

**Declared Plant Policy**  
**under the Natural Resources Management Act 2004**



**Government  
of South Australia**

**athel pine (*Tamarix aphylla*)**

Athel pine is one of the tamarisks, trees adapted to dry saline habitats where water is available in the deep subsoil. It has been widely planted in South Australia and is now beginning to impact on some watercourses in the pastoral zone.

**Management Plan for Athel pine**

**Outcomes**

- Maintain integrity of watercourses and native vegetation by preventing invasion by athel pine.

**Objectives**

- To control and contain athel pine infestations in accordance with NRM board Regional Management Plans.
- Prevent further planting of athel pine in high risk sites.
- Remove existing athel pines from high risk sites as prioritised at regional level.
- Prevent the spread of athel pine into uninfested areas.
- Prevent the reinfestation of areas cleared of athel pine

**Implementation**

- Extension to increase awareness of the environmental damage caused by athel pine.
- NRM authorities in the pastoral zone of South Australia to locate and map infestations of athel pine.
- NRM authorities in the pastoral zone of South Australia to enforce control where necessary to protect riparian habitats
- NRM authorities to develop a plan to control or contain priority infestations, and to implement this plan progressively.
- To assist local control programs, the sale and movement of athel pine is prohibited.

**Regional Implementation**

Refer to regional management plans for further details.

## athel pine policy

NRM Region	Actions
Adelaide and Mount Lofty Ranges	Contain spread
Alinytjara Wilurara	Contain spread
Eyre Peninsula	Monitor
Kangaroo Island	Monitor
Northern and Yorke	Monitor
South Australian Arid Lands	Protect sites
South Australian Murray Darling Basin	Protect sites
South East	Monitor

### Declaration

To implement this policy, athel pine is declared under the *Natural Resources Management Act, 2004* throughout the whole of the State of South Australia. The movement or transport of the plant on a public road, by itself or as a contaminant, or the sale by itself or as a contaminant is prohibited. It is declared for destruction within 100 metres of any watercourse, and NRM authorities have the responsibility of controlling infestations on road reserves within 100 metres of watercourses, and may recover the costs of roadside control work from the adjoining land owners.

Athel pine is declared in category 3 under the Act for the purpose of setting maximum penalties under and for other purposes. Any permit to allow its movement or sale can only be issued by the regional NRM Board pursuant to section 188.

The following sections of the Act apply to athel pine throughout each of the NRM regions noted below:

Sections of Act	Region							
	AMLR	AW	EP	KI	NY	SAAL	SAMDB	SE
175(1) Prohibiting entry to area								
175(2) Prohibiting movement on public roads	X	X	X	X	X	X	X	X
177(1) Prohibiting sale of the plant	X	X	X	X	X	X	X	X
177(2) Prohibiting sale of contaminated goods	X	X	X	X	X	X	X	X
180 Requiring notification of infestations								
182(1) Landowners to destroy the plant on their properties								
182(2) Landowners to control the plant on their properties	X	X	X	X	X	X	X	X
185 Recovery of control costs on adjoining road reserves	X	X	X	X	X	X	X	X

Sections 182(2) and 185 apply only on land within 100 metres of a watercourse.

### Review

This policy is to be reviewed by 2020 or in the event of a change in any regional management plan for Athel pine.

## **Weed Risk**

### Invasiveness

Athel pine originated in the arid zone of western Asia and northern Africa, and has been widely planted throughout the world as a shade and shelter tree and also for revegetation in arid or saline environments

Athel pine has become a problem in the arid zone of Australia where it can rapidly spread along streams, replacing native vegetation and increasing surface soil salinity.

Dispersal occurs by seed, which is produced in large numbers in favourable years but is very short-lived in the soil. A large infestation can develop suddenly when seed production coincides with a flood, which disperses the seed along watercourses and also provides a suitable habitat for establishment. Infestations of athel pine commonly expand by suckering from surface roots.

### Impacts

Athel pines form a dense canopy that provides inferior habitat for wildlife and inhibits the regeneration of native plants.

Like other *Tamarix* species, athel pines have deep roots that tap soil water and can lower the water table to the extent of causing small springs to dry up. To the extent that this water is saline, they extract the salt and excrete it through glands on the leaves. This process tends to increase the salinity of the surface soil and eliminate less salt-tolerant plants from the site.

In addition to displacing native vegetation, infestations along watercourses trap sediments, which reduce channel capacity as they accumulate. In time, the infestations can change the direction of streams and modify riparian landforms.

### Potential distribution

Athel pine is drought resistant and is well suited to arid and semi-arid rangelands. It is tolerant of saline and alkaline soils and, although it flourishes best in and around rivers, is not restricted to the riparian environment. Based on climatic criteria, athel pine could potentially infest watercourses throughout most of inland South Australia.

## **Feasibility of Containment**

### Control costs

Heavy infestations of mature athel pine can be controlled by combining mechanical and chemical control. Bulldozers can be used to remove trees and roots in the case of large infestations. This work is expensive when infestations are in remote areas.

Chemical control can be used over larger areas and where there is a risk of erosion due to mechanical removal. Application of herbicide to freshly cut stumps or to frilled stems frilling immediate application is effective.

Seedlings can be removed by hand or sprayed with an appropriate herbicide.

### Persistence

Athel pine is drought resistant and is well suited to arid and semi-arid rangelands. It is tolerant of saline and alkaline soils. It has an extensive and very deep root system that may penetrate as far as 50 m underground in search of water. Mature athel pines commonly reproduce vegetatively by suckering, as well as producing copious amounts of seed.

### Current distribution

The main naturalised infestations of athel pine are on creek lines, lakes and bore drains in the pastoral zone, from around 33°S on the Barrier Highway north to the Northern Territory border and the Anangu Pitjanjatjara Yankunytjatjara lands. Outlying infestations have been found south of this line at Hypurna Station and the Pike River Complex in the Riverland. Athel pine occurs as planted trees in the other regions.

### **State Level Risk Assessment**

Assessment using the Biosecurity SA Weed Risk Management System gave the following comparative weed risk and feasibility of containment scores by land use:

<b>Land use</b>	<b>Weed Risk</b>	<b>Feasibility of control</b>	<b>Response at State Level</b>
Grazing - rangeland	low 31	very high 2	monitor
Native vegetation	high 157	very high 2	destroy infestations

### **Considerations**

Athel pine is one of the Weeds of National Significance, which are subject to a uniform prohibition on sale in all jurisdictions as agreed by the Natural Resource Management Ministerial Council. In line with the national strategy on athel pine, sale of the plant is prohibited in South Australia as in other jurisdictions. However, it has been widely planted as an amenity tree in South Australia, from suburban Adelaide throughout the agricultural zone and around homesteads in the northern pastoral zone.

It was first proclaimed by the Northern Territory Government when damage to river red gum communities along the Finke River was recognised.

Risk assessment indicates management actions at State level of monitoring in rangeland grazing lands, and destroying infestations of the weed in native vegetation. However, the actions at regional level vary according to the presence of athel pine as a naturalised species and the occurrence of habitats vulnerable to invasion. The SA Murray Darling Basin and SA Arid Lands regions aim to protect sites. The Alinytjara Wilurara region also has vulnerable habitats, and aims to contain spread in the Anangu Pitjanjatjara Yankunytjatjara lands, and destroy any infestations elsewhere. In the Eyre Peninsula, Northern and Yorke, and Kangaroo Island regions, athel pine is monitored. Adelaide and Mount Lofty Ranges and South East have no wild infestations but aim to control any spread from planted trees. Kangaroo Island monitors any athel pines and aims to remove all Tamarix planted on public lands to prevent any chance of escapes.

**Synonymy**

*Tamarix aphylla* (L.)H.Karst, Deut. Fl. 641 (1883).

Taxonomic synonyms: *Thuja aphylla* L., Cent. Pl. 1 32 (1755)

*Tamarix articulata* Vahl, Symb. Bot. 2: 48, t. 32. (1791).

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