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Appendix 1: Results of seafood analysis during Gippsland Lakes bloom – Dec 2011 to March 2012

All results in this appendix are from the Victorian Department of Health website (VicHealth, 2012). Non detections are only included where they provide useful information. Results in bold face exceed the health guideline value.

Table 8: Black bream

Date of collection	Sample location	Nodularin toxin whole black bream µg/kg	Nodularin toxin G&G black bream µg/kg
07/12/2011	Point Turner	16	-
07/12/2011	Eagle Bay/ Split Jetties	43	-
07/12/2011	Tambo Bay	47	-
21/12/2011	Eagle Bay	41	< 16
21/12/2011	Tambo Bay	52	< 16
16/01/2012	Jones Bay	111	< 16
17/01/2012	Wattle Point	20	< 16
17/01/2012	Metung	203	< 16
25/01/2012	Eagle Bay	19	< 16
30/01/2012	Tambo Bay	19	< 16
30/01/2012	Jones Bay	30	< 16
31/01/2012	Metung	27.4	< 16
06/02/2012	Wattle Point	44.4	-
07/02/2012	Metung	54	< 16
08/02/2012	Eagle Bay	40	< 16
10/02/2012	Waddy Point	74	< 16
13/02/2012	Tambo Bay	24	< 16
13/02/2012	Eagle Bay	39	< 16
14/02/2012	Metung	28	< 16
15/02/2012	Waddy Point	145	< 16
21/02/2012	Tambo Bay	17	< 16
21/02/2012	Jones Bay	39	< 16
27/02/2012	Waddy Point	42	< 16
06/03/2012	Bancroft Bay	25	< 16
06/03/2012	Nungurner	33	< 16
07/03/2012	Eagle Bay	32	< 16
08/03/2012	Eagle Bay	17	< 16
13/03/2012	Jones Bay	18	< 16

Date of collection	Sample location	Nodularin toxin whole black bream µg/kg	Nodularin toxin G&G black bream µg/kg
13/03/2012	Eagle Bay	30	< 16
19/03/2012	Jones Bay	21	< 16
19/03/2012	Tambo Bay	53	< 16
26/03/2012	Tambo Bay	17	< 16
26/03/2012	Waddy Point	28	< 16
27/03/2012	Waddy Point	32	-
10/04/2012	Tambo Bay	20	< 16
23/04/2012	Tambo Bay	17	< 16

Table 9: Black mussels

Date of collection	Sample location	Nodularin toxin whole black mussels µg/kg
13/12/2011	Metung Jetty	36
13/12/2011	Nungurner Jetty	63
13/12/2011	Kalimna Jetty	740
18/12/2011	Metung Jetty	102
18/12/2011	Nungurner Jetty	107
18/12/2011	Kalimna Jetty	506
05/01/2012	Metung Jetty	168
05/01/2012	Nungurner Jetty	170
05/01/2012	Kalimna Jetty	189
11/01/2012	Nungurner Jetty	71
11/01/2012	Metung Jetty	126
11/01/2012	Kalimna Jetty	330
16/01/2012	Metung Jetty	183
16/01/2012	Nungurner Jetty	215
16/01/2012	Kalimna Jetty	338
30/01/2012	Metung Jetty	187
30/01/2012	Nungurner Jetty	306
30/01/2012	Kalimna Jetty	525
06/02/2012	Metung Jetty	149
06/02/2012	Kalimna Jetty	334
06/02/2012	Nungurner Jetty	351
13/02/2012	Metung Jetty	73

Date of collection	Sample location	Nodularin toxin whole black mussels µg/kg
13/02/2012	Kalimna Jetty	100
13/02/2012	Nungurner Jetty	130
20/02/2012	Metung Jetty	77
20/02/2012	Kalimna Jetty	135
20/02/2012	Nungurner Jetty	249
27/02/2012	Kalimna Jetty	111
27/02/2012	Metung Jetty	241
27/02/2012	Nungurner Jetty	642
05/03/2012	Kalimna Jetty	152
05/03/2012	Nungurner Jetty	274
05/03/2012	Metung Jetty	328
13/03/2012	Kalimna Jetty	88
13/03/2012	Nungurner Jetty	133
13/03/2012	Metung Jetty	188
19/03/2012	Metung Jetty	62
19/03/2012	Nungurner Jetty	121
19/03/2012	Kalimna Jetty	144
27/03/2012	Metung Jetty	34
27/03/2012	Kalimna Jetty	39
27/03/2012	Nungurner Jetty	39
02/04/2012	Kalimna Jetty	64
02/04/2012	Metung Jetty	150
10/04/2012	Nungurner Jetty	34
16/04/2012	Nungurner Jetty	31
16/04/2012	Metung Jetty	40
16/04/2012	Kalimna Jetty	83

Table 10: Prawns collected within the Gippsland Lakes

Date of collection	Species	Sample location	Nodularin toxin prawns from within the lakes µg/kg
13/01/2012	School Prawns	Gippsland Lakes	88
29/01/2012	School and King Prawns	Nungurner	299
06/02/2012	School Prawns	Nungurner	102
13/02/2012	King Prawns	Cunningham Arm	75
13/02/2012	King Prawns	Bell's Point	91
27/02/2012	King Prawns	Barrier Landing	111
06/03/2012	King Prawns	Nungurner	77
06/03/2012	King Prawns	Cunningham Arm	77
14/03/2012	King Prawns	Nungurner	56

Table 11: Prawns collected outside of Lakes Entrance

Date of collection	Species	Sample location	Nodularin toxin prawns from ocean outside the lakes µg/kg
30/12/2011	School Prawns	6.5 Nautical miles west of Lakes Entrance	30
10/01/2012	School Prawns	Eastern Beach	124
15/01/2012	School Prawns	Eastern Beach	137
17/01/2012	School Prawns	Eastern Beach	270
29/01/2012	School and King Prawns	Eastern Beach Channel	224
30/01/2012	School Prawns	Off Lake Bunga	81
30/01/2012	School Prawns	2 Nautical miles east of Lake Tyers	107
02/02/2012	School Prawns	Between 0.5 and 2.2 nautical miles east of Lake Tyers	119
04/02/2012	School Prawns	7 Nautical miles west of Lakes Entrance	77
04/02/2012	King Prawns	1.5 miles straight out from Lakes Entrance	107
04/02/2012	School Prawns	11 Nautical Miles east of Lakes Entrance 3.5 fathoms	130
06/02/2012	School Prawns	Lakes Entrance	98
16/02/2012	King Prawns	2 Nautical miles east of Lakes Entrance	35
16/02/2012	King Prawns	0.5 Nautical miles east of Lakes Entrance	55
16/02/2012	King Prawns	5 Nautical miles east of Lakes Entrance	110
26/02/2012	King Prawns	6.5 Nautical miles east of Lakes Entrance	44
27/02/2012	King Prawns	Eastern Beach Channel	99
27/03/2012	King Prawns	6 Nautical miles east of Lakes Entrance	44

Many of the locations listed in these tables may be found at:

<http://maps.google.com.au/?ll=-37.907908,147.790489&spn=0.197202,0.491638&om=1&t=m&z=12>

Appendix 2: Algal management in New South Wales

These extracts from the NSW Office of Water website provide information on algal management in NSW (<http://www.water.nsw.gov.au/Home/default.aspx>).

Algal management strategy

In response to the occurrence of the largest recorded blue–green algal bloom in the Darling River in 1991, the NSW Blue–Green Algal Task Force was formed. The Task Force was made up of representatives from a number of key NSW government agencies. In 1992, the Task Force made 30 recommendations to the government which were developed into a comprehensive integrated Algal Management Strategy to minimise the occurrence and impact of algal blooms in New South Wales.

The NSW Algal Management Strategy integrated a large number of measures into five key elements: State Algal Contingency Plan; Management of Blooms; Land and Water Management; Education and Awareness Raising; and Research. The Strategy included Algal Contingency Plans to minimise the effects of blue–green algal blooms, and short to medium term measures to control the factors leading to algal bloom development. It also covered short to long term nutrient and water management measures to minimise nutrient inputs to waterways. These measures were strengthened by education and research, and by increasing community awareness. The Strategy involves Catchment Management Authorities, NSW Office of Water and other state government agencies, local government, communities, industry, researchers and landholders.

The NSW Algal Management Strategy forms the basis of the work of the Regional Algal Coordinating Committees.

NSW State Algal Advisory Group

The NSW Algal Management Strategy is administered by the NSW State Algal Advisory Group (SAAG) and the nine regional algal coordinating committees.

The State Algal Advisory Group provides the over arching policy advice and framework for the management of fresh water and marine blooms. Membership of the State Algal Advisory Group is made up of the relevant NSW State agencies, NSW local government and the Murray Darling Basin Authority.

While each member is responsible for a specific area of management and technical information, the NSW Office of Water is the lead agency for water management in NSW and coordinates both the State Algal Advisory Group and the Regional Algal Coordinating Committees

Technical Advisory Group

The Technical Advisory Group (TAG) of the SAAG is a panel of scientists who have expertise in various aspects of the ecology and management of nuisance phytoplankton blooms, in both freshwater and marine environments.

Current TAG membership comprises staff from several key NSW government agencies that have roles in the management of nuisance phytoplankton blooms and in protecting the public from the adverse health effects of these blooms: NSW Department of Primary Industries (Office of Water and NSW Food Authority), NSW Health, Office of Environment and Heritage and Sydney Catchment Authority, plus external expertise from universities and local government (University of New South Wales, Macquarie University, Port Macquarie–Hastings Council).

The TAG reports its findings to the SAAG, who can incorporate its findings into strategic responses to algal blooms. The TAG will also respond to questions from and report back to the nine Regional Algal Coordinating Committees (RACCs) and their stakeholders on technical issues confronting these RACCs and stakeholders. By these avenues, the TAG aspires to provide relevant and transparent advice to inform algal bloom management across NSW fresh and marine waters.

Regional Algal Coordinating Committees (RACC)

RACC details are available on the NSW Office of Water webpage <http://www.water.nsw.gov.au/Water-Management/Water-quality/Algal-information/Algal-contacts/default.aspx#racc> .



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