

# WILLOWS National Priority Action Framework

## Stop the spread

- \* Determine the extent of willow infestations across Australia and make this information readily available (2.1.1)
- \* Conduct detailed weed risk assessment of naturalised and non-naturalised cultivated willows and new hybrids (2.1.4; 2.1.1; 2.1.2)
- \* Improve the status and level of enforcement of willow legislation across all states and territories using risk assessment information (2.1.3)

## Manage existing area

- \* Determine the extent of willow infestations across Australia and make this information readily available to managers. Identify and prioritise the most invasive willow taxa (2.2.1) following action 2.1.4
- \* Assess and improve best practice management techniques (2.2.3)
- \* Control priority willows, once identified by national taskforce (2.2.6)

## Gain community support

- \* Develop and implement a broad public communication strategy (2.3.1)
- \* Report on the outcomes and progress of the Willow Strategic Plan (2.3.2)

## Cross program actions

- \* Seek out appropriate funding sources for implementing high priority actions
- \* Support National Willows Taskforce in coordinating the strategic management of willows in Australia.
- \* Evaluate the current status of willows in terms of distribution, legislation and impacts

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**Stop the spread**

**Manage existing area**

**Gain community support**

**Cross program actions**

- \* Prioritise sites most susceptible to willow invasion
- \* Improve current knowledge of seeding willows, including dispersal patterns, seed viability and adult life span
- \* Raise awareness amongst public and land managers not to buy or plant invasive willows (2.1.5; 2.1.6; 2.1.8)
- \* Develop and implement sound on-ground management strategies to prevent further spread (2.1.7)

- \* Understand the dynamics and impacts of the willow sawfly and other natural enemies present in Australia and their implications for willow management (2.2.3)
- \* Improve knowledge of seeding taxa through research into their dispersal patterns, seed viability and adult life span (2.2.1)
- \* Improve the status and level of enforcement of willow legislation across all states and territories (2.2.6)
- \* Establish and apply best-practice guidelines for willow management (2.2.4)
- \* Ensure reliable identification of willows is achieved where needed

- \* Evaluate the National Willows Action Framework annually

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### Stop the spread

- \* Improve weeds officers' knowledge of willow taxa and distribution
- \* Develop and implement protocol for the management of willow plantations and cultivated willows (2.1.4)
- \* Improve coordination of willow management between land managers and management areas
- \* Attain genetic markers for the 3 exempt taxa (*S. babylonica*, *S. x reichardtii* and *S. calodendron*) to aid identification and enforcement activities
- \* Conduct research on willows in outlying climatic areas and environments
- \* Work with AQIS to prevent the importation of willows into Australia (2.1.9)

### Manage existing area

- \* Gain genetic markers for the 3 exempt taxa to aid identification and enforcement
- \* Harness knowledge and expertise of trained staff and willow experts
- \* Increase community understanding of the willow problem in urban areas
- \* Conduct a Citizens in Science program to gain understanding of changes in willow dispersal, ecology and impacts over time

### Gain community support

- \* Promote ongoing monitoring of the changes in stream and riparian ecology before and after willow control e.g. monitoring of macroinvertebrates and other indicators
- \* Promote appropriate restoration and follow up management of control sites
- \* Conduct a 'Citizens in Science' program on willows
- \* Present and implement solutions to the willow problem (2.3.3)
- \* Coordinate and facilitate the dissemination of information relating to willows and their management (2.3.5)

### Cross program actions

\*\* Priority actions were developed by the national willows taskforce in line with the National Willow Strategic Plan. Priorities are separated into 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> priorities, with 1<sup>st</sup> being the highest priority actions and 3<sup>rd</sup> being the lowest. Numbers in brackets correspond to actions in the Strategic Plan. For more detail on actions identified, see next pages. For further information, see the National Willow Strategic Plan or contact the National Willows Coordinator.

## **Detailed information regarding the WILLOW National Priority Action Framework**

The framework is divided into 4 sections:

1. Stop the spread of willows
2. Manage existing areas of willows
3. Gain community support in managing the willow problem
4. Cross program actions

This document provides further detail regarding each action contained in the framework. Priorities were developed by the *National Willows Taskforce* and are based on the National Strategy. Numbers correspond to actions in the National Strategy.

### **Stop the spread of willows**

#### **Priority 1**

- Determine the extent of willow infestations across Australia and make this information readily available (2.1.1)
  - Map willow infestations
  - Promote a national standard for willow mapping
- Conduct detailed weed risk assessment of naturalised and non-naturalised cultivated willows and new hybrids (2.1.4)
  - Identify and prioritise management of the most invasive willow taxa
  - Identify areas potentially at most risk from willow invasion (refine Weed Risk Assessment)
  - Set priorities for management of vulnerable areas currently uninfested by willows (e.g. National Parks and heritage rivers)
  - Develop and implement a rating system to identify priorities and develop response protocols (2.1.1)
  - Ensure early detection of 'dangerous' situations and new willow outbreaks and develop rapid response mechanisms to eradicate populations (2.1.2)
- Improve the status and level of enforcement of willow legislation across all states and territories using risk assessment information (2.1.3)
  - Enforce current legislation on the sale, distribution and control of willows
  - Increase legislation status of willows from sale and distribution (Restricted) to containment and control
  - Promote uniform legislation across Australia
  - Improve state border control in all states and territories other than Tasmania and Western Australia
  - Declare all willow taxa with no exceptions

#### **Priority 2**

- Prioritise sites most susceptible to willow invasion
  - including Western Australia and Queensland
- Improve current knowledge of seeding willows, including dispersal patterns, seed viability and adult life span

- Raise awareness amongst public and land managers not to buy or plant invasive willows (2.1.5; 2.1.6; 2.1.8)
  - Identify plant species with similar beneficial functions to replace willows
  - Encourage research into safe willow alternatives (both indigenous plants and *Salix* taxa) in various local contexts
  - Develop appropriate educational resources
  - Implement pre-emptive education in ‘clean’ (willow-free) areas
  - Focus on particular situations where willows may be invasive, as well as taxa that are not invasive
- Develop and implement sound on-ground management strategies to prevent further spread (2.1.7)
  - Train staff in appropriate management responses.

### **Priority 3**

- Improve weeds officers’ knowledge of willow taxa and distribution
- Develop and implement protocol for the management of willow plantations and cultivated willows (2.1.4)
  - Devise protocols for cultivation with owners or managers of collections to deal with those willows found to be potentially weedy
  - Develop and implement protocols for managing commercial willow plantations, including detailed prescriptions to prevent willows spreading (2.2.5)
- Improve coordination of willow management between land managers and management areas
- Attain genetic markers for the 3 exempt taxa (*S. babylonica*, *S. x reichardtii* and *S. calodendron*) to aid identification and enforcement activities
- Conduct research on the willows in Kununurra and other significant outlying areas to determine how extensive they could become and what potential impacts they could have in different climatic areas and environments?
- Work with AQIS to prevent the importation of willows into Australia (2.1.9)

## **Manage the existing areas of willows**

### **Priority 1**

- Determine the extent of willow infestations across Australia and make this information readily available to managers. Identify and prioritise the most invasive willow taxa (2.2.1) following action 2.1.4
  - Map infestations of the most serious willows.
  - Identify or confirm the most seriously invasive willow taxa, their mode of spread and behaviour.
  - Approve and apply a methodology for mapping.
  - Assess willow threats and impacts.
- Assess and improve best practice management techniques (2.2.3)

- Conduct research into improved tools / methods of willow control, including rehabilitation practices and ongoing management requirements of sites following willow removal
- Organise a national willow practitioners' workshop
- Undertake and apply research to introduce biocontrol agents for willows. Have willows declared as a target for biological control under the Biocontrol Act
- Control priority willows, once identified (2.2.6)
  - Eradicate or control priority willow taxa in priority areas as determined by the National Willows Taskforce following action 2.2.1.

### **Priority 2**

- Understand the dynamics and impacts of the willow sawfly and other natural enemies present in Australia and their implications for willow management (2.2.3)
- Improve knowledge of seeding taxa through research into their dispersal patterns, seed viability and adult life span (2.2.1)
- Improve the status and level of enforcement of willow legislation across all states and territories (2.2.6)
  - Develop guidelines for eradication and control to meet legislative obligations
  - Enforce legislation on containment and control of willows
  - Increase legislation status of willows from sale and distribution (Restricted status) to containment and control
- Establish and apply best-practice guidelines for willow management (2.2.4)
  - Consolidate best practice information for both control and restoration and make easily accessible
  - Support current best practice management programs and use as case studies and demonstration sites
  - Review, assess, develop and adopt current willow management practices when controlling willows.
- Ensure reliable identification of willows is achieved where needed
  - Develop website identification tool that is freely accessible
  - Develop willow weed deck showing forms of willows, not all individual taxa.
  - Liaise with weeds taxonomists in Victoria and Tasmania

### **Priority 3**

- Gain genetic markers for the 3 exempt taxa to aid identification and enforcement
- Harness knowledge and expertise of trained staff and willow experts
- Increase community understanding of the willow problem in urban areas.
- Conduct a Citizens in Science program to capture, through oral history, landholders' experiences and understanding of changes in willow dispersal, ecology and impacts over time

## **Gain community support in managing the willow problem**

### **Priority 1**

- Develop and implement a broad public communication strategy (2.3.1)
  - Highlight the nature and national significance of the willow problem
  - Review current extension material, and develop appropriate additional educational resources
  - Increase community understanding of the willow problem in urban areas
  - Identify and distribute quantifiable information on willow impacts to increase community support for the issue e.g. impacts on birds, insects, nutrient dynamics, habitat structure and water usage
- Report on the outcomes and progress of the Willow Strategic Plan (2.3.2)
  - Report annually to the National Weeds Strategy Executive Committee and to interest groups

### **Priority 3**

- Promote ongoing monitoring of the changes in stream and riparian ecology before and after willow control e.g. monitoring of macroinvertebrates and other indicators
- Promote appropriate restoration and follow up management of control sites
- Conduct a 'Citizens in Science' program to capture, through oral history, landholders' experiences and understanding of changes in willow dispersal, ecology and impacts over time
- Present and implement solutions to the willow problem (2.3.3)
  - Identify and encourage management options
  - Promote alternative species that fulfil existing functions of willows in various local contexts
  - Develop land manager partnerships
- Coordinate and facilitate the dissemination of information relating to willows and their management (2.3.5)
  - Establish a willow network and develop willows expert information web site

## **Cross action programs**

### **Priority 1**

- Attract sponsors/partners to promote, implement and help fund priority willow management actions. Develop appropriate proposals for sponsorship (2.3.4)
- Support National Willows Taskforce in coordinating the strategic management of willows in Australia.
- Evaluate the current status of willows in terms of distribution, legislation and impacts

### **Priority 2**

- Evaluate the National Willows Action Framework annually