

## Summary of National Recommendations

# Summary of National Recommendations for willow management

### Background

The following recommendations are a summary of national on-ground management and legislative recommendations as discussed in: Steel, J. Holland Clift, S. & Snell, K. (2008). *Developing willow management priorities from the local to the national level*. Department of Primary Industries, Victoria. Further context and explanation can be found in this resource, which takes into account some of the complexities of willow management.

The recommendations included in this summary are not a prescription for action, but a tool to assist regional land managers to prioritise willow management. The Willows National Management Guide is now available, and is the most up to date resource for willow management methods and developing willow management plans.

Willow management should not be considered in isolation as the aim of willow management is to protect and restore natural resources.

### General recommendations

- All regions to continue mapping new areas and update data in existing areas, and feed this information back to the National Willows Program.
- Develop an interactive web-based mapping database for storage of national datasets and use by willow managers.
- Regions continue to develop their willow identification skills and run refresher training.
- For national workshop series, consider the use of state-based facilitators to deliver workshops for each state.
- Run “train the trainer” workshops to train state-based facilitators, and enable states to run their own willow workshops.



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## National on-ground management priorities for willows

Distribution score	Invasiveness and Impact score		
	H	M	L
H	<i>S. triandra</i> * <i>S. daphnoides</i> * <i>S. glauca</i> * <i>S. exigua</i> *	<i>S. caprea</i> <i>S. pentandra</i> * <i>S. x mollissima</i> <i>S. eriocephala</i> * <i>S. myricoides</i> <i>S. aegyptiaca</i> * <i>S. elaeagnos</i> * <i>S. myrsinifolia</i> *	<i>S. integra</i> 'Hakuro-nishiki'*
M	<i>S. x rubens</i> <i>S. nigra</i> <i>S. cinerea</i> <i>S. alba</i> <i>S. babylonica</i> <i>S. purpurea</i> <i>S. x sepulcralis</i> <i>S. viminalis</i> <i>S. fragilis</i> <i>S. x pendulina</i>	<i>S. alba x matsudana</i> <i>S. gracilistyla</i> * <i>S. x reichardtii</i> <i>S. x calodendron</i> <i>S. x sericans</i> <i>S. matsudana</i>	<i>S. chilensis</i> 'Fastigiata' <i>S. alba</i> var. <i>caerulea</i>
L			<i>S. x 'Boydii'</i> <sup>^</sup>

## Prioritisation matrix at a national scale - Scientific names

\* Not known to be naturalised in Australia    ^ No potential distribution in Australia

Prioritisation matrices specific to every NRM region in Australia are also available, see the developing willow management priorities resource.

## Very High priority taxa

- Encourage the removal of the Very High risk willow taxa (*i.e.* *S. daphnoides*, *S. exigua*, *S. glauca*, and *S. triandra*) from gardens to reduce the chance of them becoming weeds in Australia.
- Establish a monitoring and incursions response program for Very High risk willow taxa, targeted to areas with suitable climates and habitats for these species, to respond to the establishment of these taxa in Australia, should this occur.
- Develop and provide information on identification of little known highest risk species to improve awareness of state, regional and local land managers to these species.



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### High priority taxa

- High priority willow taxa (*i.e.* *S. alba*, *S. babylonica*, *S. cinerea*, *S. fragilis*, *S. nigra*, *S. purpurea*, *S. viminalis*, *S. x pendulina*, *S. x rubens*, and *S. x sepulcralis*) should be targeted for eradication as a focus of control programs, in regions where this is feasible.
- For willows in this group that are beyond eradication, inform management priorities by the risk they pose to national assets.
- Conduct further mapping of *S. cinerea*, *S. babylonica* and *S. nigra* to determine the feasibility of their focus for national eradication.

### Moderate priority taxa

- Encourage the removal from gardens of, monitor and provide information on *S. aegyptiaca*, *S. elaeagnos*, *S. eriocephala*, *S. gracilistyla*, *S. myrsinifolia*, and *S. pentandra* to reduce their potential threat.
- Seeding willows (especially those able to hybridise, *i.e.* *S. caprea*, and *S. alba x matsudana*; and *S. matsudana*) in this group should be targeted for control where they threaten high value areas.
- Conduct further research on the biology and ecology of *S. myricoides*, *S. myrsinifolia*, *S. pentandra*, *S. x calodendron* and *S. x sericans*, as they may pose a greater risk than their assessments currently indicate.

### Lowest priority taxa

- Conduct further research on *S. alba* var. *caerulea*, *S. chilensis* 'Fastigiata', *S. integra* 'Hakuro-nishiki' and *S. x 'Boydii'* to determine whether they are truly low risk.

### Seeding and hybrid willows

- Determine which seeding and hybrid willows you have, and where these are within your region (use "Seeding Willows" and the GIS database to determine this).
- Conduct further mapping to confirm the gender of hybridising willow pairs, and focus management to remove one or the other based on recommendations in full report (eg. level of priority from relevant regional matrix).



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### List of seeding and hybrid willows

Willow taxa known to spread by seed are:

- *S. aegyptiaca*
- *S. alba*
- *S. caprea*
- *S. cinerea*
- *S. nigra*
- *S. purpurea*
- *S. triandra*
- *S. viminalis*
- *S. alba* x *matsudana*
- *S. x rubens*
- *S. x sepulcralis*.

Willow taxa known to form viable hybrids are

- *S. alba*
- *S. alba* var. *Caerulea*
- *S. babylonica*
- *S. cinerea*
- *S. caprea*
- *S. fragilis*
- *S. chilensis*
- *S. matsudana*
- *S. alba* x *matsudana*
- *S. x rubens*.

### National Legislative recommendations

With further research the following willows ***could be removed from the WoNS listing***, as well as state or local legislation:

- *S. chilensis* 'Fastigiata' and *S. alba* var. *caerulea* from subgenus *Salix*;
- *S. integra* 'Hakuro-nishiki,' from subgenus *Vetrix*;
- *S. x 'Boydii'*
- many of the subgenus *Chamaetia* (except *S. glauca*).

*S. babylonica* should be **added to the WoNS listing**, and considered for declaration as noxious under state and local laws.

Regional rankings and management priorities identified in this report may be used to declare *Salix x reichardtii* and *S. x calodendron* as noxious under state or local laws, where appropriate.

