Approved Conservation Advice for *Callistemon wimmerensis* (Wimmera Bottlebrush)

(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

This conservation advice has been developed based on the best available information at the time this conservation advice was approved; this includes existing plans, records or management prescriptions for this species.

Description

Callistemon wimmerensis, Family Myrtaceae, also known as the Wimmera bottlebrush, is a shrub or small tree to 10 m high with a single or multi-stemmed trunk, typically higher than it is wide. Flowers are in the form of a pink bottlebrush 11–14 cm long, and appear from late October to early December. The small 5 mm long fruit persist for up to 13 years (Marriott and Carr, 2008).

Conservation Status

Callistemon wimmerensis is listed as **critically endangered**. This species is eligible for listing as critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as it has a very restricted geographic distribution with an estimated extent of occurrence and area of occupancy of around 2 km^2. The species' geographic distribution is precarious for its survival given its occurrence at only one location and the nature of ongoing threats (TSSC, 2010).

Distribution and Habitat

The Wimmera bottlebrush occurs in two populations separated by 7.4 km along a 13 km stretch of the MacKenzie River in Victoria. Both its extent of occurrence and area of occupancy are around 2 km^2, and it has an estimated population size of several hundred thousand plants. The species grows entirely on the immediate stream banks and alluvial terraces of pale brown, silty alluvium (over a sandstone bedrock) (Marriott and Carr, 2008). Since 2004 the species is thought to have declined by 10 per cent, and the overall health of the populations has been observed to decline with lack of water flow. However, because the species was only recognised in 2004 there are few historical data available.

This species occurs within the Murray Darling Depression Bioregion and the Wimmera Natural Resource Management Region.

The distribution of this species is not known to overlap with any EPBC Act-listed threatened ecological community.

Threats

The main identified threats to the Wimmera bottlebrush are past land clearance, weed invasion, rabbits, trail bike use, and regulated and restricted water flow, particularly in years of drought (Marriott, 2006a, b; Marriott, pers. comm., 2009; Marriott and Carr, 2008).

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Support and enhance existing monitoring programs.
- More precisely assess population size, distribution, ecological requirements (especially seasonal/environmental water flows and fire) and the relative impacts of threatening processes.
- Undertake further survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of the Wimmera bottlebrush.

Habitat Loss, Disturbance and Modification

- Establish and implement appropriate environmental flows as necessary.
- Continue monitoring known populations to identify key threats.
- Continue monitoring the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Ensure there is no disturbance in areas where the Wimmera bottlebrush occurs, excluding necessary actions to manage the conservation of the species, by controlling access routes to suitably constrain public access to known sites on public land.
- Investigate and secure inclusion of crown land in reserve tenure if possible.
- Manage any other known, potential or emerging threats such as rabbits and trail bike use.

Invasive Weeds

- Develop and implement a management plan for the control of perennial veldt-grass (*Ehrharta calycina*) and dodder-laurel (*Cassytha pubescens*) in the region.
- Identify and remove weeds in the local area, which could become a threat to the Wimmera bottlebrush, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to the Wimmera bottlebrush, using appropriate methods.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on the Wimmera bottlebrush.

Animal Competition

- Develop and implement a management plan for the control and eradication of rabbits (*Oryctolagus cuniculus*) from the species' habitat.

Fire

- Develop and implement a suitable fire management strategy for the habitat of the Wimmera bottlebrush.
- Where appropriate provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bushfire risk management plan(s), risk register and/or operation maps.

Conservation Information

- Raise awareness of the Wimmera bottlebrush within the local community.
- Engage with land managers responsible for the land on, and nearby, which populations occur and encourage these key stakeholders to contribute to the implementation of conservation management actions.

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage.
- Investigate options for linking, enhancing or establishing additional populations.
- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

This list does not necessarily encompass all actions that may be of benefit to the Wimmera bottlebrush, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Existing Plans/Management Prescriptions that are Relevant to the Species

Earth Tech (2004). MacKenzie River Waterway Action Plan. A report prepared for Wimmera Catchment Management Authority, Horsham.

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

References cited:

Marriott NR (2006a). Monitoring the response of vegetation to an environmental water release in the lower MacKenzie River — with particular reference to the response of Wimmera Bottlebrush, *Callistemon wimmerensis* ms. Report for Wimmera Catchment Management Authority.

Marriot NR (2006b). Monitoring the condition of vegetation following a zero environmental water release in the lower MacKenzie River, December 2006: with particular reference to the Wimmera Bottlebrush, *Callistemon wimmerensis* ms'. Report for the Wimmera Catchment Management Authority.

Marriott NR (2009). Personal communication. White Gums Australia Environmental Consultancy.

Marriott NR and Carr GW (2008). A new species of *Callistemon* (Myrtaceae, Melaleuca) from Victoria, Australia. Muelleria 26(2), 57–63.

TSSC (Threatened Species Scientific Committee) (2010). *Callistemon wimmerensis* listing advice.

Vallee L, Hogbin T, Monks L, Makinson B, Matthes M and Rossetto M (2004). Guidelines for the translocation of threatened plants in Australia — second edition, Australian Network for Plant Conservation, Canberra.