

Dr John Williams
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Natural Resources Commission
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Our ref: 09-0061
Your ref:
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09.doc

21 May 2009

Dear Dr Williams

Subject: Proposed amendments to Environmental Outcomes Assessment Methodology

I am writing in reference to an email from the Natural Resources Commission dated 7 May 2009, seeking submissions on proposed amendments to the Environmental Outcomes Assessment Methodology (EOAM).

The following comments are provided by the Hawkesbury-Nepean Catchment Management Authority (HNCMA) in respect of the proposed amendments.

Review process

I note there are 109 proposed amendments, of which a considerable number deal with changes to the assessment methodology. The EOAM is a relatively complex assessment methodology, and the result of making a change to part of this process on the outcome of an assessment of a clearing proposal is not always readily apparent. When the EOAM was first developed it went through several stages of scenario testing and modification before being approved for use by the Minister. This included state-wide testing on more than 100 clearing proposals with review of the outcomes.

However, the current review of amendments does not allow time for scenario testing of the proposed changes to the assessment methodology. I am concerned that without adequate testing on a range of clearing proposals across the state, some of the proposed amendments may result in perverse outcomes or a failure of the EOAM to result in improved or maintained environmental outcomes.

HNCMA recommends that those proposed amendments requiring significant changes to the assessment methodology are not endorsed or approved for use until they have been subject to state-wide testing on realistic clearing scenarios by CMA's, and the results reviewed and reported with recommendations to the NRC. These amendments are identified in the following table of specific comments.

Specific comments

Comments on the individual proposed amendments are provided in the table below. Item numbers are the same as those used in the table of proposed amendments on the NRC web site.

Item	Agree/Disagree with amendment as proposed	Comments
1	agree	
2	agree	See comments below for Items 51 to 72 (EOAM section 5.4)
3	agree	
4	agree	
5	agree	
6	DISAGREE	See comments below for Item 20 (EOAM section 5.3.1)
7	agree	
8	agree	
9	agree	
10	agree	
11	agree	
12	agree	
13	agree	
14	DISAGREE	<p>Scenario testing required.</p> <p>This amendment could result in some shrublands being defined (and assessed) as “native grassland, wetland or herbfield” if the shrubs are less than 1 metre in height. For example, it is possible that some shrublands dominated by <i>Allocasuarina nana</i> are less than 1 metre in height. The implications of this are not apparent without testing.</p>
15	agree	
16	agree	
17	agree	
18	DISAGREE	Disagree - Recommend it is left in for clarity. Some level of duplication is necessary for each section to be complete.
19	agree	
20	DISAGREE	This will result in making it “easier” to clear some vegetation types that are close to 70% cleared ie. on the threshold of being overcleared, and push them into being overcleared. To prevent this situation we recommend this provision only apply to vegetation types that are less than or equal to 50% cleared in the CMA area. This would also provide a safety margin to allow for errors in the vegetation mapping and pre-1750 modelling used to calculate clearing levels.
21	agree	
22	DISAGREE	<p>Scenario testing required.</p> <p>Disagree assessing cover within the 10 ha ring is too detailed and unnecessary. Most clearing proposals in HNCMA are for small areas, often less than 10 ha. The 10 ha ring is considered necessary to assess the landscape value of small area clearing proposals.</p> <p>The introduction of 10% categories will substantially increase the work required for this part of the assessment, as vegetation cover within the rings will need to be measured using the ArcMAP drawing tool.</p>

		Also, in the geographically and vegetatively diverse landscapes of HNCMA it is not realistic to assess the type and condition of all native vegetation within the 1,000 ha circle, as required. This is beyond the scope of the resources normally available for assessing PVP agreements.
23	DISAGREE	Scenario testing required. Agree the current method of assessing connectivity is difficult to apply, but the proposed method may also have issues. We note that it is consistent with BioBanking methodology but this is also an untested assessment process. The proposed method should be trialled before adoption into the EOAM to see how it affects clearing assessments.
24	agree	
25	agree	
26	DISAGREE	Scenario testing required. Also need to re-word this statement to clarify that additional site value offsets only contribute to landscape value when both Mitchell Landscape and vegetation type are less than or equal to 30% cleared. The current wording does not clearly convey this. Reword to read "Mitchell Landscape and vegetation types are both less than or equal to 30% cleared in the CMA."
27	DISAGREE	This amendment should only be adopted once successful scenario testing (Item 22 and 26) has occurred to validate the amendment.
28	DISAGREE	This amendment should only be adopted once successful scenario testing (Item 26) has occurred to validate the amendment.
29	DISAGREE	This amendment should only be adopted once successful scenario testing (Item 22) has occurred to validate the amendment.
30	DISAGREE	This amendment should only be adopted once successful scenario testing (Item 22) has occurred to validate the amendment. If adopted, we agree with the use of judgement when scoring % vegetation cover – as long as this is exercised on a precautionary basis. Recommend including text: 'judgement is applied on a precautionary basis in favour of vegetation being in good condition.'
31	DISAGREE	This amendment should only be adopted once successful scenario testing (Item 23) has occurred to validate the amendment. Also, the Appendix B referred to was not provided with the document.
32	agree	
33	DISAGREE	Agree with the intent of the amendment, but recommend the scores only apply to areas of riparian zones with native vegetation in moderate to good condition. Riparian areas containing exotic vegetation or degraded native vegetation (ie.

		low condition) would not add disproportionately to overall biodiversity values in the offset area, and therefore should not be scored for riparian area values.
34	DISAGREE	This amendment should only be adopted once successful scenario testing (Item 26) has occurred to validate the amendment. Also recommend that the words 'as a proportion of the required Site Value' be deleted from the end of paragraph one, as they do not seem to relate to the paragraph.
35	agree	It is unclear whether the term 'over-storey' is synonymous with 'canopy' as used in <i>BioMetric</i> i.e. if 'over-storey' refers only to trees, or includes the tallest layer of vegetation within the community e.g. shrubs in a shrubland, grass in a grassland. Recommend this be made clear.
36	agree	
37	agree	
38	DISAGREE	Agree with the proposed change, but note that it makes no reference to intensity of plot or transect sampling within a zone, as the current wording does. Instead it refers to the BioMetric Operational Manual. This Manual currently has no reference to intensity of sampling. Therefore we recommend the proposed amended wording include the original reference to sampling intensity ie. "minimum of one plot or transect and a maximum of 10 plots or transects within a zone."
39	agree	
40	agree	
41	agree	
42	DISAGREE	Disagree with proposed management option of providing artificial hollows as substitutes for hollow bearing trees. See comments for Item 46.
43	agree	
44	DISAGREE	Disagree with proposed management option of providing artificial hollows as substitutes for hollow bearing trees. See comments for Item 46.
45	agree	
46	DISAGREE	Disagree with proposed management option of providing artificial hollows. This would provide an offset for clearing of hollow-bearing trees, and allow a significantly increased loss of these critical habitat elements. Artificial hollows are not a realistic substitute for hollow bearing trees. Fauna utilizing hollows have specific requirements as to the size, shape and location of hollows. These parameters are not known with sufficient certainty to design, build, and locate artificial hollows to replace tree hollows lost by clearing. Artificial hollows would also require maintenance in perpetuity, and this is a highly unrealistic expectation. The consequence of artificial hollows not being appropriate for the species or not being maintained is an immediate failure to maintain or improve environmental outcomes. This is unacceptable.
47	agree	
48	DISAGREE	It is not realistic to expect that hollows will form within predictable time frames. Therefore the eventual possibility of

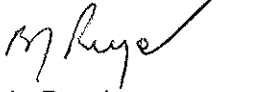
		<p>hollow formation should not contribute to determining the value of offset areas. Assuming hollows will form in an offset area would also be used to allow clearing of additional hollow bearing trees. Given the critical role of tree hollows for arboreal fauna, and the high level of uncertainty of them ever being replaced by new tree hollows developing, existing hollows must be retained.</p>
49	DISAGREE	<p>The proposed management actions need to be defined and prescribed before they can be incorporated into a PVP agreement and become binding on a landholder. For example, "ecological burning" is a concept. To become a management action it requires definition, and development of specific actions. Also, the ability to add supporting management actions where required already exists.</p>
50	DISAGREE	<p>This assumes that vegetation being in good condition only occurs as a result of intentional management by the current landholder. This is not supported by reality. It also ignores changes in land ownership. Most vegetation in good condition exists due to a lack of active degradation. In some cases this is deliberate land management; generally it is the result of benign neglect. This should not be either construed or rewarded as good land management.</p> <p>The EOAM should employ scientific methods with transparent outcomes rather than dubious assumptions.</p>
51	DISAGREE	<p>Items 51 to 72 all deal with amendments to the "Assessment of thinning to benchmark" section. These comments are intended to cover all these Items.</p> <p>We consider the amended methodology has serious flaws, and should not be adopted as proposed. The following comments are provided on assessment of thinning to benchmark, in lieu of commenting on individual Items.</p> <p>Many of the proposed amendments are agreed with. However the fundamental methodology is considered inadequate to the extent this must be addressed before it is relevant to comment on the more detailed specific changes.</p> <p>We agree there is merit in the EOAM containing a provision to allow ecological enhancement of regrowth native vegetation. However we consider the proposed amendments would not achieve this outcome.</p> <p>While the thinning protocol prescribed is stated to be "ecological thinning", there is no ecological basis to speeding up the thinning process to improve the condition of native vegetation. This method is not based on ecological processes.</p> <p>A major concern with the proposal is the lack of consideration of trees in any size classes other than those to be thinned. A common regrowth situation in this catchment is a dense, even-aged stand of trees regrown from seed dropped by scattered parent trees. Regrowth tree densities are usually in the order of several thousand stems per hectare. Benchmark stem density for trees in the same size class is very low, perhaps around 100</p>

		<p>stems per hectare, and this size class may even be completely absent from the reference site. This means that the current proposal would allow near complete clearing of the regrowth trees, with only a few isolated regrowth trees and the original parent trees remaining. The regrowth trees are also very prone to death by windthrow due to the removal of protective surrounding trees. This outcome is clearly not an ecological improvement in the condition of vegetation.</p> <p>We recommend the proposed amendments to the thinning prescriptions be reviewed to include consideration of size classes greater than 30 cm DBHOB, and be explicitly focussed on achieving benchmark vegetation condition.</p>
52	DISAGREE	See comments on Item 51.
53	DISAGREE	See comments on Item 51
54	DISAGREE	See comments on Item 51
55	DISAGREE	See comments on Item 51. Recommend the definition of "Ecological thinning" be amended to include a statement that the objective of ecological thinning is to assist the vegetation to achieve benchmark condition. The current definition applies equally well to silvicultural thinning for wood production.
56	DISAGREE	See comments on Item 51
57	DISAGREE	See comments on Item 51
58	DISAGREE	See comments on Item 51
59	DISAGREE	See comments on Item 51
60	DISAGREE	See comments on Item 51
61	DISAGREE	See comments on Item 51
62	DISAGREE	See comments on Item 51
63	DISAGREE	See comments on Item 51
64	DISAGREE	See comments on Item 51
65	DISAGREE	See comments on Item 51
66	DISAGREE	See comments on Item 51
67	DISAGREE	See comments on Item 51
68	DISAGREE	See comments on Item 51
69	DISAGREE	See comments on Item 51
70	DISAGREE	See comments on Item 51
71	DISAGREE	See comments on Item 51
72	agree	
73	agree	
74	agree	
75	agree	
76	agree	
77	agree	
78	agree	
79	agree	
80	DISAGREE	Agree with the proposal, but the proposed text does not provide adequate guidance to assessing officers. Recommend clarification as to where the 1.75km radius is measured from. Is this meant to be from the edges of a clearing polygon? If multiple clearing areas, then from the edges of the largest polygon?
81	agree	
82	agree	
83	agree	

84	agree	
85	agree	
86	agree	
87	agree	
88	agree	
89	agree	
90	agree	
91	agree	
92	agree	
93	agree	
94	agree	
95	agree	
96	agree	
97	agree	
98	agree	
99	agree	
100	DISAGREE	<p>Including areas outside the property boundary as containing part of a local population introduces an unacceptable level of uncertainty into the “improve or maintain” test. Areas of habitat supporting a local population of a species impacted on by a clearing proposal can be legally degraded by adjacent landholders to the point of no longer providing habitat for that species, or even cleared with approval or under exemption/exclusion. This would fundamentally change the assumptions made when assessing adequacy of an offset area, and result in a failure to improve or maintain environmental outcomes.</p> <p>We recommend that including areas outside the property when assessing the size of local populations be limited to land within the formal conservation reserve system.</p>
101	agree	
102	agree	
103	agree	
104	agree	
105	agree	
106	agree	
107	agree	
108	DISAGREE	<p>Generally agree with the proposed amended definitions, with the following recommended additions:</p> <p><i>Ground stratum</i> – Recommend that consistency be developed between EOAM and BioMetric tool definitions of 'groundcover' e.g. in BioMetric tool groundcover includes only herbs, forbs and grasses, whereas all woody-stemmed plants - even if less than 1m height - are classified as mid-storey.</p> <p><i>Offset</i> – add the words ‘...in order to balance or exceed losses in biodiversity’ to be consistent with the requirement to improve or maintain environmental outcomes.</p> <p><i>Plot</i> – Add the word “An area in which some of the</p>
109	agree	

I have asked Robert Adam, Catchment Coordinator at our Goulburn office to assist you should you require further information on this matter. Mr Adam may be contacted by telephone on (02) 4828 6775.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Bernie Bugden', with a long, sweeping flourish extending upwards and to the right.

Bernie Bugden
General Manager