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18th June 2017

SEPP Waters Manager
Department of Environment, Land, Water and Planning
Level 10, 8 Nicholson Street
EAST MELBOURNE VIC 3002

Dear Sir/Madam,

RE: East Gippsland CMA submission regarding Draft State Environment Protection Policy (Waters)

The East Gippsland Catchment Management Authority (EGCMA) thanks you for the opportunity to comment on the Draft State Environment Protection Policy (Waters) and is pleased to provide the following comments.

The EGCMA is supportive of the objective of the draft policy to document clear and relevant water quality standards and obligations to protect and improve the health of our water environments. We note that the review is a key action in the implementation of Water for Victoria and aims to streamline policy to reflect community values, apply updated science, better clarify industry obligations, and provide for greater accountability.

The EGCMA is the designated Site Coordinator for the Gippsland Lakes Ramsar site, and has developed this submission together with the West Gippsland Catchment Management Authority (WGCMA) as part of this role.

The East and West Gippsland CMA's jointly manage the Gippsland Lakes program and host the Gippsland Lakes Coordinating Committee. This program ($12.5M 2015-2020) involves a collaborative approach with a large number of partners from government, non-government and community led organisations.

The specific comments provided in this submission in the attached table (Attachment 1) generally consider the application of the water quality objectives for particular sub-segments under Schedule 3, but also consider beneficial uses under Schedule 2, and pollutant and load reduction targets under Schedule 4.

The EGCMA and WGCMA have identified some specific objectives that we feel require further review and consideration. Analysis of monitoring data across the Gippsland Lakes (Attachment 2) has been applied to the proposed values in the draft document to test the relevance and applicability of these objectives. The majority of the comments provided are based upon the comparison of recent data to the proposed objectives, and an assessment of the practical outcomes of applying the proposed values in the ongoing management of the Gippsland Lakes.

The EGCMA thanks you for the opportunity to provide comment.

Yours sincerely,

Graeme Dear
Chief Executive Officer

Attachment 1: Comments table

Schedule	Segment	Sub-segment	Indicator	Reference	Comment	Proposed resolution
2 Beneficial Uses	Gippsland Lakes	Lake Reeve	-	Page 57, Table 4	Lake Reeve is classified as "Slightly to moderately modified" which is the same as Lake Wellington. The rest of the Gippsland lakes system is considered "largely unmodified". What evidence was used to support this classification? This classification results in a lower level of protection afforded to Lake Reeve with respect to toxicant concentrations. Given that this is an important area for shorebird foraging, this is not a desirable outcome.	Revise the classification in line with the remainder of the Gippsland Lakes system (excepting Lake Wellington). This would then be in line with our current understanding of the condition of this area and it' importance for protection.
3 Environmental Quality Indicators and Objectives	Gippsland Lakes	-	-	Page 63, Section 3 (c)	With respect to the frequency of algal blooms within the Gippsland Lakes the current objective is difficult to determine. The majority of the lakes are classified as largely unmodified, yet large portions of the catchment are modified and it is the input from the catchment that largely drive the occurrence of blooms. The determination of what the 'natural frequency of harmful blooms' is extremely difficult, making it even more difficult to demonstrate the achievement of the objective.	Revise the wording of the objective to align with the Limit of Acceptable Change for the Gippsland lakes Ramsar site. (recognising this point also apply to other segments)
		All	All	Page 73, Table 6	Clarification is required around the threshold values in table. Currently they are expressed as distinct values, but dependant on the indicator a desirable level may be above or below the stated number.	Guidance as to whether indicators should be > or < should be provided.
3 Environmental Quality Indicators and Objectives	Gippsland Lakes	Lake King	Salinity	Page 73, Table 6	Analysis of recent data showed that Lake King would have exceeded the salinity (25th percentile) for being too fresh. Given that this is not manageable by any human intervention (particularly when considering flooding events and the scale of the waterbody), is this indicator required for this sub-segment?	Remove the lower salinity threshold (25th percentile) for Lake King
			Dissolved Oxygen		Analysis of recent data showed that the maximum dissolved oxygen level would be exceeded annually for Lake King. It is likely that this is more often than not caused by wind driven turbulence. On some occasions high DO coincided with high chlorophyll-a, but at other times Chl-a was low when DO was high.	Alter this objective to better reflect environmental conditions to avoid regular and misleading exceedances.
			All		Analysis of data shows there would be a large number of exceedances in Lake King (many annually). Given that recent assessment using the best available data shows that Lake King	Revise objectives to better reflect environmental conditions to avoid regular and

Schedule	Segment	Sub-segment	Indicator	Reference	Comment	Proposed resolution
					is supporting all the appropriate beneficial uses and doesn't appear to be in decline, the new objectives may not be set at the right level for protecting those beneficial uses (or ecological character).	misleading exceedances.
		Lake Reeve	Salinity	Page 73, Table 6	The proposed salinity objectives for Lake Reeve (30- 40 ppt) appear too low. Much of the lake is hypersaline and is classified as such in the Gippsland Lakes Ramsar Site Management Plan. The sub-segment and supports large areas of hypersaline coastal saltmarsh and regularly support large numbers of wading birds and waterbirds.	Revise the salinity objective upwards.
			All		Could you provide some information on how the objectives for Lake Reeve were derived? During the recent (2015) development of the Gippsland Lakes Ramsar Site Management Plan there was not sufficient data to set a LAC for Lake Reeve for the Ramsar Site, and we would be interested if additional data was available or used to set these objectives.	
		Lake Wellington	Total Suspended Solids	Page 73, Table 6	Analysis of recent data showed that Lake Wellington would always exceed the TSS objective. Given the shallow nature of the lake and the near constant wind driven turbulence mobilising unconsolidated bed sediments, is set at the right level?	Alter this objective to better reflect environmental conditions to avoid regular and misleading exceedances.
			Salinity		Analysis of recent data showed that Lake Wellington would have exceeded the salinity (25th percentile) for being too fresh. Given that this is not manageable by any human intervention (particularly when considering flooding events and the scale of the waterbody), is this indicator required for this sub-segment? Additionally, more fresh conditions in lake Wellington are actually desirable and beneficial to many values, particularly the fringing habitats.	Remove the lower salinity threshold (25^{th} percentile) for Lake Wellington
			Dissolved Oxygen		Analysis of recent data showed that the maximum dissolved oxygen level would be exceeded annually for Lake Wellington. It is likely that this is more often than not caused by wind driven turbulence. On some occasions high DO coincided with high chlorophyll-a, but at other times Chl-a was low when DO was high.	Alter this objective to better reflect environmental conditions to avoid regular and misleading exceedances.

Schedule	Segment	Sub-segment	Indicator	Reference	Comment	Proposed resolution
4 Pollutant and Load Reduction Targets	Gippsland Lakes	Lake Wellington	-	Page 84, Table 1	Reporting against the 2030 load target for Lake Wellington – an annual load of 100 tonnes of TP – will be challenging given TP loads into Lake Wellington vary by more than an order of magnitude from one year to the next. For example 30 tonnes in the drought year of 2009 and over 300 tonnes in 2011.	Consider re-framing the load target to account for the influence of rainfall-runoff on annual loads. For example, a ratio of TP to flow from which a reduction in the amount of TP that enters Lake Wellington per GL of water could be reported. A more sensible target might be a reduction in the ratio from 0.08 to 0.07 tonnes per GL by 2030?

Attachment 2: Data analysis

Table 1: Lake Wellington (75th percentiles, except for DO and salinity). Shading indicates exceedance of the objective.

Indicator	Threshold	2010/11	2011/12	2012/13	2013/14	**2014/15**
Chlorophyll-a	25	39	39	35	32	21
DO (25th)	95	No data	No data	98	95	95
DO (max)	110	No data	No data	112	113	111
DIN	15	No data	18	88	19	13
TN	1000	1041	1065	937	856	888
DIP	15	20	11	9	3	3
TP	120	143	108	95	114	118
TSS	30	36	35	30	41	39
Salinity (25th)	5	4	2	1	5	7
Salinity (75th)	15	6	3	11	10	12

Table 2: Lake King (data from EPA Victoria). Shading indicates exceedance of the threshold.

Indicator		Threshold	2010/11	2011/12	2012/13	2013/14	**2014/15**
Chlorophyll-a	Surface	10	11	25	11	5	4
	Bottom	5	9	14	12	4	4
DO (25th)	Surface	95	No data	No data	100	101	101
DO (max)	Surface	110	No data	No data	131	113	114
DO (25th)	Bottom	50	No data	No data	45	31	60
DO (max)	Bottom	110	No data	No data	94	105	93
DIN	Surface	10	6	109	10	10	7
	Bottom	100	244	374	164	100	82
TN	Surface	500	405	834	481	410	385
	Bottom	500	547	861	495	410	393
DIP	Surface	10	12	6	2	8	7
	Bottom	30	24	106	25	37	13
TP	Surface	50	61	77	48	54	50
	Bottom	70	66	169	67	78	50
TSS	Surface	5	6	21	8	4	4
	Bottom	5	4	9	6	5	3
Salinity (25th)	Surface	20	14	8	15	19	20
Salinity (75th)	Surface	30	20	20	28	27	26
Salinity (25th)	Bottom	25	22	24	24	27	26
Salinity (75th)	Bottom	30	27	28	31	31	28