

Species Dataform and Scoresheet for *Wisteria sinensis* (Sims) DC and/or *Wisteria floribunda* (Willd.) DC (Chinese and/or Japanese wisteria)

<b>Species Dataform and Scoresheet</b>		
<b><i>Wisteria sinensis</i> (Sims) DC and/or <i>Wisteria floribunda</i> (Willd.) DC (Chinese and/or Japanese wisteria)</b>		
Native range: China and Japan		
Date evaluated: April 14, 2009		
	<b>Answer Choices</b>	<b>Response</b>
<b>Introductory Questions</b>		
<b>1. Current federal and state regulations</b>	Y/N	N
Comments: Appears on several invasive species lists (not laws) in the Southeastern U.S., including South Carolina (Severe threat), Tennessee (Rank 2, Significant threat), and the USFS Policy (Category 2, Species suspected to be invasive) (Invasive.org 2009). Virginia has listed Japanese Wisteria as a plant with Low invasiveness and Chinese Wisteria as a plant with Medium invasiveness. Chinese wisteria appears on invasive species lists from Georgia (Top ten) and Florida (Category II increased frequency but not altering plant community).		
<b>2. Occurrence in the horticultural trade</b>	Y/N	Y
Comments: Commonly cultivated (Weakley 2008).		
<b>3. North Carolina nativity</b>	Y/N	N
Comments: Native to China and Japan (Weakley 2008).		
<b>4. Presence in natural areas</b>	Y/N	Y
Comments: Escaped to urban, suburban, and rural forests and woodlands in North Carolina (Weakley 2008). Exotic Wisteria may successfully invade natural habitats throughout the United States (Trusty et al. 2007a). Distributed along roadsides throughout the Southeastern U.S. (Trusty et al. 2007a). Common along forest edges, roadsides, ditches, and rights-of-way (Remaley 2005).		
<b>5. Non-invasive cultivars</b>	Y/N	N
Comments:		
	Maximum Point Value	Number of Points Assigned
<b>Section 1. Ecological Impact</b>		
<b>1a. Impact on abiotic ecosystem processes</b>	10	0
Comments: Unknown impact on abiotic ecosystem processes.		
<b>1b. Impact on plant community structure</b>	20	15
Comments: Infestations of Wisteria strangle or shade-out native trees and shrubs (Trusty et al. 2007b). Few or no other plant species are found in dense thickets of Wisteria (Trusty et al. 2007b). Exotic Wisteria displaces native herbs, vines, shrubs and trees (Swearingen et al. 2002). Wisteria may climb and kill trees, which opens the forest canopy and increases light levels on the forest floor (Swearingen et al. 2002).		
<b>1c. Impact on species of special concern</b>	5	0
Comments: Unknown impact on species of special concern.		
<b>1d. Impact on higher trophic levels</b>	5	0
Comments: Unknown impact on higher trophic levels.		

<b>Section 1. Subrank</b>	<b>40</b>	<b>15</b>
<b>Section 2. Current Distribution and Potential for Expansion</b>		
<b>2a. Local range expansion</b>	7	1
Comments: Wisteria continues to spread in the southeastern United States in an ongoing invasion of watersheds and managed forests (Trusty et al. 2007b).		
<b>2b. Long-distance dispersal potential</b>	13	8
Comments: Wisteria seeds may be carried great distances in water (Swearingen et al. 2002). Large seeds are water-dispersed along riparian areas and not animal-dispersed (Miller 2003).		
<b>2c. Reproductive characteristics</b>	8	6
Comments: Easily propagated, grows vigorously (Trusty et al. 2007a). Propagated from cuttings and seed (Trusty et al. 2007b). Regenerates after being cut (Trusty et al. 2007b). Shade tolerant and capable of growing in a variety of soil and moisture types (Trusty et al. 2007b). Runners root at nodes (Miller 2003).		
<b>2d. Range of communities</b>	6	2
Comments: Escaped to urban, suburban, and rural forests and woodlands in North Carolina (Weakley 2008). Distributed in natural and managed forests, and riparian areas throughout the Southeastern U.S. (Trusty et al. 2007a). Natural communities of North Carolina (Shafale and Weakley 1990) = River floodplains		
<b>2e. Similar habitats invaded elsewhere</b>	6	0
Comments:		
<b>Section 2. Subrank</b>	<b>40</b>	<b>17</b>
<b>Section 3. Management Difficulty</b>		
<b>3a. Herbicidal control</b>	5	0
Comments: Systemic herbicides, such as triclopyr may be effective for large infestations (Swearingen et al. 2002). Systemic herbicides, such as glyphosate or triclopyr may be applied to the cross sections of vines that are established around native plants or where they have grown into the canopy (Remaley 2005).		
<b>3b. Nonchemical control methods</b>	2	1
Comments: Small infestations may be cut (Swearingen et al. 2002). Small populations of cut or trailing vines may be cut back as close to the root collar as possible, but this technique is labor intensive and must be repeated until root stores are depleted (Remaley 2005).		
<b>3c. Necessity of individual treatments</b>	2	2
Comments: In areas where vines have become established around desirable native vegetation or climbed into the canopy, stems should be cut close to ground level and treated with herbicides in a cut stump application (Remaley 2005). Stump treatments should precede foliar applications to avoid damage to surrounding native plants (Remaley 2005).		
<b>3d. Average distribution</b>	2	1
Comments: Wisteria may form dense thickets (Trusty et al. 2007b).		
<b>3e. Likelihood for reestablishment</b>	2	2

Comments: Regenerates after being cut (Trusty et al. 2007b). Wisteria will resprout after cutting if root stores are left intact (Remaley 2005)		
<b>3f. Accessibility of invaded areas</b>	2	1
Comments: Wisteria is shade tolerant and may be widespread in forested habitats (Trusty et al. 2007b).		
<b>3g. Impact on native species and environment</b>	5	2
Comments: Resembles American wisteria ( <i>Wisteria frutescens</i> ) and trumpet creeper ( <i>Campsis radicans</i> ) (Swearingen et al. 2002). Nontarget plants may be harmed or killed by herbicides (Miller 2003).		
<b>Section 3. Subrank</b>	<b>20</b>	<b>9</b>
<b>Section 4. Benefits and Value</b>		
<b>4a. Estimated wholesale value</b>	-7	-3
Comments: The annual estimated wholesale value attributed to this species is \$8,541,600 (Trueblood 2009).		
<b>4b. Percentage of total sales</b>	-5	-1
Comments: Among the producers that sell this species, the highest percentage of total sales attributed to this species from any one grower is estimated to be 1-5% (Trueblood 2009).		
<b>4d. Ecosystem services</b>	-1	0
Comments:		
<b>4e. Wildlife habitat</b>	-1	0
Comments:		
<b>4f. Cultural and social benefits</b>	-1	0
Comments:		
<b>Section 4. Subrank</b>	<b>-15</b>	<b>-4</b>
<b>Overall Score</b>	<b>100</b>	<b>37</b>
<b>Overall Recommendation:</b> Moderately weedy and recommended for use with specific guidance – These species have less than high ecological impact, distribution and invasive potential, and management difficulty in relation to economic value. These plants should not be grown in close proximity to natural areas that have communities similar to those where this plant has been found to naturalize or near natural areas that have sensitive or threatened plants and/or natural communities. (Overall Score: 34 – 66)		
<b>Summary:</b> <i>Wisteria floribunda</i> and/or <i>W. sinensis</i> (Japanese and/or Chinese wisteria) is moderately weedy in North Carolina and may be recommended for horticultural use with specific guidance by the North Carolina Nursery and Landscape Association. Exotic wisteria affects urban, suburban, and rural forests and woodlands in North Carolina. In the Southeastern U.S., exotic Wisteria is distributed in natural and managed forests, especially in riparian areas, and spreads from ornamental plantings. The ecological impacts of exotic Wisteria are largely unknown, but dense thickets of this species may shade out native herbs and shrubs and displace native vegetation. Wisteria may climb and kill trees, which opens the forest canopy and increases light levels on the forest floor. The difficulty of managing Wisteria is moderate considering the availability of control methods, but management may be costly considering the time and labor required to effectively treat stands of this species. <i>Wisteria floribunda</i> and <i>W. sinensis</i> are economically valuable to the nursery industry.		

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