

<b><i>Eucalyptus globulus</i> (Blue Gum, Southern Blue Gum, Victorian Blue Gum) -- FLORIDA</b>		<b>Answer</b>	<b>Score</b>
1.01	Is the species highly domesticated?	n	0
1.02	Has the species become naturalised where grown?		
1.03	Does the species have weedy races?		
2.01	Species suited to FL climates (USDA hardiness zones; 0-low, 1-intermediate, 2-high)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	y	1
2.04	Native or naturalized in regions with an average of 11-60 inches of annual precipitation	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	y	2
3.02	Garden/amenity/disturbance weed	n	0
3.03	Weed of agriculture	y	4
3.04	Environmental weed	y	4
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	?	
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	y	1
4.05	Toxic to animals		
4.06	Host for recognised pests and pathogens	?	
4.07	Causes allergies or is otherwise toxic to humans	?	
4.08	Creates a fire hazard in natural ecosystems	y	1
4.09	Is a shade tolerant plant at some stage of its life cycle	n	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	y	1
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	y	1
5.01	Aquatic	n	0
5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0
6.01	Evidence of substantial reproductive failure in native habitat		
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	y	1
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	y	1
6.07	Minimum generative time (years)	4	-1

7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	?	
7.04	Propagules adapted to wind dispersal	?	
7.05	Propagules water dispersed	?	
7.06	Propagules bird dispersed	n	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	n	-1
8.01	Prolific seed production	?	
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	n	-1
8.03	Well controlled by herbicides	?	
8.04	Tolerates, or benefits from, mutilation or cultivation	Y	1
8.05	Effective natural enemies present in U.S.		
	<b>Total Score</b>		<b>18</b>
	<b>Implemented Pacific Second Screening</b>		<b>No</b>
	<b>Risk Assessment Results</b>		<b>Reject</b>

	Reference	Source data
1.01		Cultivated, but no evidence of selection for reduced weediness.
1.02		Skip to question 2.01
1.03		Skip to question 2.01
2.01	1. PERAL NAPPFAST Global Plant Hardiness ( <a href="http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnd.tif">http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnd.tif</a> ) & USDA Plant Hardiness Zone Map, 2012. Agricultural Research Service, U.S. Department of Agriculture. Accessed from <a href="http://planthardiness.ars.usda.gov">http://planthardiness.ars.usda.gov</a> . 2. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland ( <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948</a> [Accessed: 19 March 2012]). 3. Australia's Virtual Herbarium. 2009. <a href="http://chah.gov.au/avh/index.jsp">http://chah.gov.au/avh/index.jsp</a> . Accessed: 19 March 2012. 4. " <i>Eucalyptus globulus</i> ." <i>horticopia.com</i> . Horticopia, 2011. Web. 20 March 2012.	<b>No computer analysis was performed.</b> 1. Native global plant hardiness zones 8-10; equivalent to USDA Hardiness zones 8b-10a (north, central, and south zones of Florida). 2. Native to New South Wales, Tasmania, & Victoria, Australia; Naturalized in Africa (Azores, Canary Islands, Kenya, Morocco, Rwanda, South Africa, Tanzania, Uganda, Zimbabwe), China, France, Ireland, Italy, New Zealand, Spain, USA (California, Hawaii), South America (Bolivia, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Panama, Peru). 3. Herbarium specimens collected from the Australian states of New South Wales, South Australia, Tasmania, & Victoria. 4. Hardy range 9A to 11 (FL zones 9a-11b).
2.02		<b>No computer analysis was performed.</b> Native and naturalized ranges are well known; refer to 2.01 source data.
2.03	1. Köppen-Geiger climate map ( <a href="http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf">http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf</a> ). 2. PERAL NAPPFAST Global Plant Hardiness ( <a href="http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnd.tif">http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnd.tif</a> ) & Arbor Day <a href="http://www.arborday.org/media/zones.cfm">http://www.arborday.org/media/zones.cfm</a> .	1. Distribution in the native and cultivated ranges is widespread and occurs in more than 3 climatic groups (Bsk, Csb, Cfa, Cfb).
2.04	1. " <i>Eucalyptus globulus</i> ." <i>horticopia.com</i> . Horticopia, 2011. Web. 20 March 2012. 2. Australia's Virtual Herbarium. 2009. <a href="http://chah.gov.au/avh/index.jsp">http://chah.gov.au/avh/index.jsp</a> . Accessed: 2 April 2012.	1. Can survive on as little as 530 mm (20") annual rain with accompanying fog. 2. 500 mm-2400 mm (19.6"-94.5").
2.05	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2012, March 20].	1. Introduced to CA in 1856 and HA in 1865; a fairly common ornamental in AZ.

3.01	<p>1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2012, March 20].</p> <p>2. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (<a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948</a> [Accessed: 19 March 2012]).</p>	<p>1. Naturalized in both California and Hawaii. 2. Naturalized in Africa (Azores, Canary Islands, Kenya, Morocco, Rwanda, South Africa, Tanzania, Uganda, Zimbabwe), China, France, Ireland, Italy, New Zealand, Spain, USA (California, Hawaii), South America (Bolivia, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Panama, Peru).</p>
3.02		No evidence.
3.03	<p>1. Richardson, D.M. &amp; Rejmanek, M. 2011. Trees and shrubs as invasive alien species - a global review. <i>Diversity and Distributions</i> , 17: 788-809.</p>	<p>1. Introduced for forestry and listed on the database of invasive trees and shrubs in North America, Europe, Pacific Islands, New Zealand, and South America.</p>
3.04	<p>1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i>. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].</p> <p>2. California Invasive Plant Council. Responsible Landscaping. Don't Plant a Pest: State of California Trees. <a href="http://www.cal-ipc.org/landscaping/dpp/plantpage.php?region=state&amp;type=Trees">http://www.cal-ipc.org/landscaping/dpp/plantpage.php?region=state&amp;type=Trees</a>. Accessed: 23 March 2012. On-line.</p> <p>3. National Park Service. <i>Eucalyptus</i> . Golden Gate National Recreation Area Point Reyes National Seashore. March 2006. Brochure.</p>	<p>1. In CA and HA it does not spread far and rarely invades wildlands, although it has invaded an oak woodland on Angel Island in the San Francisco Bay. 2. Easily invades native plant communities, causing declines in native plant and animal populations. 3. Blue gums once established without their natural competitors spread invasively, displacing native vegetation and altering the design of historic features.</p>
3.05	<p>1. Holm, L. et al. <i>A Geographical Atlas of World Weeds</i> . John Wiley and Sons, New York. 1979.</p>	<p>1. The following <i>eucalypts</i> are considered principal weeds in Australia (principal weed in this context is ranked according to the importance of the weed and is usually referring to about the five most troublesome species for the crop): <i>E. cambageana</i>, <i>E. ferruginea</i>, <i>E. gracilis</i>, <i>E. marginata</i>, <i>E. miniata</i>, <i>E. pilularis</i>, <i>E. populnea</i>, <i>E. tetradonta</i> .</p>
4.01		No description of these traits

4.02	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].	1. The leaves of Bluegum Eucalyptus release a number of terpenes and phenolic acids. These chemicals may be responsible for the paucity of accompanying vegetation in plantations. Natural fog drip from Bluegum Eucalyptus inhibits the growth of annual grass seedlings in bioassays, suggesting that such inhibition occurs naturally. At least one leaf extract has been shown to strongly inhibit root growth of seedlings of other species.
4.03		No description of parasitism
4.04	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2012, March 20]. 2. James A. Duke. 1983. Handbook of Energy Crops. unpublished.	1. Foliage is unpalatable to cattle, sheep, and goats. 2. Foliage unpalatable to livestock.
4.05		
4.06	1. James A. Duke. 1983. Handbook of Energy Crops. unpublished.	1. Listed as affecting <i>Eucalyptus globulus</i> are the following: <i>Actinopelte dryina</i> , <i>Armillaria mellea</i> , <i>Cercospora epicoccoides</i> , <i>C. eucalypti</i> , <i>Corticium salmonicolor</i> , <i>Cryptosporium eucalypti</i> , <i>Cytospora australiae</i> , <i>C. eucalyptina</i> , <i>Diaporthe medusaea</i> , <i>Didymosphaeria circinnans</i> , <i>Diplodia australiae</i> , <i>Fomes applanatus</i> , <i>F. scruposus</i> , <i>Fusarium oxysporum</i> var. <i>aurantiacum</i> , <i>Ganoderma lucidum</i> , <i>Harknessia uromycoides</i> , <i>Hendersonia eucalypticola</i> , <i>Laetiporus sulphureus</i> , <i>Macrophoma molleriana</i> , <i>Macrophomina phaseoli</i> , <i>Monochaetia desmazierii</i> , <i>Mycosphaerella molleriana</i> , <i>Pestalotia truncata</i> , <i>Pestalotiopsis funerea</i> , <i>Pezizella carneo-rosea</i> , <i>Pezizella oenotherae</i> , <i>Phellinus gilvus</i> , <i>Phyllostica extensa</i> , <i>Physalospora latitans</i> , <i>P. rhodina</i> , <i>P. suberumpens</i> , <i>Polyporus gilvus</i> , <i>P. hirsutus</i> , <i>P. schweinitzii</i> , <i>P. sulphureus</i> , <i>P. versicolor</i> , <i>Poria cocos</i> , <i>P. versipora</i> , <i>Sclerotinia fuckeliana</i> , <i>Septonema multiplex</i> , <i>Septosporium scyphophorum</i> , <i>Stereum hirsutum</i> , and <i>Valsa eucalypti</i> (Ag. Handbook 165; Browne, 1968). Also listed in Browne (1968) are the following: <i>Angiospermae</i> : <i>Dendrophthoe neelgherensis</i> , and <i>Viscum album</i> . <i>Coleoptera</i> : <i>Gonipterus scutellatus</i> , <i>Paropsis obsoleta</i> , <i>Phoracantha semipunctata</i> , and <i>Triphocaris mastersi</i> . <i>Hemiptera</i> : <i>Ctenarytaina eucalypti</i> and <i>Eriococcus coriaceus</i> . <i>Hymenoptera</i> : <i>Rhinopeltella eucalypti</i> . <i>Lepidoptera</i> : <i>Metanastria hyrtaca</i> , <i>Mnesampela privata</i> , and <i>Spilonota macropetana</i> . The oil rich wood is resistant to termites (NAS, 1980a).

4.07	1. Duke, J.A. 1983. Handbook of Energy Crops. Unpublished.	1. In large doses, oil of eucalyptus, like so many essential oils has caused fatalities from intestinal irritation (Morton,1981). Death is reported from ingestion of 4–24 ml (0.14-0.81 oz = 0.27-1.6 Tablespoons) of essential oils, but recoveries are also reported for the same amount. Reported to cause contact dermatitis (Brooker et al, 1981). Sensitive persons may develop urticaria from handling the foliage and other parts of the plant (Watt and Bryer-Brandwijk, 1962).
4.08	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012]. 2.a-b. National Park Service. <i>Eucalyptus</i> . Golden Gate National Recreation Area Point Reyes National Seashore. March 2006. Brochure.	1. Bluegum Eucalyptus is highly flammable and should not be planted near structures, including homes. It is seldom killed by fire. The bark catches fire readily, and deciduous bark streamers and lichen epiphytes tend to carry fire into the canopy and to disseminate fire ahead of the main front. Other features of bluegum eucalyptus that promote fire spread include heavy litter fall, flammable oils in the foliage, and open crowns bearing pendulous branches, which encourages maximum updraft. 2.a. The annual shedding bark is one of the main reasons the trees present a significant fire hazard. The bark readily catches fire and streamers from the loose bark tend to carry fire into the canopy and cast fire ahead of the main front. 2.b. Leaf litter, the accumulation of dead, dry, oily leaves is extremely flammable.
4.09	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].	1. Bluegum Eucalyptus is shade intolerant.
4.10	1. " <i>Eucalyptus globulus</i> ." <i>horticopia.com</i> . Horticopia, 2011. Web. 20 March 2012. 2. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].	1. Requires good drainage and on sandstone but also found on limestone derived soils. This plant will grow in very dry soil. 2. Grows well on a variety of soils, but requires good drainage, low salinity, and a soil depth of at least 0.6 m (2').

4.11	<p>1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (<a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948</a> [Accessed: 19 March 2012]). 2. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].</p>	<p>1. Family: <i>Myrtaceae</i> . 2. Deciduous tree that generally grows from 30-55 mm (98'-180'). Some have attained 80 m (260') in CA.</p>
4.12	<p>1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012]. 2. National Park Service. <i>Eucalyptus</i> . Golden Gate National Recreation Area Point Reyes National Seashore. March 2006. Brochure.</p>	<p>1. Typically grows in dense monocultures. Most dense bluegum eucalyptus stands in California and Hawaii are almost devoid of understory vegetation, except for a few hardy grasses. 2. Dense blue gum stands in CA often form a monoculture, with little understory vegetation.</p>
5.01	<p>1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012]. 2. Boland, D.J. et al. <i>Forest Trees of Australia</i> . 5th ed. Collingswood, Victoria, Australia: CSIRO, 2006. Print.</p>	<p>1. Ecosystems in CA: Western hardwoods, Chaparral (mountain shrub), and Annual grasslands. 2. Occurs in woodlands and open or tall open forests.</p>
5.02	<p>1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (<a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948</a> [Accessed: 19 March 2012]).</p>	<p>1. Family: <i>Myrtaceae</i> .</p>
5.03	<p>1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (<a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948</a> [Accessed: 19 March 2012]).</p>	<p>1. Family: <i>Myrtaceae</i> . 2. Generally does not form a taproot; produces roots throughout the soil profile, rooting several feet deep in some soils.</p>
5.04	<p>1.a-b. Esser, Lora L. 1993. <i>Eucalyptus globulus</i>. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].</p>	<p>1.a. Deciduous tree that generally grows from 30-55 mm (98'-180'). Some have attained 80 m (260') in CA. 1.b. Generally does not form a taproot; produces roots throughout the soil profile, rooting several feet deep in some soils.</p>

6.01		
6.02	1.a-b. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2012, March 20].	1.a. Four 64-year-old coppice stands were studied after logging and all four stands had seedlings, making up more than 20% to the total number of stems. 1.b. Bluegum Eucalyptus also establishes from seed after fire.
6.03	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2012, March 20].	1. Natural or controlled hybrids of bluegum eucalyptus are known with <i>E. blakelyi</i> , <i>E. botryoides</i> , <i>E. cinera</i> , <i>E. cypellocarpa</i> , <i>E. ovata</i> , <i>E. rudis</i> , <i>E. tereticornis</i> (forest redgum eucalyptus), <i>E. urnigera</i> , and <i>E. viminalis</i> (manna eucalyptus)
6.04		
6.05	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2012, March 20]. 2. National Park Service. <i>Eucalyptus</i> . Golden Gate National Recreation Area Point Reyes National Seashore. March 2006. Brochure.	1. Flowers are pollinated by insects and hummingbirds. 2. Insects, primarily bees, and hummingbirds pollinate the flowers.
6.06	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].	1. Vegetative reproduction: Bluegum Eucalyptus sprouts readily from the bole, from stumps of all sizes and ages, from the lignotuber, and from the roots. The lignotuber can live for many years in the soil after stems die back. Bluegum Eucalyptus also reproduces by layering.
6.07	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2012, March 20].	1. Seed set begins at approximately 4-5 years of age.
7.01		



7.02	<p>1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (<a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948</a> [Accessed: 19 March 2012]). 2.a-d. Esser, Lora L. 1993. <i>Eucalyptus globulus</i>. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2012, March 20].</p>	<p>1. Economic importance: food additives, honey production, ornamental, fuelwood, essential oils, gum/resin, wood, folklore. 2.a. An important source for fuelwood, widely planted for pulpwood; wood is also used for fenceposts, poles, and crates. 2.b. Used for windbreaks, shelterbelts, and sight and sound barriers along highways. 2.c. Widely planted as an ornamental in CA and AZ. 2.d. Bluegum Eucalyptus oil has numerous applications including medical/pharmaceutical preparations (including veterinary care), flavoring agents (e.g., toothpastes, mouthwashes, and in the culinary industry) and as a fragrance component in the cosmetic industry.</p>
7.03	<p>1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (<a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948</a> [Accessed: 19 March 2012]).</p>	<p>1. Weed: potential seed containment.</p>
7.04	<p>1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i>. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012]. 2. Potts, B. 1990. The response of eucalypt populations to a changing environment. <i>Tasforests</i>, December: 179-193. 3. Cremer, K.W. 1977. Distance of seed dispersal in Eucalypts estimated from seed weights. <i>Australian Forest Research</i>, 7(4): 225-228. 4. Rejmánek, M. &amp; D.M. Richardson. 2011. Eucalypts (203-209). In: D. Simberloff &amp; M. Rejmánek, eds. <i>Encyclopedia of Biological Invasions</i>. Berkeley: University of California Press.</p>	<p>No adaptations for wind dispersal (i.e., lacks wings). 1. Capsules open immediately on ripening, and the seed is dispersed by wind within 1 to 2 months. Dispersal distance from one 40 m (131') tree, with winds of 10 km/h (6 mph), was 20 m (66'). 2. Seed dispersal in most eucalypt species is mainly by wind and gravity. 3. Wind is probably the only important agent of seed dispersal in the eucalypts, except possibly in species growing on river margins or flood plains where water could also transport the seed. 4. Relatively limited seed dispersal; planted eucalypts are very small and have no adaptations for dispersal (wings or fleshy). The passive release of seeds is undoubtedly aided by wind; however all rigorous studies of eucalypt seed dispersal and seedling spatial distribution show that in general seeds are dispersed over quite short distances that are in agreement with measurement of terminal descent velocity.</p>
7.05	<p>1. Rejmánek, M. &amp; D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff &amp; M. Rejmánek, eds. <i>Encyclopedia of Biological Invasions</i>. Berkeley: University of California Press.</p>	<p>1. Eucalypts should not be planted near rivers/streams. Temporarily flooded or eroded river/stream banks are suitable habitat for spontaneous establishment of seedlings. Additionally, their seeds can be dispersed for long distances by running water.</p>

7.06	1. Southern, S.G. et al. 2004. Review of gene movement by bats and birds and its potential significance for eucalypt plantation forestry. <i>Australian Forestry</i> , 67(1): 44-53.	1. Dispersal in animal droppings does not occur, although many birds eat eucalypt seed, because the seed does not survive passage through the alimentary canal of mammals and birds (Joseph 1986).
7.07	1. Duke, J.A. 1983. Handbook of Energy Crops. Unpublished.	1. No adaptations that would suggest that it could attach itself externally to animals. Seeds many, irregularly elliptical, 2-3 mm (0.079"-0.012") long, dull black.
7.08	1. Southern, S.G. et al. 2004. Review of gene movement by bats and birds and its potential significance for eucalypt plantation forestry. <i>Australian Forestry</i> , 67(1): 44-53.	1. Dispersal in animal droppings does not occur, although many birds eat eucalypt seed, because the seed does not survive passage through the alimentary canal of mammals and birds (Joseph 1986).
8.01	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].	1. Seed production, relatively small and abundant.
8.02	1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012].	1. Seed stored in soil under older stands germinate prolifically following logging or other disturbance. 2. Eucalypt seeds do not have dormancy and seed storage in the soil lasts less than a year.

8.03	<p>1. National Park Service. <i>Eucalyptus</i> . Golden Gate National Recreation Area Point Reyes National Seashore. March 2006. Brochure. 2. California Invasive Plant Council. Invasive Plants of California Wildlands. <a href="http://www.cal-ipc.org/ip/management/ipcw/pages/detailreport.cfm?usernumber=48&amp;surveynumber=182.php">http://www.cal-ipc.org/ip/management/ipcw/pages/detailreport.cfm?usernumber=48&amp;surveynumber=182.php</a>. Accessed: 23 March 2012. On-line. 3. Rejmánek, M. &amp; D.M. Richardson. 2011. Eucalypts (203-209). In: D. Simberloff &amp; M. Rejmánek, eds. Encyclopedia of Biological Invasions. Berkeley: University of California Press.</p>	<p>1. Generally, the most common form of stump treatment involves spraying Garlon 4 to a freshly cut eucalyptus stump because it is highly effective. 2. The most effective control of sprouting is achieved through application of triclopyr or glyphosate directly to the outer portion of the stump's cut surface at the time of tree felling. Triclopyr (as Garlon 4A and Garlon 3A) should be applied at the rate of 80% in an oil carrier. Imazapyr (as Arsenal or Stalker) can be used as an alternate to Garlon. Glyphosate (as Roundup or Rodeo) should be applied at 100%. Stumps should be cut as low to the ground as practical and brushed clean of sawdust to maximize absorption of the herbicide. For best results, herbicides should be applied to the freshly cut surface as soon after cutting as possible. Maximum success is achieved if cutting occurs in fall (Carrithers, pers. comm.). Complete control of sprouting on every stump will not always be achieved. Any resprouts, when three to five feet tall, should be treated with a foliar application of 2% of triclopyr or glyphosate. 3. Triclopyr or glyphosate applied to freshly cut stumps can greatly reduce resprouting.</p>
8.04	<p>1. Esser, Lora L. 1993. <i>Eucalyptus globulus</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [20 March 2012]. 2. National Park Service. <i>Eucalyptus</i> . Golden Gate National Recreation Area Point Reyes National Seashore. March 2006. Brochure.</p>	<p>1. Coppice method of regeneration is most common for short-rotation fuel biomass plantations because it allows for repeated harvests at short intervals and exploitation of exceptionally high early growth rates. 2. Their response to injury when cut is to undergo mass-sprouting from the base or trunk, and even from underground, sending out new shoots from the root system.</p>
8.05		