Approved Conservation Advice for *Eremophila ternifolia* (Wongan Eremophila)

(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

Eremophila ternifolia, Family Myoporaceae, also known as the Wongan Eremophila, is a low spreading shrub 0.3–0.5 m high. Leaves are sessile, in whorls of 3, the whorls being alternate. They are green above, often reddish brown below. The flowers are solitary, lilac, white below and spotted purple inside. Fruits are dry and seeds are small, pale yellowish-white (Chinnock, 1982).

Conservation Status

Wongan Eremophila is listed as **endangered**. This species is eligible for listing as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, prior to the commencement of the EPBC Act, it was listed as endangered under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). The Wongan Eremophila is also listed as declared rare flora that is rare or likely to become extinct under the *Wildlife Conservation Act 1950* (Western Australia) and managed as vulnerable by the Western Australian Government.

Distribution and Habitat

Wongan Eremophila is known from three locations and four populations, all in the Shire of Wongan-Ballidu. Populations are located on private property and in a nature reserve. Surveys undertaken between 1999 and 2001 recorded the total population as 1381 mature plants. At this time, two of the populations were recorded as being in a healthy condition and two as disturbed. The majority of the plants recorded were located in the disturbed populations and although it is unknown whether this species is a disturbance specialist, it may benefit from natural disturbance, such as erosion (Stack et al., 2002).

Wongan Eremophila grows in red clays between breakaways, in mallee or morel and gimlet woodlands with scattered mallee, and an undershrub layer of *Santalum spicatum* (sandalwood), *Acacia* and *Melaleuca*. Associated species include E*ucalyptus erythronema, Eucalyptus longicornis* and *Eucalyptus salubris* (Stack et al., 2006).

This species occurs within the Avon Wheatbelt Bioregion and the South West 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 Wongan Eremophila include weed invasion and water runoff causing erosion and gullying.

The main potential threats to Wongan Eremophila include inappropriate fire regimes and vehicle traffic.

Research Priorities

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

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.
- More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes.
- Undertake 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.

Regional Priority Actions

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

Habitat Loss, Disturbance and Modification

- Monitor known populations to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Identify populations of high conservation priority.
- Ensure there is no inappropriate disturbance in areas where Wongan Eremophila occurs, excluding necessary actions to manage the conservation of the species/ecological community.
- Manage any disruptions to water flows.
- Investigate formal conservation arrangements, management agreements and covenants on private land, and for crown and private land investigate inclusion in reserve tenure if possible.
- Manage any other known, potential or emerging threats.

Invasive Weeds

- Develop and implement a management plan for the control of weeds in the region.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Wongan Eremophila.

Fire

- Develop and implement a suitable fire management strategy for the habitat of Wongan Eremophila.
- Identify whether fire is neccessary to germinate soil-stored seed and if so, the appropriate intensity and interval of fire required.
- Where appropriate, provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

Conservation Information

- Raise awareness of Wongan Eremophila within the local community.
- Frequently engage with private landholders and land managers responsible for the land on 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.

Local Priority Actions

The following local priority recovery and threat abatement actions can be done to support the recovery of Wongan Eremophila.

Habitat Loss, Disturbance and Modification

- Control access routes to suitably constrain public access to known sites on public land.
- Suitably control and manage access on private land and other land tenure.
- Reduce impacts of soil erosion and gullying from maintenance tracks (Stack et al., 2006).
- Limit vehicle traffic on the maintenance track and close track during wet periods (Stack et al., 2006).
- Minimise adverse impacts from land use at known sites.
- Protect populations of the listed species through the development of conservation agreements and/or covenants.

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to Wongan Eremophila, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to Wongan Eremophila using appropriate methods.

Fire

- Implement an appropriate fire management regime for local populations.

This list does not necessarily encompass all actions that may be of benefit to Wongan Eremophila, 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

- Department of Conservation and Land Management. Declared Rare and Poorly Known Flora Largely Restricted to the Shire of Wongan-Ballidu. Western Australian Wildlife Management Program No. 39. (Stack et al., 2006).

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

Information Sources:

Chinnock RJ (1982). A new species of *Eremophila* (Myoporaceae) endemic to the Wongan Hills, Western Australia. Nuytsia. 4:5-7.

Stack G, Willers N, Fitzgerald M and Brown, A (2006). Declared rare and poorly known flora largely restricted to the Shire of Wongan-Ballidu. Department of Conservation and Land Management, Western Australia.

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M (2004). Guidelines for the Translocation of Threatened Plants in Australia - Second Edition, Australian Network for Plant Conservation, Canberra.