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7 March 2006

Hon. Ian MacDonald, MP  
NSW Minister for Natural Resources  
Level 33  
Government Macquarie Tower (GMT)  
1 Farrer Place  
Sydney NSW 2000

Dear Minister

I refer to your letter received on 6 February 2006 seeking the Natural Resources Commission's advice on a proposed amendment to the Environmental Outcomes Assessment Methodology.

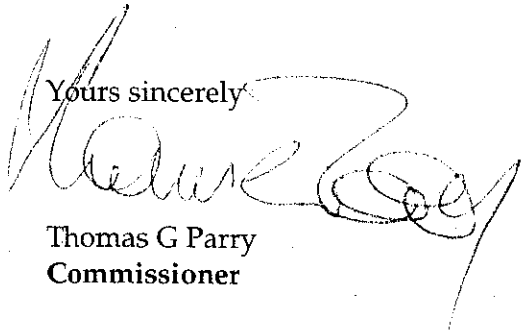
The proposed amendment consists of changes to Chapter 4 of the Assessment Methodology which deals with salinity assessment.

Our review suggests that the proposed amendments will increase the effectiveness of the tool, particularly in western areas of the state, by providing more detail of the distribution of the salt levels stored in soils across the state. The changes also provide more categories of vegetation cover and their effectiveness in taking up water from the surrounding soil. By accurately defining soil salt levels and expanding the categories of vegetation cover, these changes increase the accuracy of the tool and enable users to use information that is more appropriate to the areas they are assessing. This can increase the effectiveness of the tool in measuring the environmental outcomes from particular actions landholders' propose to take, and increase the confidence they have in the tool. The amendment also adds a definition of paddock trees and clarifies the limited effect that removal of these trees has on preventing water from reaching the groundwater stores below. That is, the removal of these trees is considered to maintain or improve salinity.

We received no submissions from stakeholders arguing against the amendment.

We therefore recommend that Chapter 4 of the Assessment Methodology should be replaced with the amended version of Chapter 4. A discussion of the approach taken to review the document is attached to this letter.

Yours sincerely,



Thomas G Parry  
Commissioner

## **Review of the proposed amendment to Chapter 4 of the Environmental Outcomes Assessment Methodology**

### **Review Process**

The Natural Resources Commission (NRC) reviewed the proposed amendment to the Chapter 4 of the Environmental Outcomes Assessment Methodology (EOAM) against its intended outcomes. The NRC also considered the proposed Chapter as a whole, including the science underpinning the Chapter.

As part of the assessment process, the NRC:

1. posted the proposed amendment and supporting documentation on its website and invited comment from 85 key stakeholders which included agencies, Catchment Management Authorities (CMAs), and environment and landholder groups
2. reviewed the proposals internally
3. discussed the original and amended chapters with their authors.

### **Findings**

Several minor and three major changes have been made in the proposed amendment. The minor changes improve the text of the chapter by clarifying definitions, improving structure and making it more user-friendly for the reader.

For example, the current version of the Salinity Chapter refers to degraded vegetation which is inconsistent with the Biodiversity Chapter and could confuse users. The proposed amendment refers to low condition vegetation making it consistent with the Biodiversity Chapter. It also clarifies that ground cover of non-native species should be considered as low condition vegetation.

The three major changes and the NRC's assessment of these changes are discussed in the following sections. Background information on the Salt Mobilisation Tool, to which changes apply, is first discussed.

### **Background to Salt Mobilisation Tool**

The salinity assessment of the EOAM defines the circumstances in which broadscale clearing can be regarded as improving or maintaining environmental outcomes for salinity. In western NSW, the assessment procedure involves the use of the Salt Mobilisation Tool. This tool uses a combination of the rate that surface water runoff percolates through the soil into the groundwater aquifer, and the amount of salt stored in the soil, to assess the potential for salt to be mobilised from the soil and to affect the salinity of groundwater stores. Where it is determined that clearing of vegetation will increase the potential for groundwater to become salty, it is considered that this will not maintain or improve salinity and an offset is required.

### **Vegetation cover and condition**

The salinity tool is informed by a list of vegetation cover types and an indication of their effectiveness in taking up water from the surrounding soil. Vegetation covers which take up water more effectively, allow less water to percolate through the soil to the groundwater store.

The amended version of the tool provides users with a wider selection of vegetation covers and a corresponding estimation of their effectiveness in taking up water from the soil. It also indicates that good condition vegetation in each of the vegetation cover types is better at taking up water from the surrounding soil than low condition vegetation.

The NRC is satisfied with this proposed change and notes that this amendment increases the likelihood that CMAs will be able to select vegetation cover types and vegetation condition that are more appropriate to the areas they are assessing. The amendment will improve the capacity of the tool to assess whether proposed clearing of native vegetation or establishment of offsets, meet the maintain or improve test for salinity.

### **Salt store classes**

The current version of the Salt Store Map shows the distribution of each of five salt store classes (amount of salt stored in the soil) across the state. These maps show little variability of the amount of salt stored in the soil across some CMA regions (e.g. Lower Murray Darling) which reduces users' confidence in the tool as such large-scale distributions are unrealistic.

In the amended version, data have been reanalysed and have been used to define nine salt store classes across the state. The distributions of the nine groups of salt stored in the soil have been assigned weightings which reflect differences in the amount of salt stored in the soil. These weightings enable the model to provide more accurate outcomes which increase its credibility with landholders.

The NRC is satisfied that this amendment is necessary and notes that the increased resolution of the state-wide map and associated data will enable CMAs to make more reliable assessments of whether clearing of native vegetation or establishment of offsets, meet the maintain or improve test for salinity.

### **Paddock Trees**

The current salinity chapter does not discuss the effect of removing paddock trees on salinity. This prevents users from assessing whether removal of paddock trees meets the maintain or improve test in regard to salinity.

The amended version clarifies that the removal of paddock trees will have little effect on the uptake of groundwater from clearing zones and therefore will not increase the likelihood of salt water in the soil reaching the groundwater stores. The change also clearly defines paddock trees in a consistent manner with the Biodiversity Chapter of the EOAM.

The NRC is satisfied with this change and notes that consistency of the Salinity Chapter with other Chapters of the EOAM improves the quality of the tool.

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While the removal of paddock trees in the salinity assessment receives an automatic "green light", the effect of their removal on biodiversity and on threatened species still needs to be determined using appropriate methods outlined in other Chapters of the Environmental Outcomes Assessment Methodology.