1.0 Cover Page

NSW DEPARTMENT OF PRIMARY INDUSTRIES

REGIONAL WEED MANAGEMENT PLAN

1.1 PLAN TITLE: ATHEL PINE REGIONAL MANAGEMENT PLAN

1.2 PLAN PROPONENTS

Regional Weeds Advisory Committee: MACQUARIE VALLEY WEEDS ADVISORY COMMITTEE (MVWAC)

Address: C/- CABONNE COUNCIL, PO BOX 17, MOLONG NSW 2866

Contact person: MEGAN POWER (REGIONAL PROJECT OFFICER)

Telephone number: (02) 63907100

Facsimile number: (02) 63907160

Email address: megan.power@cabonne.nsw.gov.au

Signature: Chairman:..... Date: .....

1.3 NAME OF PLANT (S) **WONS** Yes

Botanical name(s): *Tamarix aphylla* Common name(s): Athel Pine

1.4 PLAN PERIOD (not to exceed five years)

Starting date: 01/07/2007 Completion date: 30/06/2012

1.5 AREA OF OPERATION: The Local control Authorities (LCA) and Rural Lands Protection Boards (RLPB) of the Macquarie Valley Weeds Advisory Committee. This includes the following Councils:

Bourke Shire Council	Cobar Shire Council	Dubbo City Council
Bourke RLPB	Cobar RLPB	

1.6 AIM: To suppress and manage current Athel Pine infestations and prevent further spread of this species within and from this region

1.7 OBJECTIVES:

1.7.1 To identify existing and emerging infestations
1.7.2 To manage and suppress all core infestations on RLPB and Council land
1.7.3 To contain all rare and isolated infestations on RLPB and Council land
1.7.4 To manage and suppress all infestations on private land
1.7.5 To implement a community awareness program

2.0 STAKEHOLDERS

2.1 Signatories

Participating Councils:

Bourke Shire Council Cobar Shire Council Dubbo City Council

Participating RLPB's;

Bourke RLPB Cobar RLPB

2.2 Other Stakeholders:

- Dept. of Primary Industries
- Dept. of Environment and Conservation
- Dept. of Natural Resources
- Australian Rail Track Corporation
- State Forests
- National Parks & Wildlife Service
- Aboriginal Land Councils
- Catchment Management Authorities/committees
- Regional Landcare Co-ordinators

3.0 BACKGROUND and JUSTIFICATION

3.1 Weed Ecology and History

Athel Pine is a spreading tree, growing to 15m in height. Although it is similar in appearance to conifers, *Tamarix* is not actually a pine. It is a flowering plant with dull green leaves resembling needles. Flowers are a whitish-pink and grow on long spikes. The fruits are small and bell shaped, containing hairy seeds. These hairs allow for greater dispersal by wind. Leaves excrete salt, leaving the surrounding soils highly saline. This saltiness also means leaves are unpalatable to stock. The deep root system allows for greater usage of soil moisture, and together with their saline soils, excludes native species from competing.

This species is a rapid grower, and can grow 2-5m in just one year when conditions are suitable. As a fast grower, this species can reach reproductive maturity after just three years, with seeding occurring annually.

Athel Pine is a native of northern Africa and Asia. It was first introduced at Whyalla in the 1930's when planting for windbreaks and erosion control was encouraged. Similar plantings in the Northern Territory has lead to the current infestation along the Finke River where it has overrun more than 600km of riverbank.

3.2 Method and Rate of Spread

Although this species produces large numbers of seeds – one plant can produce thousands - every year, these seeds only remain viable if kept moist. Significant flood events can not only widely disperse seeds, but also keep them viable for longer. Seeds have small hair tufts that allow for greater wind dispersal, as well as animal dispersal.

More commonly, however, Athel Pine spreads vegetatively. Plant parts such as broken branches can resprout easily, forming new plants. Because of this, Athel Pine spreads fastest along waterways especially after flooding events where seeds and plant material are washed downstream.

3.3 Distribution and Potential Spread

This species is currently distributed across five states of Australia. It infests dryland river systems throughout inland Australia, forming dense stands. It is drought resistant and well suited to arid and semi-arid rangelands. When we consider that rangelands occupy about 70% of the Australian continent, an area of about 6 million square kilometres, the potential distribution for this species is enormous.

However, the core infestation sites within this region are located:

Dubbo: Some stands found within the city as well as in some reserves along the Macquarie River.
Bourke: Large stands found within the township.
Cobar: Most infestations (approximately 50 trees) are in the township of Cobar, on private and public land. There are a few on a couple of mine sites and on the Darling River south west of Tilpa.

3.4 Null Hypothesis

This weed has the potential to infest waterways across Australia, from WA right through to Victoria. Its drought tolerance allows for growth away from waterways as well, allowing for further distribution. It is thought that these stands exist on underground watersources. This species is tolerant of many soil types and thrives in saline conditions, conditions it has usually created itself. By excluding other less saline-tolerant species there is the opportunity to create a monoculture of Athel Pine.
Without formal control this species has the potential to spread throughout inland Australia, causing severe environmental and economical damage.

3.5 Justification and Problem Description

Athel Pine is a Weed of National Significance and has the potential to infest most of inland Australia.

- It is a notifiable weed across the State
- Athel Pine causes severe environmental damage and impacts economically on the pastoral industry
- Cultivated plants escape and naturalise easily
- It usually infests waterways with dense stands, increasing sedimentation, altering flow patterns and causing overland flooding and bank erosion
- These dense stands prevent stock and wildlife from using watersources and makes mustering difficult if not impossible
- It's ability to influence local soil salt levels gives it an advantage over less salt-tolerant native and pasture species
- Its deep, complex root system consumes large amounts of soil moisture that also results in lesser growth of surrounding plants
- It reduces biodiversity. It has been found that areas infested with Athel Pine had ground covers dominated by saltbushes and introduced grasses, whereas areas dominated by native species such as River Red Gum (*Eucalyptus camaldulensis*) had more varied ground cover species.
- It is difficult and expensive to control as an integrated management approach is needed
- It can quickly re-establish itself if left unchecked
- It is fire resistant and can alter natural fire regimes affecting native species regeneration
- It can lower water tables and therefore drain watersources reducing the number of stock watering points

4.0 LEGISLATIVE and REGULATORY SITUATION

4.1 Current Declaration

Athel Pine is a Class 5 weed across all of New South Wales. It is a restricted plant and the requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with.

4.2 Declaration Changes

There are no declaration changes being sought.

5.0 CONSIDERATIONS and OPPORTUNITIES

5.1 Financial Support for Plan Implementation

Funding opportunities will be investigated at local, state and federals levels of government.

5.2 Barriers and Contingencies

Barriers:

- Locations of most infestations along waterways affecting chemical use within control program
- Erosion problems at infestation locations affecting mechanical control methods
- Lack of follow-up work resulting in a less effective control program
- New germination of seed spread from core areas by wind, water, native and feral animals, and livestock
- Isolation of infestations

Contingencies:

- Significant flooding events increasing distribution of species
- Ideal seasonal conditions allowing for prolific growth leading to resource shortfalls
- Control costs

5.3 Links to Other Strategies

National Weeds Strategy
NSW Weeds Strategy
Athel Pines WONS Strategy

6.0 ACTION PLAN

ACTION PLAN FOR CONTROL:	Performance indicator	Who	Objectives addressed (Number)
6.1 Survey, map and record all infestations	Mapping is completed	All LCA's Regional Weed Coordinator	1.7.1
6.2 Stop the spread of Athel Pine from infested areas	100% of core infestations suppressed. 50% of marginal infestations suppressed Control work carried out, particularly around borders of core infestation Containment strategies implemented Integrated management techniques introduced 100% of infested properties inspected All treated areas are monitored and retreated where necessary	All LCA's Landholders	1.7.2, 1.7.3 & 1.7.4
6.3 Athel Pine awareness programs will be run in all LCA's	Educational material given to all landholders of infested properties Three local shows / field days attended per year	All LCA's and RLPB's	1.7.5

7.0 MONITOR and REVIEW PROCESS

This plan will be monitored by Weed Officers and progress reviewed annually by MVWAC. This will include discussions on increase or decrease, rate of spread, the potential range, successful management strategies and their results.

An annual review of this plan and management strategies will be held to ensure stakeholder's efforts match the performance indicators and that key milestones are achieved. Further opportunities to combine other weed control or land management efforts into an integrated program including Athel Pine will be actively pursued, as will the use of any future advances in biological, chemical or management control techniques.

8.0 BENEFITS

If a management plan is in place and control carried out, the benefits to the Macquarie Valley will include:

- Boost in river health by reductions in sedimentation, bank erosion and altered flow patterns.
- Water sources are relieved from Athel Pine's detrimental effects and stock watering points regained from Athel Pine's grasp
- Better access to watering points, streams and recreation areas
- Increased productivity
- Increased land values
- Increased biodiversity and protection of native bushland and endemic species

9.0 RESOURCES

Athel Pine Weeds of National Significance Strategic Plan

Athel Pine Weeds of National Significance Weed Management Guide

Athel Pine Agnote, No. F61. Northern Territory DPIE

Grice, A.C. & Martin, T.G., 2006. "Guest Editorial: Rangelands, weeds and biodiversity", *The Rangeland Journal*, Vol. 28 No. 1, pp. 1-2.