



Ministry of Marine Resources
GOVERNMENT OF THE COOK ISLANDS



Manihiki Water Quality Data
January 2006 - November 2013.
Pearl Support Division
Ministry of Marine Resources

The data enclosed is the property of the Ministry of

Location	Date	Temperature (°C)	Salinity (ppt)	DOSat (%)	DO (mg/L)	pH	DRP (µg/L)	NH4-N (µg/L)	NO3-N (µg/L)	DIN (µg/L)	Extracted Chl a (µg/L)	TSS (mg/L)	Enterococci (count/100ml)	Vibrio Green (count/mL)	Vibrio Yellow (count/mL)
Moe Akaroro	27-Jan-06		37.3			8.2							0	1	1
Moe Akaroro	9-Mar-06		36.7										0	0	0
Moe Akaroro	20-Apr-06	20.3	34.9										0	6	0
Moe Akaroro	21-Jun-06	19.5											0	0	5
Moe Akaroro	13-Jul-06												3	450	450
Moe Akaroro	26-Jul-06	20.7	39.2										75	5	5
Moe Akaroro	10-Aug-06														
Moe Akaroro	7-Sep-06												7	0	0
Moe Akaroro	21-Sep-06												7	0	0
Moe Akaroro	19-Oct-06	29.5					9	3	0.5		0.3		32	0	10
Moe Akaroro	2-Nov-06		34.1			8	7	2	1		0.2		3	260	15
Moe Akaroro	30-Nov-06	28.3					4	4	0.5				1220	78	6
Moe Akaroro	1-Feb-07		36.9			8.6	1	2	2	4		0.6	28	60	25
Moe Akaroro	22-Feb-07	29.9	36.1				3	5	2	7		1.8	6	10	0
Moe Akaroro	17-Apr-07	25.4	33.6			7.7	2	9	1	10	0.1	0.3	62	5	0
Moe Akaroro	1-May-07	23.2					0.5	0.5	0.5	1	0.2	0.3			
Moe Akaroro	15-May-07	20.5	34.9			8.3	2	3	1	4	0.2	0.7	5	30	5
Moe Akaroro	29-May-07	20.2	35.7			8.3	3	4	0.5	4.5	0.5	0.5	16	450	0
Moe Akaroro	19-Jun-07	28.9					3	3	3	6		0.3	40	15	60
Moe Akaroro	9-Aug-07	34.9	35.2			8	3	5	0.5	5.5	0.3	0.5	9	5	5
Moe Akaroro	27-Sep-07	28.9	35.7			7.9	8	9	5	14	0.1	0.3	14	0	0
Moe Akaroro	9-Oct-07	29					5	9	2	11					
Moe Akaroro	18-Oct-07	28.8					2	0.5	0.5	1	0.2	0.6	3	0	50
Moe Akaroro	1-Nov-07	28.9	34.3			8									
Moe Akaroro	30-Nov-07											0.9	8	0	20
Moe Akaroro	13-Dec-07	29	35.7			7.7					1	0.8	15	0	0
Moe Akaroro	7-Feb-08	28.5	35.9			7.9	5	1	0.5	1.5	0.5	0.9	34	0	0
Moe Akaroro	19-Feb-08	29.2					5	1	1	2	0.3	0.3	11	0	85
Moe Akaroro	6-Mar-08		35.6			7.6	5	4	1	5	0.2	0.3	20	0	0
Moe Akaroro	15-Apr-08		35.4			7.8	1	4	2	6	0.4	0.3	75	0	0
Moe Akaroro	27-May-08		35.3			8	2	0.5	4	4.5	0.4	0.7	12	0	0
Moe Akaroro	10-Jun-08		36			7.6	1	3	1	4	0.8	0.3	10	0	0
Moe Akaroro	8-Jul-08		36.2				3	0.5	0.5	1	0.4	0.4	24	0	0
Moe Akaroro	23-Sep-08	24.2	36				1	7	6	13	0.9	0.5	14	0	0
Moe Akaroro	15-Oct-08	28					2	3	0.5	3.5	0.3	0.9	325	0	0
Moe Akaroro	4-Nov-08	28.6	35.4				19	6	1	7	0.3	1.6	158	55	0
Moe Akaroro	18-Nov-08						4	7	13	20	0.3		0	0	0
Moe Akaroro	20-Jan-09		35.4			8.2	8	28	8	36	0.2	0.5	36	0	0
Moe Akaroro	3-Feb-09		36.1			8.3	5	3	5	8	0.1	0.3	23	0	5
Moe Akaroro	17-Mar-09		35.5			8.2	0.5	3	2	5	0.2	0.7	13	0	0

Moe Akaroro	14-Apr-09		36.2			8.9	3	0.5	2	2.5	0.3	1.3	25	0	0
Moe Akaroro	28-Apr-09	23.9	35.4			8.6	0.5	2	0.5	2.5	0.38	0.3	49	85	200
Moe Akaroro	23-Jun-09	28.7	35			8.9	13	5	16	21	0.9	0.3	0	0	5
Moe Akaroro	7-Jul-09		35.9			8.1	11	2	5	7	0.31	0.3	13	0	15
Moe Akaroro	13-Oct-09		36.1			8.3	5	4	1	5	0.28	0.8	84	0	0
Moe Akaroro	10-Nov-09	24	35.3			8.6	6	3	0.5	3.5	0.11	0.3	37	0	0
Moe Akaroro	24-Nov-09						6	6	1	7	0.12	0.3	4	0	50
Moe Akaroro	8-Dec-09						7	7	2	9	0.2	0.3	0	0	0
Moe Akaroro	16-Feb-10		35.1			8.3	9	5	6	11	0.78	0.3	6	5	0
Moe Akaroro	27-Apr-10		35			8.1	6	3	1	4	0.2	0.4	30	0	435
Moe Akaroro	21-Jun-10	29.3	35.3			8.45	4	0.5	2	2.5	0.34	0.5	26	0	0
Moe Akaroro	10-Aug-10		35.4			8.5	7	0.5	1	1.5	0.55	0.5	3	40	65
Moe Akaroro	14-Sep-10	29.8					2	4	0.5	4.5	0.09	0.3	2	0	0
Moe Akaroro	12-Oct-10		35.8			8.1	3	4	2	6	0.38	0.9	15	0	0
Moe Akaroro	28-Oct-10	29.5					3	3	0.5	3.5	0.24	0.7	5	0	5
Moe Akaroro	7-Dec-10	29.9					5	14	2	16	0.44	0.7	16	0	5
Moe Akaroro	18-Jan-11	28.9					8	1	0.5	1.5	0.26	0.3	0	5	45
Moe Akaroro	17-Feb-11	28.2		101.5	7.8	8	4	1	0.5	1.5	0.35	1.9	0	0	0
Moe Akaroro	30-Mar-11	24.4					6	0.5	1	1.5	0.37	1	24	0	0
Moe Akaroro	26-Apr-11	21.3	35.8	75.5	5.1	7.95	6	3	1	3.6	0.33	0.7	32	0	0
Moe Akaroro	15-Jun-11	28.8	35.9	69.4	4.8	8.1	6	0.5	2	2.2	1.23	0.6	18	0	0
Moe Akaroro	19-Jul-11						5	2	2	4.2	2.02	0.3	2	0	0
Moe Akaroro	16-Aug-11						7	0.5	2	2	2.85	0.7	17	0	25
Moe Akaroro	31-Aug-11	27.02		111.9	5.73	8.06	6	0.5	0.5	1	1.03	1.2	0	25	0
Moe Akaroro	20-Sep-11	27.25		102.5	5.21	8.08	6	2	0.5	2.5	1.61	1.3	16	0	0
Moe Akaroro	31-Jan-12	28.94	35.38	107.00	6.78	8.11	1	2	1	3	0.40	0.25	0	5	10
Moe Akaroro	14-Feb-12	29.23	35.45	107.70	6.78	8.09	1	2	1	3	0.32	0.40	8	0	0
Moe Akaroro	28-Feb-12	29.34	35.82	97.80	6.13	8.06	3	17	1	18	0.27	1.42	117	0	15
Moe Akaroro	13-Mar-12	29.51	35.72	94.30	5.90	8.11	5	29	1	30	0.55	0.85	4	0	35
Moe Akaroro	27-Mar-12	29.73	35.54	96.10	6.00	8.12	4	26	2	28	0.48	0.25	10	0	0
Moe Akaroro	26-Apr-12	29.79	35.48	97.20	6.06	8.09	5	25	2	26	0.33	0.83	7	0	0
Moe Akaroro	8-May-12	29.90					7	28	1	29	0.51	0.25	6	0	0
Moe Akaroro	5-Jun-12	29.07	35.44	96.80	6.11	10.56	8	29	1	30	0.48	0.60	3	100	0
Moe Akaroro	19-Jun-12						10	3	2	5	0.48	0.25	0	10	0
Moe Akaroro	3-Jul-12	28.59	35.60	103.80	6.60	5.53	10	1	1	2	0.47	0.47	4	10	0
Moe Akaroro	17-Jul-12						11	2	2	4	0.42	0.27	37	50	10
Moe Akaroro	21-Aug-12	28.90					11	1	1	2	0.29	0.25	3	10	0
Moe Akaroro	28-Aug-12	27.94	35.37	104.10	6.70	8.18	13	11	8	19	0.23	0.49	25	0	0
Moe Akaroro	11-Sep-12	28.24	35.50	106.10	6.79	7.98	15	1	1	2	0.15	0.25	11	30	10
Moe Akaroro	9-Oct-12	28.81	35.57	100.40	6.36	8.06	11	3	1	4	0.45	0.83	1	0	0
Moe Akaroro	23-Oct-12	28.84	35.16	101.00	6.41	8.12	8	10	1	11	0.29		3	0	0
Moe Akaroro	6-Nov-12	29.58		103.40	5.40	8.08	7	9	1	10	0.17	0.30	0	0	10
Moe Akaroro	4-Dec-12	30.20	34.72	98.40	6.13	8.08	8	12	2	14	0.10		0	0	0
Moe Akaroro	11-Dec-12	29.67	34.43	103.00	6.48	8.11	8	11	1	12	0.24		5	0	0
Moe Akaroro	29-Jan-13											0.25	6	0	0
Moe Akaroro	26-Feb-13											0.25	2	0	0
Moe Akaroro	12-Mar-13	29.04	52.98	144.0	8.26	8.05						0.25	11	0	0
Moe Akaroro	27-Mar-13	29.40	32.11	249.0	15.93	8.07						1.21	29	0	0
Moe Akaroro	02-May-13	30.09	32.02	122.8	7.78	8.11						0.52	6	0	0
Moe Akaroro	16-Jul-13	28.38	33.09	281.9	18.24	8.11						2.12		0	10
Moe Akaroro	13-Aug-13	27.71	33.95	246.4	16.04	8.15						0.25	0	0	0

Moe Akaroro	27-Aug-13	28.07	34.93	152.1	9.79	8.08					0.25	48		
Moe Akaroro	05-Nov-13	28.53	34.13	90.7	5.82	8.11					2.03	1	0	10
Moe Akaroro	19-Nov-13	29.25	33.90			8.09					0.39	57	0	0
Monitoring Buoy	27-Jan-06		37.4			8.2						0	1	0
Monitoring Buoy	9-Mar-06		37.4									0	7	50
Monitoring Buoy	20-Apr-06	22	35									0	36	1
Monitoring Buoy	21-Jun-06	19.3										1	0	2
Monitoring Buoy	13-Jul-06											0	640	115
Monitoring Buoy	26-Jul-06	19.9	39.4									75	355	0
Monitoring Buoy	10-Aug-06	22.3												
Monitoring Buoy	7-Sep-06											2	0	0
Monitoring Buoy	21-Sep-06											6	0	0
Monitoring Buoy	19-Oct-06	29.6				7	3	1		0.4		9	0	5
Monitoring Buoy	2-Nov-06		34.2			8.1	7	1	1		0.3		7	50
Monitoring Buoy	30-Nov-06	29.1					4	5	0.5				390	20
Monitoring Buoy	1-Feb-07		36.4			8.5	3	5	3	8		0.7	55	35
Monitoring Buoy	22-Feb-07	29.9					3	6	4	10		2.1	10	1320
Monitoring Buoy	17-Apr-07	24.6	33.6			7.7	3	5	0.5	5.5	0.3	0.3	121	0
Monitoring Buoy	1-May-07	29.6					3	5	2	7	0.3	0.3		
Monitoring Buoy	15-May-07	20.4	34.8			8	3	9	5	14	0.2	0.6	18	35
Monitoring Buoy	29-May-07	19.9	35.2			8.1	4	4	0.5	4.5	0.5	0.3	18	5
Monitoring Buoy	19-Jun-07	29.9					0.5	5	3	8		0.8	60	10
Monitoring Buoy	9-Aug-07	32.8	34.9			8.1	2	5	1	6	0.6	0.6	6	10
Monitoring Buoy	27-Sep-07	28.9	35.6			7.9	3	2	0.5	2.5	0.2	0.6	2	0
Monitoring Buoy	9-Oct-07	29					3	4	1	5				
Monitoring Buoy	18-Oct-07	28.7					13	0.5	0.5	1	0.5	0.5	3	0
Monitoring Buoy	1-Nov-07	29	34.2			8.1								70
Monitoring Buoy	30-Nov-07						4	0.5	0.5			0.5	9	0
Monitoring Buoy	13-Dec-07	29	35.8			7.8					0.6	0.7	16	0
Monitoring Buoy	7-Feb-08	28.8	36			7.9	4	1	8	9	0.6	0.4	86	155
Monitoring Buoy	19-Feb-08	29.2					4	0.5	8	8.5	0.4	0.3	8	0
Monitoring Buoy	6-Mar-08		35.7			7.7	4	3	0.5	3.5	0.2	0.3	17	5
Monitoring Buoy	15-Apr-08		35.7			7.6	1	2	9	11	0.4	0.3	28	5
Monitoring Buoy	27-May-08		35.3			7.9	3	4	5	9	0.3	0.3	33	0
Monitoring Buoy	10-Jun-08		36			7.7	0.5	0.5	1	1.5	0.5	0.5	8	0
Monitoring Buoy	8-Jul-08		36.1				4	0.5	0.5	1	0.5	0.4	28	0
Monitoring Buoy	23-Sep-08	21.8	36				1	7	1	8	0.3	0.3	23	0
Monitoring Buoy	15-Oct-08	28.2					1	3	1	4	0.3	0.6	68	0
Monitoring Buoy	4-Nov-08	28.7	35.4				2	3	15	18	0.2	1.1	34	0
Monitoring Buoy	18-Nov-08						4	5	16	21	0.2		0	0
Monitoring Buoy	20-Jan-09		35			8.2	4	4	0.5	4.5	0.3	0.3	34	0
Monitoring Buoy	3-Feb-09		36.3			8.3	7	2	2	4	0.1	0.3	9	0
Monitoring Buoy	17-Mar-09		35.5			8.3	0.5	2	2	4	0.19	0.6	23	5
Monitoring Buoy	14-Apr-09		36			8.8	104	4	4	8	0.4	1.3	52	0
Monitoring Buoy	28-Apr-09	23.4	35.4			8.6	1	0.5	0.5	1	0.22	0.3	61	10
Monitoring Buoy	23-Jun-09	28.9	34.7			8.8	6	5	6	11	1.1	0.6	0	0
Monitoring Buoy	7-Jul-09		35.8			8.1	8	4	8	12	0.26	0.4	16	0
Monitoring Buoy	13-Oct-09		36.2			8.3	8	7	5	12	0.31	1.4	40	5
Monitoring Buoy	10-Nov-09	23.4	35			8.7	7	5	0.5	5.5	0.14	0.4	9	10
Monitoring Buoy	24-Nov-09						5	2	0.5	2.5	0.28	0.3	4	15
Monitoring Buoy	8-Dec-09						7	2	10	12	0.46	0.3	0	0

Monitoring Buoy	16-Feb-10		35.1			8.3	7	4	0.5	4.5	0.56	0.3	28	0	0
Monitoring Buoy	27-Apr-10		35.1			8.1	3	2	2	4	0.23	0.5	14	0	45
Monitoring Buoy	21-Jun-10	29.4	35.3			8.58	3	2	2	4	0.5	0.5	46	0	0
Monitoring Buoy	10-Aug-10		35.3			8.5	6	1	2	3	0.4	1.2	12	0	10
Monitoring Buoy	14-Sep-10	28.8					2	0.5	0.5	1	0.48	0.3	0	20	160
Monitoring Buoy	12-Oct-10		35.7			8.1	5	3	0.5	3.5	0.35	0.4	38	0	0
Monitoring Buoy	28-Oct-10	28.5					4	2	0.5	2.5	0.26	0.5	1	0	0
Monitoring Buoy	7-Dec-10	30					5	13	2	15	0.46	0.5	19	0	5
Monitoring Buoy	18-Jan-11	24.9					5	1	1	2	0.22	0.3	0	0	0
Monitoring Buoy	17-Feb-11	28.8		102.2	7.82	7.98	4	0.5	0.5	1	0.41	1.3	1	0	0
Monitoring Buoy	30-Mar-11	30.2					5	5	1	6	0.28	0	33	0	0
Monitoring Buoy	26-Apr-11	19.2	35.7	74.2	5.1	8	5	3	0.5	3.2	0.44	1.3	49	0	35
Monitoring Buoy	15-Jun-11	28.8	36.1	67.3	4.6	8.2	6	3	1	4.1	1.4	0.3	11	0	0
Monitoring Buoy	19-Jul-11						7	8	3	11.2	1.18	0.3	11	5	100
Monitoring Buoy	16-Aug-11						5	0.5	3	3	2.65	1	10	0	0
Monitoring Buoy	31-Aug-11	27.31		112.7	5.74	8.09	7	2	1	3.5	0.43	0.3	2	0	0
Monitoring Buoy	20-Sep-11	27.58		107.7	5.44	8.09	5	0.5	0.5	1	0.86	0.3	4	0	0
Monitoring Buoy	31-Jan-12	28.37	35.35	105.90	6.77	8.12	2	4	1	5	2.40	0.25	0	0	0
Monitoring Buoy	14-Feb-12	29.48	35.50	104.60	6.56	8.10	2	3	4	7	0.99	0.70	11	0	50
Monitoring Buoy	28-Feb-12	29.72	25.83	97.50	6.08	8.10	3	23	1	24	0.94	0.82	19	0	0
Monitoring Buoy	13-Mar-12	29.73	35.60	96.90	6.05	8.14	3	18	1	19	0.36	0.41	3	15	30
Monitoring Buoy	27-Mar-12	29.76	35.47	93.40	5.83	8.10	4	27	1	28	0.62	0.25	1	30	0
Monitoring Buoy	26-Apr-12	30.08	35.47	94.20	5.85	8.10	4	27	1	28	0.46	0.25	0	0	0
Monitoring Buoy	8-May-12	29.50					6	33	1	34	0.65	0.25	7	0	0
Monitoring Buoy	5-Jun-12	29.20	35.41	89.80	5.66	10.64	8	29	1	30	0.58	0.25	0	40	320
Monitoring Buoy	19-Jun-12						9	3	1	4	0.58	0.25	3	0	10
Monitoring Buoy	3-Jul-12	28.69	35.62	105.00	6.67	8.28	9	1	1	2	0.31	0.28	7	10	0
Monitoring Buoy	17-Jul-12						10	1	1	2	0.33	0.29	38	70	50
Monitoring Buoy	21-Aug-12	28.80					11	3	1	4	0.27	0.25	0	10	0
Monitoring Buoy	28-Aug-12	28.13	35.30	102.80	6.60	8.14	10	3	1	4	0.22	0.36	35	10	100
Monitoring Buoy	11-Sep-12	28.43	35.53	104.10	6.64	7.95	11	1	1	2	0.24	0.30	4	50	110
Monitoring Buoy	9-Oct-12	28.99	35.48	113.70	7.19	8.08	10	2	1	3	0.26	0.27	5	0	0
Monitoring Buoy	23-Oct-12	29.02	35.15	99.40	6.29	8.13	7	11	2	13	0.50		5	0	0
Monitoring Buoy	6-Nov-12	29.37		99.70	5.24	8.16	15	12	3	14	0.12	0.25	0	0	0
Monitoring Buoy	4-Dec-12	30.28	34.73	98.40	6.12	8.12	6	8	1	9	0.14		0	0	0
Monitoring Buoy	11-Dec-12	29.82	34.75	102.30	6.41	8.14	8	9	1	10	0.39		6	0	10
Monitoring Buoy	29-Jan-13											0.25	3	0	0
Monitoring Buoy	26-Feb-13											0.25	0	0	10
Monitoring Buoy	12-Mar-13	29.15	52.98	160.2	9.17	7.99						0.25	33	0	10
Monitoring Buoy	27-Mar-13	29.57	32.10	145.6	9.30	8.06						0.25	14	0	10
Monitoring Buoy	02-May-13	30.24	31.97	121.0	7.64	8.13						0.25	7	10	80
Monitoring Buoy	16-Jul-13	28.41	32.96	223.8	14.48	8.12						0.25		0	0
Monitoring Buoy	13-Aug-13	27.70	33.84	270.1	17.60	8.11						0.62	34	0	0
Monitoring Buoy	27-Aug-13	28.13	34.82	111.7	7.19	8.05						0.25	23		
Monitoring Buoy	05-Nov-13	28.50	33.93	86.8	5.58	8.09						0.47	8	10	10
Monitoring Buoy	19-Nov-13	29.14	33.67			8.09						0.25	82	10	10
Ngatoka e Hitu	27-Jan-06		37.4			8.3							0	0	0
Ngatoka e Hitu	9-Mar-06		36.6										0	12	0
Ngatoka e Hitu	20-Apr-06	21.2	35										0	0	0
Ngatoka e Hitu	21-Jun-06	18.2											0	10	15
Ngatoka e Hitu	13-Jul-06												8	525	10

Ngatoka e Hitu	26-Jul-06	19.8	39.1										150	15	0
Ngatoka e Hitu	10-Aug-06	22.5													
Ngatoka e Hitu	7-Sep-06												6	0	0
Ngatoka e Hitu	21-Sep-06												4	0	0
Ngatoka e Hitu	19-Oct-06	29.7				4	7	2		0.3			11	5	15
Ngatoka e Hitu	2-Nov-06		34.2		8	7	2	0.5		0.2			6	120	60
Ngatoka e Hitu	30-Nov-06	29.8				3	5	0.5					570	11	8
Ngatoka E Hitu	1-Feb-07	29.7	36.4		8.6	2	3	2	5		0.8		133	50	30
Ngatoka E Hitu	22-Feb-07	29.9				2	5	3	8		1.8		10	405	60
Ngatoka E Hitu	17-Apr-07	24.5	33.6		7.7	0.5	8	1	9	0.3	0.3		47	10	5
Ngatoka E Hitu	1-May-07	30.4				0.5	0.5	0.5	1	0.4	0.3				
Ngatoka E Hitu	15-May-07	21.5	34.8		7.9	3	7	4	11	0.3	0.7		1	0	15
Ngatoka E Hitu	29-May-07	20	35.1		8.1	2	4	0.5	4.5	0.7	0.3		15	0	40
Ngatoka E Hitu	19-Jun-07	30.1				1	4	1	5		1		30	15	20
Ngatoka E Hitu	9-Aug-07	30.8	35		8	2	5	1	6	0.5	3.1		6	10	15
Ngatoka E Hitu	27-Sep-07	29	35.5		7.8	3	2	0.5	2.5	0.2	0.5		6	0	10
Ngatoka E Hitu	9-Oct-07	29				1	0.5	0.5	1						
Ngatoka E Hitu	18-Oct-07	28.1				3	1	0.5	1.5	0.2	0.6		5	0	0
Ngatoka E Hitu	1-Nov-07	29	34.1		8										
Ngatoka E Hitu	30-Nov-07					4	0.5	0.5			0.3		12	15	255
Ngatoka E Hitu	13-Dec-07	28.9	35.7		7.8					0.5	0.6		21	5	5
Ngatoka e Hitu	7-Feb-08	28.9	36		7.9	3	2	3	5	0.4	1		731	73	5
Ngatoka e Hitu	19-Feb-08	29.3				2	4	6	10	0.4	0.4		18	0	190
Ngatoka e Hitu	6-Mar-08		35.6		7.5	3	1	0.5	1.5	0.2	0.3		9	0	0
Ngatoka e Hitu	15-Apr-08		35.7		7.7	4	8	2	10	0.3	0.3		39	0	10
Ngatoka e Hitu	27-May-08		35.3		7.9	0.5	17	12	29	0.4	0.4		8	0	0
Ngatoka e Hitu	10-Jun-08		36.1		7.7	3	6	3	9	0.5	0.3		10	0	0
Ngatoka e Hitu	8-Jul-08		36.1			2	0.5	0.5	1	0.4	0.4		24	0	0
Ngatoka e Hitu	23-Sep-08	23.4	36			7	9	5	14	0.3	3.5		33	0	0
Ngatoka e Hitu	15-Oct-08	28.3				2	6	0.5	6.5	0.2	0.3		230	0	0
Ngatoka e Hitu	4-Nov-08	29.1	35.4			3	8	12	20	0.2	0.4		158	0	0
Ngatoka e Hitu	18-Nov-08					4	13	15	28	0.2			0	0	0
Ngatoka e Hitu	20-Jan-09		35.3		8.2	4	6	0.5	6.5	0.2	0.3		24	0	0
Ngatoka e Hitu	3-Feb-09		36.3		8.3	4	3	3	6	0.1	0.3		15	20	5
Ngatoka e Hitu	17-Mar-09		35.5		8.2	0.5	3	2	5	0.2	0.8		10	0	105
Ngatoka e Hitu	14-Apr-09		35.9		8.8	3	0.5	4	4.5	0.4	1.3		93	0	0
Ngatoka e Hitu	28-Apr-09	23.4	35.4		8.6	2	1	2	3	0.23	0.3		99	100	120
Ngatoka e Hitu	23-Jun-09	28.8	34.8		8.9	11	8	18	26	0.6	0.7		0	10	10
Ngatoka e Hitu	7-Jul-09		35.8		8.1	8	3	5	8	0.17	0.7		6	0	20
Ngatoka e Hitu	13-Oct-09		36.1		8.3	11	10	7	17	0.18	0.5		30	0	0
Ngatoka e Hitu	10-Nov-09	23.6	35.2		8.6	5	2	0.5	2.5	0.12	0.3		5	0	0
Ngatoka e Hitu	24-Nov-09					6	1	2	3	0.31	0.3		2	0	0
Ngatoka e Hitu	8-Dec-09					9	5	8	13	0.22	0.3		3	0	0
Ngatoka e Hitu	16-Feb-10		35.2		8.3	5	1	0.5	1.5	0.69	0.3		20	0	0
Ngatoka e Hitu	27-Apr-10		35.1		8.1	5	2	0.5	2.5	0.2	0.3		6	0	50
Ngatoka e Hitu	21-Jun-10	29.5	35.3		8.54	3	0.5	2	2.5	0.44	0.8		32	0	0
Ngatoka e Hitu	10-Aug-10		35.3		8.5	5	3	0.5	3.5	0.42	0.7		7	5	5
Ngatoka e Hitu	14-Sep-10	28.7				4	0.5	2	2.5	0.4	0.3		1	5	0
Ngatoka e Hitu	12-Oct-10		35.7		8.1	2	2	1	3	0.29	0.5		23	0	0
Ngatoka e Hitu	28-Oct-10	26.5				3	2	0.5	2.5	0.18	1		1	0	0
Ngatoka e Hitu	7-Dec-10	30				6	13	0.5	13.5	0.46	1		29	0	0

Ngatoka e Hitu	18-Jan-11	23.6					5	0.5	1	1.5	0.15	0.3	0	0	15
Ngatoka e Hitu	17-Feb-11	27.9		101.4	7.8	8	4	0.5	0.5	1	0.41	1.5	0	0	0
Ngatoka e Hitu	30-Mar-11	30.2					5	0.5	1	1.5	0.3	0.9	16	0	0
Ngatoka e Hitu	26-Apr-11	18.6	35.79	75.6	5.16	7.97	6	3	3	6	0.42	0.3	25	0	75
Ngatoka e Hitu	15-Jun-11	28.3	36	74.1	5.2	8.1	6	0.5	2	2.3	1.42	0.3	20	5	0
Ngatoka e Hitu	19-Jul-11						8	2	5	6.9	0.85	0.3	17	0	0
Ngatoka e Hitu	16-Aug-11						6	3	3	6.1	2.61	1.4	6	0	5
Ngatoka e Hitu	31-Aug-11	27.33		116.7	5.97	8.11	7	4	1	4.7	0.7	0.3	2	0	0
Ngatoka e Hitu	20-Sep-11	27.68		101.8	5.13	8.09	5	0.5	0.5	1	1.82	0.3	14	0	0
Ngatoka e Hitu	31-Jan-12	28.48	35.36	105.00	6.70	8.12	3	4	1	5	0.49	0.77	8	0	0
Ngatoka e Hitu	14-Feb-12	29.86	35.52	104.40	6.51	8.11	2	5	1	5	0.95	0.40	10	0	0
Ngatoka e Hitu	28-Feb-12	29.89	35.86	98.10	6.10	8.09	3	19	1	20	0.97	1.21	23	0	50
Ngatoka e Hitu	13-Mar-12	29.84	35.59	98.70	6.15	8.16	3	28	1	29	0.53	1.03	3	0	10
Ngatoka e Hitu	27-Mar-12	29.82	35.47	93.70	5.85	8.11	2	11	1	12	0.64	0.94	4	0	0
Ngatoka e Hitu	26-Apr-12	30.20	35.47	95.10	5.90	8.11	3	11	1	12	0.39	0.25	0	10	0
Ngatoka e Hitu	8-May-12	30.00					5	22	1	23	0.65	0.25	9	10	10
Ngatoka e Hitu	5-Jun-12	29.33	35.43	91.70	5.77	10.70	7	29	1	30	0.57	0.25	0	280	10
Ngatoka e Hitu	19-Jun-12						9	2	1	3	0.44	0.25	0	10	0
Ngatoka e Hitu	3-Jul-12	28.77	35.60	137.10	8.69	7.91	10	1	1	2	0.41	0.25	3	40	0
Ngatoka e Hitu	17-Jul-12						10	4	1	5	0.23	0.28	40	20	70
Ngatoka e Hitu	21-Aug-12	28.70					11	1	1	2	0.25	0.25	2	10	0
Ngatoka e Hitu	28-Aug-12	28.21	35.24	103.40	6.63	8.18	10	1	1	2	0.17	0.90	18	10	10
Ngatoka e Hitu	11-Sep-12	28.48	35.48	103.00	6.57	7.97	17	1	1	2	0.18	0.25	2	110	80
Ngatoka e Hitu	9-Oct-12	29.01	35.45	116.60	7.37	8.07	9	1	1	2	0.20	0.27	2	10	0
Ngatoka e Hitu	23-Oct-12	29.06	35.13	98.50	6.24	8.13	8	12	1	13	0.28		4	0	10
Ngatoka e Hitu	6-Nov-12	29.35		101.50	5.35	8.08	8	15	1	16	0.11	0.29	1	0	0
Ngatoka e Hitu	4-Dec-12	30.27	34.68	98.90	6.15	8.12	8	10	2	12	0.15		0	0	0
Ngatoka e Hitu	11-Dec-12	29.87	34.78	100.90	6.31	8.13	9	10	9	19	0.29		7	0	0
Ngatoka e Hitu	29-Jan-13											0.25	43	0	0
Ngatoka e Hitu	26-Feb-13											0.47	0	0	0
Ngatoka e Hitu	12-Mar-13	29.14	52.98	144.6	8.28	8.01						0.37	16	0	0
Ngatoka e Hitu	27-Mar-13	29.64	32.08	146.1	9.31	8.06						1.03	17	0	0
Ngatoka e Hitu	02-May-13	30.22	31.98	133.5	8.44	8.14						0.42	13	0	0
Ngatoka e Hitu	16-Jul-13	28.41	32.91	240.3	15.56	8.06						0.44		10	10
Ngatoka e Hitu	13-Aug-13	27.67	33.78	148.1	9.66	8.05						0.77	2	0	0
Ngatoka e Hitu	27-Aug-13	28.16	34.79	114.2	7.35	8.03						0.25	6		
Ngatoka e Hitu	05-Nov-13	28.59	33.97	85.3	5.47	8.10						1.59	6	0	20
Ngatoka e Hitu	19-Nov-13	29.11	33.67			8.09						0.25	49	0	10
Rahea Raro	27-Jan-06		37.4			8.3							0	0	0
Rahea Raro	9-Mar-06		36.8										0	0	120
Rahea Raro	20-Apr-06	20.7	34.9										0	0	0
Rahea Raro	21-Jun-06	20.7											0	0	15
Rahea Raro	13-Jul-06												8	630	540
Rahea Raro	26-Jul-06	20.1	39										174	35	80
Rahea Raro	10-Aug-06	22													
Rahea Raro	7-Sep-06												6	0	5
Rahea Raro	21-Sep-06												19	0	5
Rahea Raro	19-Oct-06	29.2					9	7	3		0.4		11	15	20
Rahea Raro	2-Nov-06		34.3				8	8	3	1	0.3		4	205	35
Rahea Raro	30-Nov-06	27.3					5	9	1				410	5	32
Rahea Raro	1-Feb-07	29.1	36.6			8.6	1	4	3	7		0.5	66	240	0

Rahea Raro	22-Feb-07	29.5	35.6				3	5	2	7		0.3	14	275	35
Rahea Raro	17-Apr-07	25.8	33.6			7.8	3	9	3	12	0.2	0.3	49	5	5
Rahea Raro	1-May-07	29.9					2	3	0.5	3.5	0.2	0.3			
Rahea Raro	15-May-07	20.6	34.8			8.5	3	3	0.5	3.5	0.2	0.5	2	35	105
Rahea Raro	29-May-07	21.4	35.6			8.3	3	4	0.5	4.5	0.3	0.3	8	0	200
Rahea Raro	19-Jun-07	29.5					2	2	0.5	2.5		0.5	250	80	795
Rahea Raro	9-Aug-07	32.3	34.8			8	3	6	2	8	0.2	0.3	6	0	0
Rahea Raro	27-Sep-07	29.1	35.7			7.9	3	4	0.5	4.5	0.2	0.3	12	0	15
Rahea Raro	9-Oct-07	29.1					5	7	1	8					
Rahea Raro	18-Oct-07	28.1					4	0.5	2	2.5	0.2	1.1	10	0	55
Rahea Raro	1-Nov-07	29.1	34.3			8									
Rahea Raro	30-Nov-07						5	0.5	2			0.7	4	10	30
Rahea Raro	13-Dec-07	29	35.6			7.7					0.6	0.5	9	5	35
Rahea Raro	7-Feb-08	28.7	36			7.9	5	3	0.5	3.5	0.5	1	73	0	10
Rahea Raro	19-Feb-08	29.3					6	2	1	3	0.3	0.3	28	0	160
Rahea Raro	6-Mar-08		35.8			7.6	6	2	2	4	0.3	0.3	38	20	20
Rahea Raro	15-Apr-08		35.7			7.8	0.5	6	4	10	0.4	0.3	29	0	5
Rahea Raro	27-May-08		33.8			7.9	3	5	4	9	0.3	0.3	9	0	0
Rahea Raro	10-Jun-08		36			7.5	4	0.5	3	3.5	0.5	0.3	19	5	0
Rahea Raro	8-Jul-08		36.2				5	0.5	0.5	1	0.4	1.4	25	0	10
Rahea Raro	23-Sep-08	25.2	36				1	5	5	10	0.9	1	16	0	0
Rahea Raro	15-Oct-08	28.3					5	13	0.5	13.5	0.3	0.3	645	0	2
Rahea Raro	4-Nov-08	28.9	35.3				4	9	0.5	9.5	0.2	0.8	19	0	0
Rahea Raro	18-Nov-08						2	7	16	23	0.3		0	0	0
Rahea Raro	20-Jan-09		35.4			8.2	3	6	0.5	6.5	0.2	1.1	62	90	5
Rahea Raro	3-Feb-09		36.4			8.3	5	2	4	6	0.1	0.3	3	0	0
Rahea Raro	17-Mar-09		35.5			8.3	0.5	1	2	3	0.31	0.8	16	0	35
Rahea Raro	14-Apr-09		36			8.8	3	0.5	3	3.5	0.3	0.3	530	0	5
Rahea Raro	28-Apr-09	24.2	35.4			8.6	0.5	4	0.5	4.5	0.22	0.4	8	115	370
Rahea Raro	23-Jun-09	28.8	35.2			9	6	3	8	11	1.2	1	4	10	0
Rahea Raro	7-Jul-09		35.9			8.2	10	10	10	20	0.25	0.8	21	0	10
Rahea Raro	13-Oct-09		36			8.2	5	7	0.5	7.5	0.2	0.9	87	0	5
Rahea Raro	10-Nov-09	24.3	35.2			8.6	6	4	0.5	4.5	0.12	0.3	12	0	0
Rahea Raro	24-Nov-09						5	2	1	3	0.19	1.7	3	0	0
Rahea Raro	8-Dec-09						6	6	5	11	0.19	0.3	2	0	0
Rahea Raro	16-Feb-10		35.2			8.3	7	2	2	4	0.53	0.3	16	0	0
Rahea Raro	27-Apr-10		35			8.1	5	3	44	47	0.19	0.5	47	5	1140
Rahea Raro	21-Jun-10	29.4	35.4			8.51	4	2	0.5	2.5	0.26	0.7	51	0	0
Rahea Raro	10-Aug-10		35.3			8.4	7	5	2	7	0.44	1.5	3	5	70
Rahea Raro	14-Sep-10						2	0.5	0.5	1	0.32	0.3	2	0	0
Rahea Raro	12-Oct-10		35.7			8.1	3	4	1	5	0.33	0.6	16	0	0
Rahea Raro	28-Oct-10	25.5					6	3	0.5	3.5	0.14	0.5	2	0	0
Rahea Raro	7-Dec-10	29.6					6	14	2	16	0.4	0.5	12	0	10
Rahea Raro	18-Jan-11						4	0.5	0.5	1	0.29	0.3	0	0	0
Rahea Raro	17-Feb-11	28.4		100.1	7.6	8	4	0.5	0.5	1	0.34	2.7	1	5	15
Rahea Raro	30-Mar-11	25					5	0.5	1	1.5	0.36	0.4	12	0	0
Rahea Raro	26-Apr-11	23	35.8	81.8	5.6	7.9	7	4	0.5	4.1	0.28	0.9	8	0	0
Rahea Raro	15-Jun-11	28.6	36	71.6	5	8.1	7	0.5	1	1.6	1.26	0.3	23	0	5
Rahea Raro	19-Jul-11						7	0.5	2	2.1	1.96	1	10	0	5
Rahea Raro	16-Aug-11						7	4	6	9.6	2.67	2.2	30	0	5
Rahea Raro	31-Aug-11	27.19		115.4	5.91	8.06	6	1	4	4.9	1.17	1.3	0	0	0

Rahea Raro	20-Sep-11	27.45		107.3	5.43	8.08	4	0.5	0.5	1	1.02	0.3	3300	5	0
Rahea Raro	31-Jan-12	28.80	35.35	105.90	6.72	8.12	2	21	2	24	0.44	0.41	2	100	10
Rahea Raro	14-Feb-12	29.67	35.50	103.30	6.46	8.11	14	9	16	25	0.21	0.40	8	0	15
Rahea Raro	28-Feb-12	29.71	36.85	100.70	6.28	8.16	3	21	1	22	0.22	0.75	3	5	10
Rahea Raro	13-Mar-12	29.59	35.62	101.60	6.36	8.13	4	27	1	28	0.55	0.41	0	15	45
Rahea Raro	27-Mar-12	29.84	35.46	96.80	6.04	8.12	6	37	14	50	0.45	0.25	18	0	0
Rahea Raro	26-Apr-12	29.99	35.49	95.80	5.96	8.08	6	28	1	29	0.39	0.86	0	0	10
Rahea Raro	8-May-12	29.90					7	26	1	27	0.46	0.25	370	0	0
Rahea Raro	5-Jun-12	29.26	35.45	94.40	5.94	10.54	7	32	1	33	0.49	0.51	5	520	590
Rahea Raro	19-Jun-12						9	1	2	3	0.55	0.25	1	360	10
Rahea Raro	3-Jul-12	28.70	35.62	106.00	6.73	8.00	10	1	1	2	0.34	0.25	8	90	0
Rahea Raro	17-Jul-12						10	1	1	2	0.29	0.44	27	0	10
Rahea Raro	21-Aug-12	28.50					11	1	1	2	0.25	0.25	0	10	0
Rahea Raro	28-Aug-12	28.11	35.33	102.30	6.57	8.16	12	6	1	7	0.21	0.25	11	0	0
Rahea Raro	11-Sep-12	28.35	35.50	118.70	7.59	8.10	15	1	1	2	0.16	0.25	2	920	960
Rahea Raro	9-Oct-12	28.90	35.50	101.90	6.45	8.08	9	2	1	3	0.33	0.25	0	10	0
Rahea Raro	23-Oct-12	28.98	35.15	101.70	6.44	8.12	8	11	1	12	0.27		48	0	0
Rahea Raro	6-Nov-12	29.36		99.20	5.21	8.13	8	10	2	12	0.10	0.30	0	0	0
Rahea Raro	4-Dec-12	30.21	34.38	98.70	6.16	8.07	9	12	2	14	0.12		0	0	0
Rahea Raro	11-Dec-12	29.81	34.67	100.30	6.28	8.10	7	10	2	12	0.25		6	0	30
Rahea Raro	29-Jan-13											0.25	2	0	100
Rahea Raro	26-Feb-13											0.25	1	0	20
Rahea Raro	12-Mar-13	29.08	52.94	147.8	8.47	8.06						0.25	4	0	350
Rahea Raro	27-Mar-13	29.66	32.14	180.7	11.51	8.07						0.30	38	0	350
Rahea Raro	02-May-13	30.16	32.00	127.2	8.04	8.12						0.46	38	0	0
Rahea Raro	16-Jul-13	28.44	33.03	135.8	8.78	8.09						0.25	14	0	0
Rahea Raro	13-Aug-13	27.63	33.83	216.4	14.12	8.15						0.31	0	0	0
Rahea Raro	27-Aug-13	28.19	34.87	187.5	12.05	8.07						0.25	23		
Rahea Raro	05-Nov-13	28.59	34.11	94.4	6.05	8.14						1.56	1	0	0
Rahea Raro	19-Nov-13	29.11	33.78			8.06						0.25	10	0	0
Takaniko	27-Jan-06		37.5			8.3							0	0	1
Takaniko	9-Mar-06		36.4										0	10	15
Takaniko	20-Apr-06	20.5	34.9										0	12	0
Takaniko	21-Jun-06	19.3											0	30	0
Takaniko	13-Jul-06												2	120	150
Takaniko	26-Jul-06	20.6	39.2										51	0	15
Takaniko	10-Aug-06	23.4													
Takaniko	7-Sep-06												33	5	20
Takaniko	21-Sep-06												110	10	85
Takaniko	19-Oct-06	29.5					6	6	1		0.5		12	30	220
Takaniko	2-Nov-06		34.3				8	7	3	2		0.5	26	2350	35
Takaniko	30-Nov-06	28.7					5	6	1				42	134	4
Takaniko	1-Feb-07		35.9			8.6	0.5	2	3	5		0.5	990	80	150
Takaniko	22-Feb-07	29.5	35.7				3	7	1	8		0.8	27	705	210
Takaniko	17-Apr-07	26	33.3			7.7	3	9	3	12	0.3	0.5	72	10	30
Takaniko	1-May-07	28.7					0.5	5	4	9	0.3	0.7			
Takaniko	15-May-07	21.2	34.7			8.4	1	4	0.5	4.5	0.2	1.3	305	25	670
Takaniko	29-May-07	23.1	35.5			8.2	3	7	9	16	0.3	0.3	12	20	10
Takaniko	19-Jun-07	30.1					0.5	4	1	5		1	25	50	340
Takaniko	9-Aug-07	30.7	34.6			8.1	2	6	3	9	0.3	0.5	2	5	30
Takaniko	27-Sep-07	29.3	35.4			7.8	19	8	19	27	0.2	1.1	10	25	210

Takaniko	9-Oct-07	29.1					7	7	3	10					
Takaniko	18-Oct-07	27.9					3	1	1	2	0.2	0.6	5	5	455
Takaniko	1-Nov-07	29.2	34.2				8								
Takaniko	30-Nov-07						8	4	2	6		1.6	735	120	1240
Takaniko	13-Dec-07	28.6	35.6			7.1					0.4	1.7	56	50	265
Takaniko	7-Feb-08	28.9	36			7.8	4	2	0.5	2.5	0.4	0.6	73	0	35
Takaniko	19-Feb-08	29.5					5	2	4	6	0.4	0.3	160	5	1290
Takaniko	6-Mar-08		35.4			7.6	5	2	2	4	0.3	0.3	21	5	10
Takaniko	15-Apr-08		35.7			7.9	2	7	0.5	7.5	0.6	0.3	38	5	70
Takaniko	27-May-08					7.9	0.5	15	3	18	0.5	0.7	32	0	60
Takaniko	10-Jun-08		36			7.1	2	0.5	2	2.5	0.5	0.3	26	0	0
Takaniko	8-Jul-08		35.9				5	0.5	0.5	1	0.6	2	3	10	0
Takaniko	23-Sep-08	24.7	36.1				1	6	6	12	0.5	1.5	26	0	10
Takaniko	15-Oct-08	28.6					2	4	0.5	4.5	0.2	0.3	350	0	0
Takaniko	4-Nov-08	29.3	35.3				3	9	2	11	0.4	1.8	21	0	5
Takaniko	18-Nov-08						4	7	17	24	0.5		0	0	0
Takaniko	20-Jan-09		35.3			8.1	3	6	1	7	0.2	1.3	73	0	15
Takaniko	3-Feb-09		36.3			8.3	6	2	5	7	0.2	0.8	2	5	0
Takaniko	17-Mar-09		35.6			8.3	1	3	3	6	0.5	1.1	14	0	40
Takaniko	14-Apr-09		36			8.7	16	0.5	5	5.5	0.3	0.8	55	0	10
Takaniko	28-Apr-09	23.6	35.4			8.6	0.5	4	2	6	0.16	0.3	55	200	330
Takaniko	23-Jun-09	29.1	35.3			9	5	2	5	7	0.2	2.4	1	0	5
Takaniko	7-Jul-09		35.7			8.2	9	1	8	9	0.31	0.7	72	0	350
Takaniko	13-Oct-09		35.9			8.2	9	4	6	10	0.4	1	185	0	20
Takaniko	10-Nov-09	24.7	34.7			8.5	6	2	1	3	0.32	10.8	32	0	0
Takaniko	24-Nov-09						8	4	1	5	0.43	0.3	3	0	50
Takaniko	8-Dec-09						4	3	3	6	0.37	0.5	1	0	0
Takaniko	16-Feb-10		35.1			8.1	7	8	2	10	0.57	0.5	25	0	10
Takaniko	27-Apr-10		35			8.1	4	3	11	14	0.32	0.8	9	0	30
Takaniko	21-Jun-10	29.6	35.7			8.47	7	1	2	3	0.51	0.9	33	0	0
Takaniko	10-Aug-10		35.4			8.4	7	2	2	4	0.27	2	10	0	90
Takaniko	14-Sep-10						3	0.5	3	3.5	0.45	0.3	0	0	10
Takaniko	12-Oct-10		35.7			7.9	3	3	3	6	0.39	1	16	0	10
Takaniko	28-Oct-10	28.5					1	3	2	5	0.08	0.8	1	0	15
Takaniko	7-Dec-10	28.9					5	12	2	14	0.75	0.8	4	0	35
Takaniko	18-Jan-11						5	0.5	1	1.5	0.38	0.3	0	0	0
Takaniko	17-Feb-11	30.1		102.4	7.8	8	5	2	3	5	0.5	1.9	1	5	0
Takaniko	30-Mar-11	26.6					5	4	2	6	0.38	0.3	0	0	0
Takaniko	26-Apr-11	21.7	35.5	75.4	5.1	7.72	6	1	0.5	1.5	0.66	1.7	9	0	0
Takaniko	15-Jun-11	28	35.8	86.7	6	7.9	7	0.5	0.5	1	1.43	1.4	15	10	5
Takaniko	19-Jul-11						7	0.5	2	2	1.93	0.3	13	5	25
Takaniko	16-Aug-11						7	5	9	13.9	2.48	2.6	24	5	40
Takaniko	31-Aug-11	27.3		117.7	6.02	8.08	8	4	5	8	1.24	1.4	1	0	0
Takaniko	20-Sep-11	27.65		109.9	5.55	8.05	5	1	0.5	1.5	2.24	0.4	507	0	0
Takaniko	31-Jan-12	28.95	35.34	104.20	6.60	8.11	1	1	1	1	0.56	0.94	33	10	20
Takaniko	14-Feb-12	30.31	35.57	104.70	6.48	8.05	2	3	1	4	0.24	0.52	5	5	15
Takaniko	28-Feb-12	30.01	35.90	94.40	5.86	8.07	6	29	1	30	0.91	0.64	3	1200	975
Takaniko	13-Mar-12	29.77	35.50	102.30	6.39	8.12	5	22	1	23	0.90	1.28	2	0	20
Takaniko	27-Mar-12	30.07	35.47	97.70	6.07	8.09	4	30	1	31	0.91	0.39	35	60	150
Takaniko	26-Apr-12	30.33	35.50	100.00	6.19	8.07	5	25	1	27	0.86	1.45	0	10	0
Takaniko	8-May-12	30.20					7	30	3	33	0.65	0.43	3	10	0

Takaniko	5-Jun-12	29.45	35.49	95.50	5.99	10.33	8	33	1	34	0.97	0.63	1	340	
Takaniko	19-Jun-12						9	2	2	4	0.48	0.25	1	10	0
Takaniko	3-Jul-12	28.83	35.68	125.70	7.96	6.31	10	1	1	2	0.50	0.25	2	0	0
Takaniko	17-Jul-12						10	1	2	3	0.45	0.44	26	30	20
Takaniko	21-Aug-12	29.90					10	1	1	2	0.32	0.25	3	0	0
Takaniko	28-Aug-12	28.36	35.30	98.70	6.31	8.18	10	3	1	4	0.49	0.35	2	30	10
Takaniko	11-Sep-12	28.55	35.45	102.30	6.52	8.13	17	1	1	2	0.37	0.25	0	250	40
Takaniko	9-Oct-12	28.95	35.37	97.40	6.16	8.03	12	48	4	52	0.73	0.83	2	10	10
Takaniko	23-Oct-12	29.12	35.08	100.30	6.35	8.12	8	13	2	15	0.43		0	0	0
Takaniko	6-Nov-12	29.56		104.10	5.47	8.19	7	8	1	9	0.32	0.31	1	0	10
Takaniko	4-Dec-12	30.32	34.45	100.50	6.25	8.15	8	11	1	12	0.19		0	0	0
Takaniko	11-Dec-12	29.87	34.79	100.70	6.30	8.10	7	15	2	17	0.17		3	0	120
Takaniko	29-Jan-13											0.25	1	0	0
Takaniko	26-Feb-13											0.25	5	0	0
Takaniko	12-Mar-13	29.11	52.88	114.8	6.58	7.99						0.25	0	0	0
Takaniko	27-Mar-13	30.00	32.10	111.1	7.04	8.05						0.85	12	0	0
Takaniko	02-May-13	30.30	31.98	118.8	7.50	8.13						0.68	0	0	0
Takaniko	16-Jul-13	28.45	32.86	115.3	7.46	7.98						0.25	5	0	10
Takaniko	13-Aug-13	27.42	33.60	193.6	12.69	8.15						0.61	0	0	0
Takaniko	27-Aug-13	28.28	34.77	161.5	10.37	8.06						0.25	36		
Takaniko	05-Nov-13	28.61	34.00	101.3	6.88	8.16						2.77	4	0	10
Takaniko	19-Nov-13	29.17	33.64			8.09						0.25	0	0	0
Tukao Bay	27-Jan-06		37.5			8.3							0	1	28
Tukao Bay	9-Mar-06		36.6										0	0	12
Tukao Bay	20-Apr-06	20.9	34.8										6	11	3
Tukao Bay	21-Jun-06	18.9											7	30	305
Tukao Bay	13-Jul-06												1	530	570
Tukao Bay	26-Jul-06	20.7	39.1										48	0	340
Tukao Bay	10-Aug-06	22.7													
Tukao Bay	7-Sep-06												2	0	5
Tukao Bay	21-Sep-06												24	20	5
Tukao Bay	19-Oct-06	29.6				4	7	3			0.5		9	0	20
Tukao Bay	2-Nov-06		35			8	8	1	1		0.5		6	55	25
Tukao Bay	30-Nov-06	28.6				4	6	3					310	8	26
Tukao Bay	1-Feb-07	29.1	36.5			8.4	4	6	4	10		2.5	34	70	30
Tukao Bay	22-Feb-07	29.9	35.9				4	6	2	8		1.4	3	390	10
Tukao Bay	17-Apr-07	24.6	33.6			7.7	2	4	2	6	0.3	0.9	139	5	10
Tukao Bay	1-May-07	30.1					2	0.5	0.5	1	0.3	0.8			
Tukao Bay	15-May-07	20.8	34.8			8.5	2	6	2	8	0.2	1	10	10	45
Tukao Bay	29-May-07	19.8	33.9			8.3	3	5	2	7	0.3	0.7	7	45	285
Tukao Bay	19-Jun-07	30.5					2	11	1	12		1.1	20	10	1650
Tukao Bay	9-Aug-07	35.5	34.5			8.1	1	1	0.5	1.5	0.7	1	32	0	5
Tukao Bay	27-Sep-07	28.9	35.6			7.9	2	3	1	4	0.3	0.6	2	0	5
Tukao Bay	9-Oct-07	29.1					3	5	5	10					
Tukao Bay	18-Oct-07	28.5					3	1	0.5	1.5	0.5	1.2	3	0	0
Tukao Bay	1-Nov-07	29	35			8									
Tukao Bay	30-Nov-07						5	1	4			0.9	2	10	5
Tukao Bay	13-Dec-07	28.9	35.8			7.9					0.5	0.9	13	0	5
Tukao Bay	7-Feb-08	28.8	35.9			7.9	4	5	0.5	5.5	0.6	0.7	82	82	190
Tukao Bay	19-Feb-08	29.1					6	1	1	2	0.5	1	9	0	0
Tukao Bay	6-Mar-08		35.8			7.7	5	7	7	14	0.2	0.3	23	10	5

Tukao Bay	15-Apr-08			35.5			7.5	2	2	0.5	2.5	0.7	0.3	33	50	90
Tukao Bay	27-May-08			35.3			8	3	4	13	17	0.7	1	10	0	5
Tukao Bay	10-Jun-08			36.1			7.7	0.5	0.5	0.5	1	0.8	0.5	10	0	20
Tukao Bay	8-Jul-08			36.2				3	0.5	0.5	1	0.6	0.3	35	0	0
Tukao Bay	23-Sep-08	22.8		36				3	9	1	10	0.2	2.5	20	0	0
Tukao Bay	15-Oct-08	28.3						2	4	3	7	0.4	0.8	83	0	0
Tukao Bay	4-Nov-08	28.8		35.4				1	6	20	26	0.4	1.9	146	0	0
Tukao Bay	18-Nov-08							6	10	14	24	0.2		0	0	0
Tukao Bay	20-Jan-09			35.6			8.2	3	11	1	12	0.2	2	22	0	0
Tukao Bay	3-Feb-09			35.9			8.4	5	3	1	4	0.1	0.3	4	0	0
Tukao Bay	17-Mar-09			35.5			8.2	0.5	3	2	5	0.26	0.7	46	10	15
Tukao Bay	14-Apr-09			35.9			8.9	26	5	4	9	0.3	2.8	62	0	5
Tukao Bay	28-Apr-09	23.6		35.3			8.6	2	4	1	5	0.27	0.7	134	0	5
Tukao Bay	23-Jun-09	28.7		34.7			8.9	7	2	10	12	0.7	0.9	56	0	5
Tukao Bay	7-Jul-09			35.9			8.1	5	4	4	8	0.24	0.5	12	0	5
Tukao Bay	13-Oct-09			36.2			8.3	9	6	3	9	0.18	1.5	105	5	15
Tukao Bay	10-Nov-09	23.7		34.8			8.7	5	0.5	1	1.5	0.29	0.3	3	0	15
Tukao Bay	24-Nov-09							4	4	0.5	4.5	0.5	0.3	6	5	20
Tukao Bay	8-Dec-09							7	5	10	15	0.4	0.4	0	0	0
Tukao Bay	16-Feb-10			35.2			8.3	5	4	0.5	4.5	0.52	0.5	31	10	0
Tukao Bay	27-Apr-10			35.1			8.1	2	0.5	2	2.5	0.72	0.7	20	0	35
Tukao Bay	21-Jun-10	29.4		32			8.56	3	1	2	3	0.4	0.3	43	0	0
Tukao Bay	10-Aug-10			35.3			8.5	4	0.5	1	1.5	0.44	1.4	9	0	30
Tukao Bay	14-Sep-10	28.1						2	0.5	0.5	1	0.44	0.6	2	0	5
Tukao Bay	12-Oct-10			35.8			8.1	3	2	2	4	0.5	1.2	14	0	10
Tukao Bay	28-Oct-10	28.6						0.5	13	2	15	0.46	1	1	0	0
Tukao Bay	7-Dec-10	29.9						4	11	1	12	0.58	1	26	0	5
Tukao Bay	18-Jan-11	23.9						6	0.5	1	1.5	0.44	1	0	10	5
Tukao Bay	17-Feb-11	28.8			101.3	7.74	7.98	5	0.5	0.5	1	0.73	3.4	1	0	0
Tukao Bay	30-Mar-11	27.4						5	0.5	1	1.5	0.55	0.3	42	0	0
Tukao Bay	26-Apr-11	30.9	35.88	75.4	5.13	8	4	3	0.5	3.2	0.6	3.3	85	0	65	
Tukao Bay	15-Jun-11	28.3	35.6	67.1	4.6	8.1	5	0.5	1	1.9	1.62	0.6	12	0	0	
Tukao Bay	19-Jul-11							5	4	1	5.7	1.29	0.3	1	0	5
Tukao Bay	16-Aug-11							5	0.5	3	3	2.31	1.3	8	0	240
Tukao Bay	31-Aug-11	27.48			113.1	5.76	8.11	7	1	1	2.6	0.68	1.3	2	0	0
Tukao Bay	20-Sep-11	27.72			100.5	5.06	8.09	7	3	1	4	0.56	0.3	0	0	0
Tukao Bay	31-Jan-12	28.13	35.34	96.90	6.20	8.10	3	4	8	12	0.89	0.25	4	0	0	
Tukao Bay	14-Feb-12	29.32	35.47	106.80	6.71	8.10	1	1	1	2	0.30	0.62	9	0	0	
Tukao Bay	28-Feb-12	29.78	35.82	96.60	6.02	8.11	5	31	1	32	0.70	0.91	12	0	5	
Tukao Bay	13-Mar-12	29.64	35.60	95.15	5.95	8.13	4	18	1	19	0.27	0.48	2	0	295	
Tukao Bay	27-Mar-12	29.73	35.50	90.10	5.63	8.09	5	12	1	13	0.53	0.25	5	0	0	
Tukao Bay	26-Apr-12	30.14	35.46	98.40	6.11	8.10	6	28	1	29	0.47	3.17	0	100	10	
Tukao Bay	8-May-12	29.90						5	29	1	30	0.59	0.25	4	0	30
Tukao Bay	5-Jun-12	29.07	35.43	95.10	6.01	10.71	6	30	2	31	0.45	0.63	0	100	20	
Tukao Bay	19-Jun-12							8	4	1	5	0.69	1.33	5	20	140
Tukao Bay	3-Jul-12	28.57	35.59	107.10	6.81	8.35	9	1	1	2	0.65	0.25	9	60	0	
Tukao Bay	17-Jul-12							10	5	13	18	0.36	0.79	8	0	0
Tukao Bay	21-Aug-12	31.40						11	3	1	4	0.34	0.45	3	10	10
Tukao Bay	28-Aug-12	28.23	35.26	102.10	6.54	8.16	9	2	1	3	0.35	0.25	5	40	10	
Tukao Bay	11-Sep-12	28.43	35.51	111.20	7.09	7.96	11	1	1	2	0.34	0.75	6	10	70	
Tukao Bay	9-Oct-12	29.07	35.53	103.10	6.51	8.07	10	3	2	4	0.56	0.25	1	40	10	

Tukao Bay	23-Oct-12	28.93	35.12	100.60	6.38	8.13	8	10	1	11	0.30		3	0	0
Tukao Bay	6-Nov-12	29.35		98.40	5.18	8.16	6	8	1	9	0.21	0.25	0	0	0
Tukao Bay	4-Dec-12	30.30	34.79	99.30	6.17	8.11	9	9	1	10	0.34		0	10	10
Tukao Bay	11-Dec-12	29.44	34.55	98.20	6.20	8.14	9	13	3	15	0.51		9	0	0
Tukao Bay	29-Jan-13											0.25	19	0	0
Tukao Bay	26-Feb-13											0.47	0	0	0
Tukao Bay	12-Mar-13	29.08	52.96	105.2	6.03	8.01						0.70	17	0	0
Tukao Bay	27-Mar-13	29.51	32.06	146.5	9.36	8.04						0.85	27	0	0
Tukao Bay	02-May-13	30.44	31.97	128.0	8.06	8.14						0.25	11	40	140
Tukao Bay	16-Jul-13	28.33	32.89	241.0	15.63	8.10						0.71		10	10
Tukao Bay	13-Aug-13	27.47	33.69	250.9	16.42	8.12						0.78	1	0	0
Tukao Bay	27-Aug-13	28.11	34.78	131.0	8.43	8.05						0.74	95		
Tukao Bay	05-Nov-13	28.38	33.85	86.2	5.55	8.09						0.65	6	0	0
Tukao Bay	19-Nov-13	29.42	33.76			8.10						0.25	24	0	10