

TIPPC Plant Assessment Form

For use with “[Criteria for Categorizing Invasive Non-Native Plants that Threaten Wildlands](#)”
by the California Invasive Plant Council and the Southwest Vegetation Management Association

Version February 2003, modified July 2009 for the Texas Invasive Plant & Pest Council –
www.texasinvasives.org

Table 1. Species and Evaluator Information

Species name (Latin binomial):	Nandina domestica
Synonyms:	
Common names:	Sacred bamboo
Evaluation date (mm/dd/yy):	4/12/2011
Evaluator #1 Name/Title:	Travis Gallo/Ecologist
Affiliation:	The Lady Bird Johnson Wildflower Center
Phone numbers:	512-232-0116
Email address:	tgallo@wildflower.org
Address:	
Evaluator #2 Name/Title:	enter text here
Affiliation:	enter text here
Phone numbers:	enter text here
Email address:	enter text here
Address:	enter text here

Section below for list committee use—please leave blank

List committee members:	enter text here
Committee review date:	enter text here
List date:	enter text here
Re-evaluation date(s):	enter text here

General comments on this assessment:

Originally assessed for City of Austin Invasive Species Management Plan

Table 2. Criteria, Section, and Overall Scores

Species: Nandina domestica

Region: Texas

1.1	Impact on abiotic ecosystem processes	U	No Information
1.2	Impact on plant community	B	3
1.3	Impact on higher trophic levels	C	3
1.4	Impact on genetic integrity	D	No Information

<p>Impact</p> <p><i>Enter four characters from Q1.1-1.4 below:</i></p> <p>U B C D</p> <p><i>Using matrix, determine score and enter below:</i></p> <p>C</p>
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2.1	Role of anthropogenic and natural disturbance	A	Other Pub. Mat'l
2.2	Local rate of spread with no management	B	Observational
2.3	Recent trend in total area infested within state	B	Observational
2.4	Innate reproductive potential Wksht A	A	Other Pub. Mat'l
2.5	Potential for human-caused dispersal	A	Other Pub. Mat'l
2.6	Potential for natural long-distance dispersal	A	Other Pub. Mat'l
2.7	Other regions invaded	A	Other Pub. Mat'l

<p>Invasiveness</p> <p><i>Enter the sum total of all points for Q2.1-2.7 below:</i></p> <p>19</p> <p><i>Use matrix to determine score and enter below:</i></p> <p>A</p>
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<p>Plant Score</p> <p><i>Using matrix, determine Overall Score and Alert Status from the three section scores and enter below:</i></p> <p>Medium</p> <p>No Alert</p>

3.1	Ecological amplitude/Range	A	Other Pub. Mat'l
3.2	Distribution/Peak frequency Wksht C	A	Other Pub. Mat'l

<p>Distribution</p> <p><i>Using matrix, determine score and enter below:</i></p> <p>A</p>

<p>Documentation</p> <p><i>Average of all questions</i></p> <p>2.8</p>
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Table 3. Documentation (List all references at end of PAF. Short citations may be used in Table 3.)

Impacts		
Question 1.1 Impact on abiotic ecosystem processes	U	No Information back
Identify ecosystem processes impacted: No known impact on abiotic ecosystem processes		
Sources of information: Observational, Gallo		
Question 1.2 Impact on plant community composition, structure, and interactions	B	Other pub. Mat'l
Identify type of impact or alteration: Dominates forest understory and outcompetes native vegetation (Miller, 2003; UF/IFAS 2008). Displaces native species and disrupts plant communities (USDA Forest Service 2006). Nandina is listed as a Class I invasive species by the Florida Exotic Pest Plant Council which means that it is "actively disrupting plant communities" (Scheper, 2008).		
Sources of information: enter text here Miller, J.H. (2003) Nonnative invasive plants of southern forests: a field guide for identification and control. Gen.Tech. Rep. SRS-62. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 93 p. Scheper, J. (2008) <i>Nandina domestica</i> . FloriData. (http://www.floridata.com/ref/N/nand_dom.cfm) Accessed: April 6, 2009. UF/IFAS Center for Aquatic and Invasive Plants. 2008. <i>Nandina domestica</i> . University of Florida. (http://plants.ifas.ufl.edu/node/281) Accessed: April 12, 2011. USDA Forest Service, Forest Health Staff. (2006) Weed of the Week, Nandina, WO 04-28-06. (http://www.invasive.org/weedcd/pdfs/wow/nandina.pdf) Accessed: April 12, 2011.		
Question 1.3 Impact on higher trophic levels	C	Other pub. Mat'l
Identify type of impact or alteration: Can be toxic to grazing animals (Russell et al, 1997)		
Sources of information: Dr. Alice B. Russell, Dr. James W. Hardin, Dr. Larry Grand, Plant Pathology; and Dr. Angela Fraser. 1997. "Poisonous Plants of North Carolina". North Carolina State University Accessed 12 April 2011: www.ces.ncsu.edu/depts/hort/consumer/poison/Nandido.htm .		
Question 1.4 Impact on genetic integrity	D	No Information back
Identify impacts: No known hybridization		
Sources of information: Observational, Gallo		
Invasiveness		
Question 2.1 Role of anthropogenic and natural disturbance in establishment	A	Other Pub. Mat'l
Describe role of disturbance: Can establish in undisturbed woodlands.		

Sources of information: Stone, Katharine R. 2009. <i>Nandina domestica</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Accessed 13 April 2011: http://www.fs.fed.us/database/feis/ .	
Question 2.2 Local rate of spread with no management	B Observational
Describe rate of spread: In local areas it seems to be increasing, but not doubling <10 years.	
Sources of information: Gallo, Observational	
Question 2.3 Recent trend in total area infested within state	B Observational
Describe trend: <i>N. domestica</i> has steadily increased in central, north, and east Texas. But the range seems to be static, but the overall area being infested in these regions is increasing.	
Sources of information: Gallo, observational	
Question 2.4 Innate reproductive potential	A Other Pub. Mat'l back
Describe key reproductive characteristics:	
Sources of information: Cherry, Hillary M. 2002. Ecophysiology and control of <i>Nandina domestica</i> . Gainesville, FL: University of Florida. 74 p. Thesis Stone, Katharine R. 2009. <i>Nandina domestica</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Accessed 13 April 2011: http://www.fs.fed.us/database/feis/ .	
Question 2.5 Potential for human-caused dispersal	A Other Pub. Mat'l back
Identify dispersal mechanisms: Various websites and nurseries list it as a common plant sold and bought as an ornamental	
Sources of information: Welch, W. 2002. <i>Nandinas</i> are excellent landscape plants. Horticulture Updates, Texas A&M University Horticulture. Accessed 13 April 2011.	
Question 2.6 Potential for natural long-distance dispersal	A Other Pub. Mat'l back
Identify dispersal mechanisms: Berries are readily eaten by birds and mammals. They are also dispersed by water.	
Sources of information: Miller, J.H. (2003) Nonnative invasive plants of southern forests: a field guide for identification and control. Gen.Tech. Rep. SRS-62. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research	

Station. 93 p.	
Stone, Katharine R. 2009. Nandina domestica. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Accessed 13 April 2011: http://www.fs.fed.us/database/feis/ .	
Question 2.7 Other regions invaded	C Other Pub. Mat'l back
Identify other regions: Has invaded most southern forest throughout the US. Particularly TN, FL, GA, LA, NC, VA.	
Sources of information:	
Stone, Katharine R. 2009. Nandina domestica. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Accessed 13 April 2011: http://www.fs.fed.us/database/feis/ .	
Distribution	
Question 3.1 Ecological amplitude/Range	A Other Pub. Mat'l back
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: enter text here	
Refer to Worksheet B	
Sources of information: enter text here	
Invaders of Texas Citizen Science Program (Accessed 9 May 2011: http://texasinvasives.org/observations/search.php?satellite=&sn=NADO&cn=).	
USDA PLANTS Database (Accessed 9 May 2011: http://plants.usda.gov/java/county?state_name=Texas&statefips=48&symbol=NADO)	
Question 3.2 Distribution/Peak frequency	A Other Pub. Mat'l back
Describe distribution: enter text here	
Refer to Worksheet B	
Sources of information: enter text here	
Invaders of Texas Citizen Science Program (Accessed 9 May 2011: http://texasinvasives.org/observations/search.php?satellite=&sn=NADO&cn=).	
USDA PLANTS Database (Accessed 9 May 2011: http://plants.usda.gov/java/county?state_name=Texas&statefips=48&symbol=NADO)	

References

List full citations for all references used in the PAF (short citations such as DiTomaso and Healy 2007 may be used in table above). **Websites** should include the name of the organization and the date accessed. **Personal communications** should include the affiliation of the person providing the observation. Enter each reference on a separate line; the table will expand as needed.

Examples:

Mitich, L. W. 1995. Intriguing world of weeds: Tansy ragwort. *Weed Technology*. 9: 402-404.

HEAR. Date unknown. *Emex spinosa*. Hawaiian Ecosystems at Risk. www.hear.org/pier/species/emex_spinosa.htm. Accessed March 17, 2009

DiTomaso, J. M. Personal communication from Dr. Joe DiTomaso, Dept. of Plant Science, UC Davis. Email received 3/17/09.

Miller, J.H. (2003) Nonnative invasive plants of southern forests: a field guide for identification and control. Gen.Tech. Rep. SRS-62. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 93 p.

Scheper, J. (2008) *Nandina domestica*. FloriData. (http://www.floridata.com/ref/N/nand_dom.cfm) Accessed: April 6, 2009.

UF/IFAS Center for Aquatic and Invasive Plants. 2008. *Nandina domestica*. University of Florida. (<http://plants.ifas.ufl.edu/node/281>) Accessed: April 12, 2011.

USDA Forest Service, Forest Health Staff. (2006) Weed of the Week, *Nandina*, WO 04-28-06. (<http://www.invasive.org/weeded/pdfs/wow/nandina.pdf>) Accessed: April 12, 2011.

Stone, Katharine R. 2009. *Nandina domestica*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Accessed 13 April 2011: <http://www.fs.fed.us/database/feis/>.

Worksheet A

Reaches reproductive maturity in 2 years or less	1
Dense infestations produce >1,000 viable seed per square meter	2
Populations of this species produce seeds every year.	1
Seed production sustained over 3 or more months within a population annually	1
Seeds remain viable in soil for three or more years	0
Viable seed produced with <i>both</i> self-pollination and cross-pollination	0
Has quickly spreading vegetative structures (rhizomes, roots, etc.) that may root at nodes	0
Fragments easily and fragments can become established elsewhere	0
Resprouts readily when cut, grazed, or burned	1
	6 1
	A
Note any related traits: enter text here	

Worksheet B - Texas Ecoregions (Griffen et al, 2004).

* A. means >50% of type occurrences are invaded; B means >20% to 50%;

C. means >5% to 20%; D. means present but ≤5%; U. means unknown

Code	Level III	Level IV	Score
ER01	Arizona/New Mexico Mountains	Chihuahuan Desert Slopes	
		Montane Woodlands	
ER02	Chihuahuan Deserts	Chihuahuan Basins and Playas	
		Chihuahuan Desert Grasslands	A
		Low Mountains and Bajadas	
		Chihuahuan Montane Woodlands	
		Stockton Plateau	
ER03	High Plains	Rolling Sand Plains	
		Canadian/Cimarron High Plains	
		Llano Estacado	
		Shinnery Sands	
		Arid Llano Estacado	
ER04	Southwestern Tablelands	Canadian/Cimarron Breaks	
		Flat Tablelands and Valleys	
		Caprock Canyons, Badlands, and Breaks	
		Semiarid Canadian Breaks	
ER05	Central Great Plains	Red Prairie	
		Broken Red Plains	A
		Limestone Plains	
ER06	Cross Timbers	Eastern Crosstimbers	A
		Western Crosstimbers	A
		Grand Prairie	A
		Limestone Cut Plain	
		Carbonate Cross Timbers	
ER07	Edwards Plateau	Edwards Plateau Woodland	A
		Llano Uplift	A
		Balcones Canyonlands	A
		Semiarid Edwards Plateau	
ER08	Southern Texas Plains	Northern Nueces Alluvial Plains	
		Semiarid Edwards Bajadas	
		Texas-Tamaulipan Thornscrub	
		Rio Grande Floodplain and Terraces	
ER09	Texas Blackland Prairies	Northern Blackland Prairies	A
		Southern Blackland/Fayette Prairie	A
		Floodplains and Low Terraces	
ER10	East Central Texas Plains	Northern Post Oak Savanna	
		Southern Post Oak Savanna	
		San Antonio Prairie	
		Northern Prairie Outliers	
		Bastrop Lost Pines	A
		Floodplains and Low Terraces	
ER11	Western Gulf Coastal Plain	Northern Humid Gulf Coastal Prairies	A
		Southern Subhumid Gulf Coastal Prairies	
		Floodplains and Low Terraces	
		Coastal Sand Plain	
		Lower Rio Grande Valley	
		Lower Rio Grande Alluvial Floodplain	
		Texas-Louisiana Coastal Marshes	
		Mid-Coast Barrier Islands and Coastal Marshes	C
Laguna Madre Barrier Islands and Coastal Marshes			
ER12	South Central Plains	Tertiary Uplands	A
		Floodplains and Low Terraces	
		Pleistocene Fluvial Terraces	
		Southern Tertiary Uplands	A
		Flatwoods	A
		Red River Bottomland	