000	0.0	0.0	0.0	0.0	0.0	1.7	2.2	9.2	22.9	11.6	0.0	0.0	47.5
2001	0.0	0.0	0.8	3.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	4.4
2002	0.0	0.0	0.0	0.0	0.0	0.0	3.8	19.1	27.5	18.3	7.5	0.6	76.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	5.8	0.2	0.0	0.0	12.8
TOTAL	0.0	0.0	0.8	3.1	0.0	17.8	66.1	133.3	152.2	53.2	8.1	0.6	435.1
Average	0.0	0.0	0.1	0.2	0.0	1.3	4.7	9.5	10.9	3.8	0.6	0.0	31.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.8	3.1	0.0	6.8	26.1	24.8	28.3	18.3	7.5	0.6	76.7
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.8
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	3.8
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.8	0.0	0.0	0.0	4.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	5.9	0.0	0.0	0.0	12.8
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	7.1	0.9	0.0	0.0	18.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.8	12.1	9.6	1.9	0.0	0.0	40.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.2	4.2	16.9	14.8	2.5	0.0	0.0	48.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	2.9	9.2	19.7	23.1	7.4	0.0	0.0	64.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	4.7	13.7	20.8	26.3	12.3	0.4	0.0	73.6
Percentile 100%	0.0	0.0	0.8	3.1	0.0	6.8	26.1	24.8	28.3	18.3	7.5	0.6	76.7

Lower Turakina – Tura 1b

Table 150: Number of days the MALF occurs at Turakina at SH3

Flow Statistic	MALF	Flow	0.925											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.2	0.0	0.0	0.0	0.0	0.0	2.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	8.1	1.3	0.0	0.0	0.0	12.1
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.9	8.7	0.0	3.3	14.1	0.0	0.0	27.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.2	0.0	0.0	0.0	0.0	5.7
1986	0.0	0.0	0.0	0.0	0.0	0.0	13.9	15.1	2.1	0.0	0.0	0.0	0.0	31.1
1987	0.0	0.0	0.0	0.0	0.0	1.1	28.5	5.5	0.0	0.0	0.0	0.0	0.0	35.2
1988	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	1.2	0.0	0.0	0.0	1.6
1989	0.0	0.0	0.0	0.0	0.0	0.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	2.2
1990	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.2	5.6	1.9	0.0	0.0	0.0	11.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	1.4	48.5	41.9	16.2	7.9	14.2	0.0	0.0	130.2
Average	0.0	0.0	0.0	0.0	0.0	0.1	3.2	2.8	1.1	0.5	0.9	0.0	0.0	8.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	1.1	28.5	15.1	8.1	3.3	14.1	0.0	0.0	35.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.2	0.0	0.0	0.0	0.0	0.0	3.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.6	0.0	0.0	0.0	0.0	0.0	10.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.5	0.6	1.2	0.0	0.0	0.0	15.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.1	9.2	7.4	4.2	1.7	0.0	0.0	0.0	29.5
Percentile 100%	0.0	0.0	0.0	0.0	0.0	1.1	28.5	15.1	8.1	3.3	14.1	0.0	0.0	35.2

Table 151: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Turakina at SH3

Flow Statistic	MALF * 0.9	Flow	0.833										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.9	0.2	0.0	0.0	2.2
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	2.1	0.0	3.7
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	2.6
1986	0.0	0.0	0.0	0.0	0.0	0.0	10.6	13.9	2.1	0.0	0.0	0.0	26.6
1987	0.0	0.0	0.0	0.0	0.0	0.0	25.5	5.3	0.0	0.0	0.0	0.0	30.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.9	0.0	0.0	0.0	1.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	36.4	23.9	5.0	0.2	2.1	0.0	67.6
Average	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.6	0.3	0.0	0.1	0.0	4.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	25.5	13.9	2.1	0.2	2.1	0.0	30.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	2.0
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.8	0.2	0.0	0.0	0.0	2.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	6.4	4.2	1.5	0.0	0.0	0.0	17.4
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	25.5	13.9	2.1	0.2	2.1	0.0	30.8

Table 152: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Turakina at SH3

Flow statistic	(MALF *0.9) + 10% of MALF	Flow	0.925										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.2	0.0	0.0	0.0	0.0	2.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	8.1	1.3	0.0	0.0	12.1
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.9	8.7	0.0	3.3	14.1	0.0	27.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.2	0.0	0.0	0.0	5.7
1986	0.0	0.0	0.0	0.0	0.0	0.0	13.9	15.1	2.1	0.0	0.0	0.0	31.1
1987	0.0	0.0	0.0	0.0	0.0	1.1	28.5	5.5	0.0	0.0	0.0	0.0	35.2
1988	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	1.2	0.0	0.0	1.6
1989	0.0	0.0	0.0	0.0	0.0	0.1	2.1	0.0	0.0	0.0	0.0	0.0	2.2
1990	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.2	5.6	1.9	0.0	0.0	11.8
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	1.4	48.5	41.9	16.2	7.9	14.2	0.0	130.2
Average	0.0	0.0	0.0	0.0	0.0	0.1	3.2	2.8	1.1	0.5	0.9	0.0	8.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	1.1	28.5	15.1	8.1	3.3	14.1	0.0	35.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.2	0.0	0.0	0.0	0.0	3.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.6	0.0	0.0	0.0	0.0	10.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.5	0.6	1.2	0.0	0.0	15.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.1	9.2	7.4	4.2	1.7	0.0	0.0	29.5
Percentile 100%	0.0	0.0	0.0	0.0	0.0	1.1	28.5	15.1	8.1	3.3	14.1	0.0	35.2

Table 153: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Turakina at SH3

Flow statistic	(MALF *0.9) + 15% of MALF	Flow	0.972										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.3	0.3	0.0	0.0	0.0	6.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	13.4	5.4	0.0	0.0	26.4
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	2.1	13.3	2.3	18.3	14.3	0.0	50.3
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	1.8	0.4	1.4	0.0	11.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	15.4	15.6	2.1	0.0	0.0	0.0	33.1
1987	0.0	0.0	0.0	0.0	0.0	2.0	29.2	5.6	0.0	0.0	0.0	0.0	36.8
1988	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.3	0.0	3.7	0.0	0.0	6.3
1989	0.0	0.0	0.0	0.0	0.0	1.3	3.3	0.0	0.1	0.0	0.0	0.0	4.6
1990	0.0	0.0	0.0	0.0	0.0	0.0	3.9	4.4	9.5	2.8	0.0	0.0	20.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	4.5	57.3	58.9	29.5	30.6	15.6	0.0	196.5
Average	0.0	0.0	0.0	0.0	0.0	0.3	3.8	3.9	2.0	2.0	1.0	0.0	13.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	2.0	29.2	15.6	13.4	18.3	14.3	0.0	50.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.9
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	6.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.3	0.2	0.0	0.0	0.0	8.4
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.4	1.5	0.3	0.0	0.0	18.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.2	3.4	7.4	2.1	3.0	0.0	0.0	27.7
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.3	10.8	11.0	6.6	4.7	0.8	0.0	35.3
Percentile 100%	0.0	0.0	0.0	0.0	0.0	2.0	29.2	15.6	13.4	18.3	14.3	0.0	50.3

Table 154: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Turakina at SH3

Flow statistic	(MALF *0.9) + 20% of MALF	Flow	1.018										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	4.2	6.4	3.4	5.3	0.0	0.0	19.3
1982	0.0	0.0	0.0	0.0	0.0	0.2	0.0	12.4	16.9	7.8	0.0	0.0	37.3
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.9	0.0	0.0	0.0	0.0	3.0
1984	0.0	0.0	0.0	0.0	0.0	0.0	2.9	16.2	8.7	23.3	14.5	0.0	65.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.3	8.6	7.3	5.9	6.5	0.0	28.6
1986	0.0	0.0	0.0	0.0	0.0	0.0	16.5	16.1	2.1	0.0	0.0	0.0	34.8
1987	0.0	0.0	0.0	0.0	0.0	2.8	30.0	5.7	0.0	0.0	2.6	0.0	41.1
1988	0.0	0.0	0.0	0.0	0.0	3.3	2.2	1.2	0.1	10.0	0.0	0.0	16.9
1989	0.0	0.0	0.0	0.0	0.0	2.4	4.1	0.0	4.5	0.0	0.0	0.0	11.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	6.5	6.6	11.8	3.2	0.0	0.0	28.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	8.7	67.9	75.0	55.0	55.6	23.6	0.0	285.7
Average	0.0	0.0	0.0	0.0	0.0	0.6	4.5	5.0	3.7	3.7	1.6	0.0	19.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	3.3	30.0	16.2	16.9	23.3	14.5	0.0	65.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	0.0	0.0	0.0	0.0	7.8
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.9	0.1	0.0	0.0	0.0	16.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.0	2.6	1.3	0.0	0.0	22.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.9	6.6	4.3	4.9	0.0	0.0	28.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.6	4.7	9.4	7.6	6.3	0.5	0.0	35.3
Percentile 90%	0.0	0.0	0.0	0.0	0.0	2.6	12.5	14.6	10.6	9.1	4.9	0.0	39.6
Percentile 100%	0.0	0.0	0.0	0.0	0.0	3.3	30.0	16.2	16.9	23.3	14.5	0.0	65.6

Table 155: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Turakina at SH3

Flow statistic	(MALF *0.9) + 25% of MALF	Flow	1.064										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	15.1	4.0	1.1	0.0	0.0	0.0	20.1
1978	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	7.0	7.8	6.1	10.6	0.0	0.0	31.4
1982	0.0	0.0	0.0	0.0	0.0	0.2	0.1	13.9	19.7	9.5	0.0	0.0	43.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	3.1	2.5	0.0	0.0	0.0	0.0	5.6
1984	0.0	0.0	0.0	0.0	0.0	0.0	3.6	17.0	15.4	24.8	14.7	0.0	75.6
1985	0.0	0.0	0.0	0.0	0.0	0.0	2.4	9.7	12.0	10.0	7.6	0.0	41.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	17.5	16.6	2.1	0.0	0.0	0.0	36.2
1987	0.0	0.0	0.0	0.0	0.0	3.6	30.8	5.7	0.0	0.5	4.3	0.0	44.8
1988	0.0	0.0	0.0	0.0	0.0	7.7	3.2	2.8	1.2	15.5	0.0	0.0	30.4
1989	0.0	0.0	0.0	0.0	0.0	3.3	5.3	0.0	7.1	0.0	0.0	0.0	15.6
1990	0.0	0.0	0.0	0.0	0.0	0.0	8.4	8.6	16.6	4.0	0.0	0.0	37.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	15.0	96.6	88.7	81.3	75.0	26.6	0.0	383.1
Average	0.0	0.0	0.0	0.0	0.0	1.0	6.4	5.9	5.4	5.0	1.8	0.0	25.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	7.7	30.8	17.0	19.7	24.8	14.7	0.0	75.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.0	0.0	0.0	7.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.7	0.7	0.0	0.0	18.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	3.2	4.0	1.2	0.0	0.0	0.0	30.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	4.3	6.5	3.7	1.9	0.0	0.0	33.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.2	6.7	8.4	6.9	8.4	0.0	0.0	37.3
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	9.7	10.5	12.7	10.1	0.9	42.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	3.5	16.5	15.5	16.1	13.5	6.3	0.0	44.3
Percentile 100%	0.0	0.0	0.0	0.0	0.0	7.7	30.8	17.0	19.7	24.8	14.7	0.0	75.6

Table 156: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Turakina at SH3

Flow statistic	(MALF *0.9) + 30% of MALF	Flow	1.111										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1977	0.0	0.0	0.0	0.0	0.0	0.0	15.5	4.1	1.3	0.0	0.0	0.0	20.9
1978	0.0	0.0	0.0	0.0	0.0	1.0	1.8	0.0	0.0	0.0	0.0	0.0	2.7
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.1
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	8.2	11.8	10.1	12.7	0.0	0.0	42.7
1982	0.0	0.0	0.0	0.0	0.0	1.3	0.6	15.3	21.3	11.4	0.0	0.0	49.9
1983	0.0	0.0	0.0	0.0	0.0	0.0	4.9	2.7	0.0	0.0	0.0	0.0	7.5
1984	0.0	0.0	0.0	0.0	0.0	0.0	5.1	18.4	18.5	25.4	14.8	0.0	82.2
1985	0.0	0.0	0.0	0.0	0.0	0.0	4.6	10.7	15.7	15.2	9.8	0.0	56.1
1986	0.0	0.0	0.0	0.0	0.0	0.0	18.4	17.1	2.4	0.0	0.0	0.0	37.9
1987	0.0	0.0	0.0	0.0	0.0	6.0	31.0	5.8	0.0	2.6	5.4	0.0	50.8
1988	0.0	0.0	0.0	0.0	0.0	11.8	4.0	4.2	3.5	21.4	0.0	0.0	44.8
1989	0.0	0.0	0.0	0.0	0.0	4.3	5.9	0.9	8.1	0.0	0.0	0.0	19.1
1990	0.0	0.0	0.0	0.0	0.0	0.6	10.0	9.5	19.9	4.3	0.0	0.0	44.5
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	24.9	109.9	101.7	100.8	93.1	30.1	0.0	460.5
Average	0.0	0.0	0.0	0.0	0.0	1.7	7.3	6.8	6.7	6.2	2.0	0.0	30.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	11.8	31.0	18.4	21.3	25.4	14.8	0.0	82.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.0	0.0	0.0	0.0	2.4
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.4	0.0	0.0	0.0	0.0	9.8
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	4.4	3.5	0.8	0.0	0.0	0.0	20.2
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	4.9	4.2	2.4	0.0	0.0	0.0	37.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.2	5.4	7.3	5.3	3.3	0.0	0.0	43.4
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.9	7.7	10.5	9.7	10.0	0.0	0.0	44.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	1.9	11.1	12.5	16.3	13.2	1.1	0.0	50.1
Percentile 90%	0.0	0.0	0.0	0.0	0.0	5.3	17.2	16.4	19.3	18.9	8.0	0.0	54.0
Percentile 100%	0.0	0.0	0.0	0.0	0.0	11.8	31.0	18.4	21.3	25.4	14.8	0.0	82.2

Owahanga Water Management Zone – Owha 1

Owahanga – Owha 1

Table 157: Number of days that the MALF occurs at Owahanga at Branscombe Bridge

Flow Statistic	MALF	Flow	0.045										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	10.5	0.0	0.0	0.0	11.8
2000	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	6.1	6.6	0.0	0.0	13.6
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	6.5	24.4	0.3	0.0	0.0	0.0	31.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	6.1
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	8.6	0.0	0.0	0.0	20.2
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.4	14.0	36.5	25.7	6.7	0.1	0.0	83.5
Average	0.0	0.0	0.0	0.0	0.0	0.1	2.0	5.2	3.6	0.9	0.0	0.0	11.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.4	6.5	24.4	10.5	6.6	0.0	0.0	31.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	8.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0	11.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	3.8	0.0	0.0	0.0	12.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	6.6	0.0	0.0	0.0	14.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	5.1	9.4	8.1	0.0	0.0	0.0	18.9
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.2	6.3	16.7	9.4	2.6	0.0	0.0	24.6
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.4	6.5	24.4	10.5	6.6	0.0	0.0	31.2

Table 158: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Owahanga at Branscombe Bridge

Flow Statistic	MALF *0.9	Flow	0.041										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	9.0	0.0	0.0	0.0	9.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.6	0.0	0.0	9.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	3.0	23.7	0.3	0.0	0.0	0.0	27.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	8.1	0.0	0.0	0.0	18.4
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	6.7	34.1	22.2	4.7	0.0	0.0	67.6
Average	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.9	3.2	0.7	0.0	0.0	9.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	3.1	23.7	9.0	4.6	0.0	0.0	27.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	5.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	9.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	3.0	0.0	0.0	0.0	9.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.1	5.5	0.0	0.0	0.0	11.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	2.5	8.2	7.4	0.0	0.0	0.0	16.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	3.0	15.7	8.5	1.8	0.0	0.0	21.8
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	3.1	23.7	9.0	4.6	0.0	0.0	27.0

Table 159: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Owahanga at Branscombe Bridge

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	0.045											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	10.5	0.0	0.0	0.0	11.8	
2000	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	6.1	6.6	0.0	0.0	13.6	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	6.5	24.4	0.3	0.0	0.0	0.0	31.2	
2003	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	6.1	
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	8.6	0.0	0.0	0.0	20.2	
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	0.0	0.0	0.4	14.0	36.5	25.6	6.6	0.0	0.0	83.1	
Average	0.0	0.0	0.0	0.0	0.0	0.1	2.0	5.2	3.6	0.9	0.0	0.0	11.8	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	0.0	0.0	0.4	6.5	24.4	10.5	6.6	0.0	0.0	31.2	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	8.4	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0	11.8	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	3.8	0.0	0.0	0.0	12.9	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	6.6	0.0	0.0	0.0	14.9	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	5.1	9.4	8.1	0.0	0.0	0.0	18.9	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.2	6.3	16.7	9.4	2.6	0.0	0.0	24.6	
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.4	6.5	24.4	10.5	6.6	0.0	0.0	31.2	

Table 160: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Owahanga at Branscombe Bridge

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	0.047											
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	
1999	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.5	10.9	0.0	0.0	0.0	13.1	
2000	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.0	6.9	6.9	0.0	0.0	15.0	
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2002	0.0	0.0	0.0	0.0	0.0	0.0	6.9	24.8	0.3	0.0	0.0	0.0	32.0	
2003	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	7.3	
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.7	8.6	0.0	0.0	0.0	21.3	
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	0.0	0.0	0.5	16.7	38.0	26.7	6.9	0.0	0.0	88.8	
Average	0.0	0.0	0.0	0.0	0.0	0.1	2.4	5.4	3.8	1.0	0.0	0.0	12.7	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	0.0	0.0	0.0	0.0	0.0	0.5	7.3	24.8	10.9	6.9	0.0	0.0	32.0	
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	9.6	
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.3	0.0	0.0	13.1	
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.3	4.3	0.0	0.0	14.2	
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.9	7.2	0.0	0.0	16.3	
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	10.3	8.3	0.0	0.0	20.0	
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.2	7.1	17.5	9.5	2.8	0.0	0.0	25.6	
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.5	7.3	24.8	10.9	6.9	0.0	0.0	32.0	

Table 161: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Owahanga at Branscombe Bridge

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	0.050										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.6	10.9	0.0	0.0	0.0	13.5
2000	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.0	7.3	7.1	0.0	0.0	15.8
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	7.5	25.2	0.9	0.0	0.0	0.0	33.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	8.3
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	9.1	0.0	0.0	0.0	23.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.6	18.7	39.7	28.3	7.1	0.0	0.0	94.4
Average	0.0	0.0	0.0	0.0	0.0	0.1	2.7	5.7	4.0	1.0	0.0	0.0	13.5
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.6	8.3	25.2	10.9	7.1	0.0	0.0	33.6
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.0	10.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.9	0.0	0.0	0.0	13.5
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.4	4.7	0.0	0.0	0.0	14.9
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.3	7.7	0.0	0.0	0.0	17.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	6.4	11.2	8.7	0.0	0.0	0.0	21.6
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.2	7.8	18.4	9.8	2.8	0.0	0.0	27.2
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.6	8.3	25.2	10.9	7.1	0.0	0.0	33.6

Table 162: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Owahanga at Branscombe Bridge

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	0.052										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.6	11.1	0.0	0.0	0.0	13.9
2000	0.0	0.0	0.0	0.0	0.0	0.8	1.0	0.1	8.8	7.7	0.0	0.0	18.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	7.9	25.3	2.1	0.0	0.0	0.0	35.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	8.6
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	9.7	0.0	0.0	0.0	23.9
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.8	19.7	40.4	31.7	7.7	0.0	0.0	100.2
Average	0.0	0.0	0.0	0.0	0.0	0.1	2.8	5.7	4.5	1.1	0.0	0.0	14.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.8	8.6	25.3	11.1	7.7	0.0	0.0	35.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.8	0.0	0.0	0.0	10.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.1	2.1	0.0	0.0	0.0	13.9
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.4	6.1	0.0	0.0	0.0	16.6
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	9.0	0.0	0.0	0.0	19.5
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	6.8	11.5	9.5	0.0	0.0	0.0	22.8
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.3	8.2	18.6	10.3	3.1	0.0	0.0	28.5
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.8	8.6	25.3	11.1	7.7	0.0	0.0	35.3

Table 163: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Owahanga at Branscombe Bridge

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	0.054										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1999	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.3	11.3	0.0	0.0	0.0	15.3
2000	0.0	0.0	0.0	0.0	0.0	0.9	1.3	0.6	10.1	8.3	0.0	0.0	21.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	8.6	25.5	3.4	0.0	0.0	0.0	37.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	0.0	8.8
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	9.9	0.0	0.0	0.0	24.9
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.9	21.4	42.5	34.8	8.3	0.0	0.0	107.9
Average	0.0	0.0	0.0	0.0	0.0	0.1	3.0	6.1	5.0	1.2	0.0	0.0	15.4
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.9	8.8	25.5	11.3	8.3	0.0	0.0	37.5
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	1.4	0.0	0.0	0.0	11.4
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.6	3.4	0.0	0.0	0.0	15.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.0	7.3	0.0	0.0	0.0	18.8
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	3.8	4.0	9.9	0.0	0.0	0.0	21.9
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	7.4	12.3	10.1	0.0	0.0	0.0	24.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.4	8.7	19.2	10.6	3.3	0.0	0.0	29.9
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.9	8.8	25.5	11.3	8.3	0.0	0.0	37.5

Kai Iwi Water Management Zone – West 2

Kai Iwi – West 2

Table 164: Number of days that the MALF occurs at Kai Iwi at Handley Rd

Flow Statistic	MALF	Flow	0.530																
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL						
1978		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1979		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1981		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1982		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1983		0.0	0.0	0.0	0.0	0.0	0.0	2.9	15.2	2.3	6.3	0.0	0.6	27.3					
1984		0.0	0.0	0.0	8.0	16.9	16.0	5.9	19.0	19.0	18.8	5.2	0.1	108.8					
1985		0.0	0.0	0.0	3.0	1.4	5.9	3.1	15.3	11.7	4.3	0.0	0.0	44.8					
1986		0.0	0.0	0.0	0.0	0.0	3.5	6.1	8.5	3.2	0.0	0.0	0.0	21.3					
1987		0.0	0.0	0.0	0.0	0.0	0.0	24.7	4.3	9.3	19.0	3.0	0.0	60.4					
1988		0.0	0.0	0.0	0.0	0.0	16.8	20.3	17.4	6.8	15.0	0.0	0.0	76.4					
1989		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990		0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1					
1991		0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.8	0.0	0.0	0.0	0.0	2.8					
1992		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
1993		0.0	0.0	0.0	0.0	0.0	0.0	7.6	13.6	1.8	0.0	0.0	0.0	23.0					
1994		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0					
1995		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
1996		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
1997		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
1998		0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2					
1999		0.0	0.0	0.0	0.0	0.0	0.0	0.7	5.4	23.9	6.8	0.0	0.0	36.9					
2000		0.0	0.0	0.0	0.0	0.0	1.9	12.4	15.7	22.6	10.8	5.7	0.0	69.2					
2001		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
2002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0	2.8	11.6				
2003		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
2004		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
TOTAL		0.0	0.0	0.0	11.0	18.5	44.1	87.0	119.5	109.6	81.0	13.9	3.4	488.0					
Average		0.0	0.0	0.0	0.4	0.7	1.6	3.2	4.4	4.1	3.0	0.5	0.1	18.1					
Minimum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Maximum		0.0	0.0	0.0	8.0	16.9	16.8	24.7	19.0	23.9	19.0	5.7	2.8	108.8					
Percentile 10%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Percentile 20%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Percentile 30%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Percentile 40%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Percentile 50%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2					
Percentile 60%		0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2	0.0	0.0	0.0	0.0	3.0					
Percentile 70%		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.5	2.5	0.0	0.0	0.0	21.6				
Percentile 80%		0.0	0.0	0.0	0.0	0.0	0.0	5.3	12.6	8.5	5.9	0.0	0.0	35.0					
Percentile 90%		0.0	0.0	0.0	0.0	0.0	0.1	4.5	9.5	15.5	14.6	12.5	1.2	0.0	63.9				
Percentile 100%		0.0	0.0	0.0	8.0	16.9	16.8	24.7	19.0	23.9	19.0	5.7	2.8	108.8					

Table 165: Number of days that a proposed minimum flow occurs at Kai Iwi at Handley Rd

Flow Statistic	MALF *0.9	Flow	0.477										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.1	8.5	0.6	0.8	0.0	0.0	10.1
1984	0.0	0.0	0.0	2.9	14.1	8.5	2.4	10.7	12.0	10.0	0.6	0.0	61.3
1985	0.0	0.0	0.0	1.2	0.1	3.9	1.4	12.9	5.9	0.2	0.0	0.0	25.5
1986	0.0	0.0	0.0	0.0	0.0	1.5	0.4	1.7	1.9	0.0	0.0	0.0	5.5
1987	0.0	0.0	0.0	0.0	0.0	0.0	22.9	4.2	6.3	11.7	2.9	0.0	48.0
1988	0.0	0.0	0.0	0.0	0.0	2.3	7.7	1.9	0.7	0.0	0.0	0.0	12.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	2.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	13.0	2.0	0.0	0.0	20.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	4.1	14.4	16.2	35.0	48.4	41.4	24.8	3.5	0.0	187.9
Average	0.0	0.0	0.0	0.2	0.5	0.6	1.3	1.8	1.5	0.9	0.1	0.0	6.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	2.9	14.1	8.5	22.9	12.9	13.0	11.7	2.9	0.0	61.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0	1.3
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.5	0.9	0.0	0.0	0.0	9.2
Percentile 90%	0.0	0.0	0.0	0.0	0.0	1.8	1.8	6.9	6.1	1.3	0.0	0.0	22.6
Percentile 100%	0.0	0.0	0.0	2.9	14.1	8.5	22.9	12.9	13.0	11.7	2.9	0.0	61.3

Table 166: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Kai Iwi at Handley Rd

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	0.530										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.9	15.2	2.3	6.3	0.0	0.6	27.3
1984	0.0	0.0	0.0	8.0	16.9	16.0	5.9	19.0	19.0	18.8	5.2	0.1	108.8
1985	0.0	0.0	0.0	3.0	1.4	5.9	3.1	15.3	11.7	4.3	0.0	0.0	44.8
1986	0.0	0.0	0.0	0.0	0.0	3.5	6.1	8.5	3.2	0.0	0.0	0.0	21.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	24.7	4.3	9.3	19.0	3.0	0.0	60.4
1988	0.0	0.0	0.0	0.0	0.0	16.8	20.3	17.4	6.8	15.0	0.0	0.0	76.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.8	0.0	0.0	0.0	0.0	2.8
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	7.6	13.6	1.8	0.0	0.0	0.0	23.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.7	5.4	23.9	6.8	0.0	0.0	36.9
2000	0.0	0.0	0.0	0.0	0.0	1.9	12.4	15.7	22.6	10.8	5.7	0.0	69.2
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0	2.8	11.6
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	11.0	18.5	44.1	87.0	119.4	109.6	81.0	13.9	3.4	487.9
Average	0.0	0.0	0.0	0.4	0.7	1.6	3.2	4.4	4.1	3.0	0.5	0.1	18.1
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	8.0	16.9	16.8	24.7	19.0	23.9	19.0	5.7	2.8	108.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2	0.0	0.0	0.0	0.0	3.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.5	2.5	0.0	0.0	0.0	21.6
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	5.3	12.6	8.5	5.9	0.0	0.0	35.0
Percentile 90%	0.0	0.0	0.0	0.0	0.1	4.5	9.5	15.5	14.6	12.5	1.2	0.0	63.9
Percentile 100%	0.0	0.0	0.0	8.0	16.9	16.8	24.7	19.0	23.9	19.0	5.7	2.8	108.8

Table 167: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Kai Iwi at Handley Rd

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	0.557										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.0	0.0	0.0	1.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	4.7	16.9	3.6	9.7	0.0	1.0	35.9
1984	0.0	0.0	0.0	11.2	17.6	16.7	9.3	22.0	23.3	20.6	10.2	0.9	131.8
1985	0.0	0.0	0.0	3.9	2.1	8.4	5.8	16.4	13.9	7.3	0.3	0.0	58.1
1986	0.0	0.0	0.0	0.0	0.1	5.0	9.7	11.6	3.6	0.0	0.0	0.0	30.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	26.3	5.4	10.9	22.3	4.4	0.0	69.4
1988	0.0	0.0	0.0	0.0	0.0	20.4	21.7	20.4	9.7	21.0	0.0	0.0	93.2
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	5.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	4.1	3.5	0.0	0.0	0.0	0.0	7.6
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	9.6	16.1	7.4	0.0	0.0	0.0	33.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	6.9
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	2.4
1998	0.0	0.0	0.0	0.0	0.2	0.0	0.0	7.7	2.8	0.0	0.0	0.0	10.8
1999	0.0	0.0	0.0	0.0	0.0	0.0	8.8	14.1	25.1	8.2	0.0	0.0	56.1
2000	0.0	0.0	0.0	0.0	0.0	4.0	14.9	18.7	25.6	15.1	7.3	0.0	85.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	21.6	0.0	0.0	4.2	36.5
2003	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.3
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	15.1	20.0	54.5	121.6	173.8	148.1	104.3	22.3	6.1	665.8
Average	0.0	0.0	0.0	0.6	0.7	2.0	4.5	6.4	5.5	3.9	0.8	0.2	24.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	11.2	17.6	20.4	26.3	22.0	25.6	22.3	10.2	4.2	131.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	5.4
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	6.3	1.9	0.0	0.0	9.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	10.9	4.4	0.0	0.0	33.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	15.7	10.7	8.0	0.0	52.2
Percentile 90%	0.0	0.0	0.0	0.0	0.1	6.4	11.8	17.6	22.3	17.3	1.9	0.4	75.9
Percentile 100%	0.0	0.0	0.0	11.2	17.6	20.4	26.3	22.0	25.6	22.3	10.2	4.2	131.8

Table 168: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Kai Iwi at Handley Rd

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	0.583										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	0.2	0.0	0.0	3.3
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	5.1	0.0	0.0	0.0	8.8
1983	0.0	0.0	0.0	0.0	0.0	0.0	7.0	17.9	4.4	13.4	0.0	1.6	44.4
1984	0.0	0.0	0.0	14.6	18.7	17.0	12.1	24.6	26.5	22.0	14.1	2.3	151.9
1985	0.0	0.0	0.0	5.6	4.0	9.2	8.8	17.6	15.5	10.3	1.5	0.0	72.5
1986	0.0	0.0	0.0	0.0	0.3	7.4	12.6	13.9	4.0	0.0	0.0	0.0	38.1
1987	0.0	0.0	0.0	0.0	0.4	0.0	26.4	7.1	16.7	23.6	4.9	0.9	80.0
1988	0.0	0.0	0.0	0.0	3.7	22.8	22.5	21.6	16.0	24.2	0.0	0.0	110.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	3.3	4.8	8.6	0.0	0.0	0.0	16.6
1990	0.0	0.0	0.0	0.0	0.0	0.0	10.9	4.0	0.3	0.0	0.0	0.0	15.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	5.3	4.6	0.0	0.0	0.0	0.0	9.9
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	10.9	17.7	9.8	0.0	0.0	0.0	38.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.4	0.0	0.0	0.0	8.6
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	4.8
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	8.1	0.0	0.0	0.0	16.1
1998	0.0	0.0	0.0	0.0	0.3	0.0	0.0	18.6	4.7	0.0	0.0	0.0	23.5
1999	0.0	0.0	0.0	0.0	0.0	0.0	13.2	18.1	26.8	8.6	2.9	0.0	69.6
2000	0.0	0.0	0.0	0.0	0.0	8.9	19.2	20.6	27.2	17.8	11.9	0.0	105.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.6	0.0	0.0	0.0	3.9
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.3	25.2	6.8	1.4	7.4	58.2
2003	0.0	1.3	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	4.6
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.8	0.0	0.0	0.0	5.1
TOTAL	0.0	1.3	0.0	20.2	27.3	65.4	155.4	238.5	206.0	126.9	36.8	12.2	890.0
Average	0.0	0.0	0.0	0.7	1.0	2.4	5.8	8.8	7.6	4.7	1.4	0.5	33.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	1.3	0.0	14.6	18.7	22.8	26.4	24.6	27.2	24.2	14.1	7.4	151.9
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	3.4
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.2	0.0	0.0	4.8
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	1.6	0.0	0.0	0.0	8.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.0	0.0	0.0	0.0	15.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	8.1	4.9	0.0	0.0	20.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	17.4	8.8	1.5	0.0	39.7
Percentile 80%	0.0	0.0	0.0	0.0	0.2	0.0	11.9	17.9	15.9	10.0	1.1	0.0	67.3
Percentile 90%	0.0	0.0	0.0	0.0	1.7	9.0	15.6	19.4	25.7	19.5	3.7	1.2	90.3
Percentile 100%	0.0	1.3	0.0	14.6	18.7	22.8	26.4	24.6	27.2	24.2	14.1	7.4	151.9

Table 169: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Kai Iwi at Handley Rd

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	0.610										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.6	2.1	1.6	0.0	0.0	9.6
1982	0.0	0.0	0.0	0.0	4.1	0.0	0.0	14.5	15.9	0.0	0.1	0.0	34.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	12.1	18.6	5.9	16.4	0.0	2.7	55.7
1984	0.0	0.0	0.2	16.9	19.2	17.2	14.6	25.5	27.4	23.0	16.8	5.4	166.1
1985	0.0	0.0	0.0	8.0	5.8	10.2	11.2	18.0	16.5	14.3	5.0	0.0	89.0
1986	0.0	0.0	0.0	0.0	0.5	10.4	15.2	16.0	4.9	0.0	0.0	0.0	46.8
1987	0.0	0.0	0.0	0.0	3.3	0.0	28.2	11.1	19.2	24.0	5.4	1.2	92.5
1988	0.0	0.0	0.0	0.0	5.4	24.0	24.3	22.5	21.9	27.2	0.0	0.0	125.2
1989	0.0	0.0	0.0	0.0	0.0	1.8	4.4	9.3	8.6	0.0	0.0	0.0	24.1
1990	0.0	0.0	0.0	0.0	0.0	3.6	14.9	8.4	10.5	0.7	0.0	0.0	38.1
1991	0.0	0.0	0.0	0.0	0.0	0.0	9.1	7.0	0.0	0.0	0.0	0.0	16.1
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	14.4	18.4	11.9	5.1	0.0	0.0	49.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	2.8	0.0	0.0	0.0	12.1
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	5.6	0.0	0.0	0.0	14.9
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	11.8	0.0	0.0	0.0	23.8
1998	0.0	0.0	0.0	0.0	0.3	0.0	2.5	21.7	5.6	0.0	0.0	0.0	30.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	15.1	22.1	27.5	8.7	5.3	0.0	78.6
2000	0.0	0.0	0.0	0.0	0.0	13.5	21.5	22.5	28.3	20.7	15.4	0.0	121.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.7	11.9	0.0	3.7	0.0	21.6
2002	0.0	0.0	0.0	0.0	0.0	0.0	1.3	22.9	29.7	14.1	6.4	8.9	83.3
2003	0.2	3.4	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	7.7
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	7.5	0.0	0.0	0.0	14.1
TOTAL	0.2	3.4	0.2	24.9	38.5	80.7	193.3	307.1	275.6	155.8	58.1	18.2	1156.1
Average	0.0	0.1	0.0	0.9	1.4	3.0	7.2	11.4	10.2	5.8	2.2	0.7	42.8
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.2	3.4	0.2	16.9	19.2	24.0	28.2	25.5	29.7	27.2	16.8	8.9	166.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	8.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	2.7	0.0	0.0	13.7
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.3	8.8	5.6	0.0	0.0	0.0	18.3
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	2.5	9.3	7.5	0.0	0.0	0.0	24.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	7.2	13.5	11.3	0.4	0.0	0.0	36.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	12.6	18.1	12.7	5.8	0.0	0.0	51.0
Percentile 80%	0.0	0.0	0.0	0.0	0.5	3.2	14.8	21.1	18.7	14.3	4.7	0.0	82.4
Percentile 90%	0.0	0.0	0.0	0.0	4.6	11.6	17.7	22.5	27.4	21.6	5.8	1.8	104.3
Percentile 100%	0.2	3.4	0.2	16.9	19.2	24.0	28.2	25.5	29.7	27.2	16.8	8.9	166.1

Table 170: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Kai Iwi at Handley Rd

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	0.636										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
1981	0.0	0.0	0.0	0.0	0.6	0.6	2.8	11.3	7.0	4.6	0.0	0.0	26.9
1982	0.0	0.0	0.0	0.0	8.5	0.6	0.5	18.6	19.4	2.9	1.0	0.0	51.6
1983	0.0	0.0	0.0	0.0	0.0	0.0	17.2	20.4	7.4	18.1	0.2	4.8	68.0
1984	0.0	0.0	0.5	18.1	19.6	17.3	16.1	25.7	28.5	23.4	19.6	9.3	178.3
1985	0.0	0.0	0.0	10.2	8.3	11.2	13.3	19.1	17.4	16.4	8.2	0.0	104.0
1986	0.0	0.0	0.0	0.0	1.2	13.6	17.0	17.6	6.1	0.0	0.0	0.0	55.6
1987	0.0	0.0	0.0	0.0	5.5	0.0	29.4	12.3	23.5	24.2	9.0	4.7	108.5
1988	0.0	0.0	0.0	0.0	6.3	24.7	25.2	22.7	24.5	28.6	0.6	0.0	132.7
1989	0.0	0.0	0.0	0.0	0.0	3.8	5.1	12.5	8.6	0.0	0.0	0.0	30.1
1990	0.0	0.0	0.0	0.0	0.0	9.6	17.8	10.1	15.8	1.3	0.0	0.0	54.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	13.4	8.2	0.0	0.0	0.0	0.0	21.7
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	1.7	0.0	18.8	19.8	14.8	6.8	0.0	0.0	62.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	3.6	12.7	5.9	0.0	0.0	0.0	22.3
1995	0.0	0.0	0.0	0.0	0.0	0.0	2.9	15.1	8.3	0.0	0.0	0.0	26.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	1.3	15.0	17.4	7.0	0.0	0.0	40.8
1998	0.0	0.0	0.0	0.0	0.3	0.0	9.7	23.6	9.1	0.0	0.0	0.0	42.6
1999	0.0	0.0	0.0	0.0	4.9	0.6	18.0	24.1	28.6	10.2	6.4	0.0	92.8
2000	0.1	0.0	0.0	0.0	0.0	14.6	23.3	23.1	29.1	22.6	16.3	0.0	129.1
2001	0.0	0.0	0.0	0.8	0.0	0.0	1.4	7.4	16.5	0.3	10.2	0.0	36.6
2002	0.0	0.0	0.0	0.0	0.0	0.0	8.2	24.4	30.6	17.6	10.9	11.1	102.7
2003	0.4	6.3	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0	14.7
2004	0.0	0.0	0.0	0.0	0.0	0.0	1.3	16.6	9.7	0.0	0.0	0.0	27.6
TOTAL	0.4	6.3	0.5	29.1	57.0	96.7	254.5	361.3	328.4	183.9	82.4	29.8	1430.4
Average	0.0	0.2	0.0	1.1	2.1	3.6	9.4	13.4	12.2	6.8	3.1	1.1	53.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.4	6.3	0.5	18.1	19.6	24.7	29.4	25.7	30.6	28.6	19.6	11.1	178.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.7	0.0	0.0	0.0	16.1
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	9.7	6.1	0.0	0.0	25.5
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	3.2	12.4	7.8	0.0	0.0	0.0	28.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	8.1	15.0	9.1	0.3	0.0	0.0	40.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	17.2	15.4	3.9	0.0	53.4
Percentile 70%	0.0	0.0	0.0	0.0	0.7	0.6	16.3	19.2	17.4	7.6	0.7	0.0	63.2
Percentile 80%	0.0	0.0	0.0	0.0	4.3	8.4	17.7	22.2	22.7	17.4	7.8	0.0	100.7
Percentile 90%	0.0	0.0	0.0	0.3	7.1	14.0	20.6	23.8	28.5	22.9	10.5	4.7	116.7
Percentile 100%	0.4	6.3	0.5	18.1	19.6	24.7	29.4	25.7	30.6	28.6	19.6	11.1	178.3

Coastal Manawatu Water Management Zone – Mana 13

Upper Tokomaru – Mana 13b

Table 171: Number of days that the MALF occurs at Tokomaru All

Flow Statistic	MALF	Flow	0.247										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.3	0.0	0.0	0.0	3.2
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.7	0.0	9.1
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.7	0.4	0.0	0.0	0.0	4.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	20.4	18.0	0.0	45.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	9.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.3	0.0	0.0	0.0	6.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	12.0	13.9	0.0	0.0	28.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	3.4
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.1	20.5	24.9	14.3	8.2	0.0	71.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	25.2	21.2	8.5	0.0	74.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	14.5	58.6	78.5	74.3	39.4	0.0	265.2
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.3	3.1	3.0	1.6	0.0	10.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	9.0	20.5	25.2	21.2	18.0	0.0	74.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	5.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	3.0	0.9	0.0	0.0	9.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.1	9.8	14.1	6.8	0.0	38.5
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	9.0	20.5	25.2	21.2	18.0	0.0	74.0

Table 172: Number of days that a proposed minimum flow of 0.9 of the MALF occurs at Tokomaru All

Flow Statistic	MALF * 0.9	Flow	0.222										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.5
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	4.0	0.0	6.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.6	0.0	0.0	0.0	0.0	2.9
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	19.4	13.3	0.0	36.5
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	6.3
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.6
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.0	9.2	0.0	0.0	18.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	1.9	18.4	22.3	11.1	5.6	0.0	59.3
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.7	24.3	19.8	5.9	0.0	62.8
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.8
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	8.5	37.5	59.4	62.3	28.9	0.0	196.6
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.5	2.4	2.5	1.2	0.0	7.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	6.3	18.4	24.3	19.8	13.3	0.0	62.8
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.5	0.0	6.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.7	6.3	10.3	5.0	0.0	29.1
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	6.3	18.4	24.3	19.8	13.3	0.0	62.8

Table 173: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 10% of the MALF occurs at Tokomaru All

Flow Statistic	(MALF *0.9) + 10% of MALF	Flow	0.247										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.3	0.0	0.0	0.0	3.2
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.7	0.0	9.1
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.7	0.4	0.0	0.0	0.0	4.4
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	20.4	18.0	0.0	45.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	9.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.3	0.0	0.0	0.0	6.4
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	12.0	13.9	0.0	0.0	28.7
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	3.4
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.1	20.5	24.9	14.3	8.2	0.0	71.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	25.2	21.2	8.5	0.0	74.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	6.2
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	14.5	58.5	78.5	74.2	39.4	0.0	265.1
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.3	3.1	3.0	1.6	0.0	10.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	9.0	20.5	25.2	21.2	18.0	0.0	74.0
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	5.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	3.0	0.9	0.0	0.0	9.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.1	9.8	14.1	6.8	0.0	38.5
Percentile 100%	0.0	0.0	0.0	0.0	0.0	0.0	9.0	20.5	25.2	21.2	18.0	0.0	74.0

Table 174: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 15% of the MALF occurs at Tokomaru All

Flow Statistic	(MALF *0.9) + 15% of MALF	Flow	0.259										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.6	0.0	0.0	0.0	4.1
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	5.2	0.0	10.4
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.7	0.5	4.3	0.0	0.0	9.2
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	21.0	18.8	0.0	46.8
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	1.0	10.0	0.0	0.0	0.0	0.0	0.0	10.9
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	5.2	0.0	0.0	0.0	7.8
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	14.7	14.6	1.0	0.0	35.2
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	4.1
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	2.1
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	4.9	21.8	25.6	16.3	9.4	0.0	77.9
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.2
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	5.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	26.1	21.7	9.4	0.0	78.2
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0	7.3
TOTAL	0.0	0.0	0.0	0.0	1.0	16.5	68.0	87.9	83.4	43.8	0.0	300.7	
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.7	3.5	3.3	1.8	0.0	12.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	1.0	10.0	21.8	26.1	21.7	18.8	0.0	78.2
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.1	0.0	0.0	7.7
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.0	4.5	0.2	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.0	6.4	11.6	15.6	7.7	0.0	42.2
Percentile 100%	0.0	0.0	0.0	0.0	0.0	1.0	10.0	21.8	26.1	21.7	18.8	0.0	78.2

Table 175: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 20% of the MALF occurs at Tokomaru All

Flow Statistic	(MALF *0.9) + 20% of MALF	Flow	0.271										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	3.0	0.0	0.0	0.0	5.4
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.4	5.8	0.0	12.2
1982	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.6
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.7	0.6	4.9	0.0	0.0	10.3
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	21.8	19.1	0.0	50.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.0	0.0	0.0	0.0	0.0	2.6	10.6	0.0	0.0	0.0	0.0	0.0	13.2
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	5.9	0.0	0.0	0.0	9.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	16.3	15.3	3.7	0.0	42.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	4.9
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.6	0.0	0.0	0.0	0.0	3.8
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	5.4	22.1	25.7	16.9	10.0	0.0	80.2
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	6.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.6	26.6	22.6	10.3	0.0	82.1
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.7
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0	0.0	7.9
TOTAL	0.0	0.0	0.0	0.0	0.0	2.7	18.4	76.6	96.8	88.6	48.8	0.0	332.0
Average	0.0	0.0	0.0	0.0	0.0	0.1	0.7	3.1	3.9	3.5	2.0	0.0	13.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	2.6	10.6	22.6	26.6	22.6	19.1	0.0	82.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	6.0
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.0	0.0	0.0	8.8
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	6.1	5.2	0.7	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	1.3	7.5	13.4	16.3	8.3	0.0	46.9
Percentile 100%	0.0	0.0	0.0	0.0	0.0	2.6	10.6	22.6	26.6	22.6	19.1	0.0	82.1

Table 176: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 25% of the MALF occurs at Tokomaru All

Flow Statistic	(MALF *0.9) + 25% of MALF	Flow	0.284										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	3.9	0.0	0.0	0.0	7.7
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.1	6.1	0.0	13.8
1982	0.0	0.0	0.0	0.1	0.0	0.8	0.0	0.8	0.6	0.0	0.0	0.0	2.2
1983	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	0.7	6.1	0.0	0.0	12.2
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	22.3	19.3	0.0	52.8
1985	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
1986	0.0	0.0	0.0	0.0	0.0	4.5	12.2	0.0	0.0	0.0	0.0	0.0	16.7
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	6.6	0.0	0.0	0.0	11.2
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	18.0	17.3	4.7	0.0	47.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	6.7
1995	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.6	0.0	0.0	0.0	0.0	5.6
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.6	23.2	26.1	18.1	11.2	0.0	85.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	7.4
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9	26.9	23.0	10.7	0.0	83.4
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	1.1	1.1	0.0	11.4
TOTAL	0.0	0.0	0.0	0.2	0.0	5.2	22.5	86.6	106.0	95.8	52.0	0.0	368.3
Average	0.0	0.0	0.0	0.0	0.0	0.2	0.9	3.5	4.2	3.8	2.1	0.0	14.7
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.1	0.0	4.5	12.2	23.2	26.9	23.0	19.3	0.0	85.1
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	7.5
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.6	0.6	0.0	11.4
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	6.8	6.3	0.9	14.4
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	8.5	15.3	17.8	8.9	50.7
Percentile 100%	0.0	0.0	0.0	0.1	0.0	4.5	12.2	23.2	26.9	23.0	19.3	0.0	85.1

Table 177: Number of days that a proposed management flow of 0.9 of the MALF plus a core allocation of 30% of the MALF occurs at Tokomaru All

Flow Statistic	(MALF *0.9) + 30% of MALF	Flow	0.296										
Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.7	0.0	0.0	0.0	8.9
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	8.5	7.0	0.0	16.7
1982	0.0	0.0	0.0	0.3	0.0	1.0	0.0	1.4	0.9	0.0	0.0	0.0	3.6
1983	0.0	0.0	0.0	0.0	0.0	0.0	3.2	2.7	1.2	7.2	0.0	0.0	14.2
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	12.4	22.6	19.4	0.0	54.5
1985	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
1986	0.0	0.0	0.0	0.0	0.0	5.2	12.9	0.0	0.0	0.0	0.0	0.0	18.1
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.5	6.7	7.2	0.0	0.0	0.0	14.5
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	18.8	18.5	5.1	0.0	51.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0	7.6
1995	0.0	0.0	0.0	0.0	0.0	0.0	2.0	5.3	0.0	0.0	0.0	0.0	7.3
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	6.9	23.5	26.2	18.7	12.2	0.0	87.6
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	0.4	0.0	0.0	10.9
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.3	25.8	27.4	23.5	11.3	0.0	88.3
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	2.3
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	2.1	1.6	0.0	14.2
TOTAL	0.0	0.0	0.0	0.8	0.0	6.2	26.1	98.6	118.6	103.2	55.1	0.0	408.6
Average	0.0	0.0	0.0	0.0	0.0	0.2	1.0	3.9	4.7	4.1	2.2	0.0	16.3
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.5	0.0	5.2	12.9	25.8	27.4	23.5	19.4	0.0	88.3
Percentile 10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile 30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Percentile 40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
Percentile 50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	7.3
Percentile 60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.1	0.0	0.0	9.7
Percentile 70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	4.2	1.4	0.0	14.2
Percentile 80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	6.9	7.9	7.5	1.0	0.0
Percentile 90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	9.8	16.2	18.6	9.6	0.0
Percentile 100%	0.0	0.0	0.0	0.5	0.0	5.2	12.9	25.8	27.4	23.5	19.4	0.0	88.3



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