

Assessment date 16 October 2018 Prepared by Wiley and Lieurance

<i>Gaura lindheimeri</i> ALL ZONES		Answer	Score
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 Florida's USDA climate zones (0-low; 1-intermediate; 2-high) North Zone: suited to Zones 8, 9 Central Zone: suited to Zones 9, 10 South Zone: suited to Zone 10	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 habitats with periodic inundation North Zone: mean annual precipitation 50-70 inches Central Zone: mean annual precipitation 40-60 inches South Zone: mean annual precipitation 40-60 inches	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	y	2
3.03	Weed of agriculture	unk	
3.04	Environmental weed	unk	
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	unk	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	unk	-1
4.05	Toxic to animals	n	0
4.06	Host for recognised pests and pathogens	n	0
4.07	Causes allergies or is otherwise toxic to humans	n	0
4.08	Creates a fire hazard in natural ecosystems	unk	0
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.	unk	0
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	unk	0
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	n	0
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	y	1
6.04	Self-compatible or apomictic	y	1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	y	1
6.07	Minimum generative time (years)	1	1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	unk	-1
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	unk	-1
7.04	Propagules adapted to wind dispersal	unk	-1
7.05	Propagules water dispersed	unk	-1
7.06	Propagules bird dispersed	unk	-1
7.07	Propagules dispersed by other animals (externally)	unk	-1
7.08	Propagules dispersed by other animals (internally)	unk	-1
8.01	Prolific seed production	unk	-1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	unk	-1
8.03	Well controlled by herbicides	unk	1
8.04	Tolerates, or benefits from, mutilation or cultivation	unk	-1
8.05	Effective natural enemies present in U.S.	?	
Total Score			4
Implemented Pacific Second Screening			yes
Risk Assessment Results			EVAL

section	# questions answered	satisfy minimum?
A		9 yes
B		7 yes
C		12 yes
total		28 yes

	Reference	Source data
1.01		Cultivated, but no evidence of selection for reduced weediness
1.02		Skip to 2.01
1.03		Skip to 2.01
2.01	<p>1. Global Plant Hardiness Zones for Phytosanitary Risk Analysis. http://naldc.nal.usda.gov/download/36586/PDF (Accessed: 14 June 2017) 2. US National Plant Germplasm System. https://npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?id=458527 (Accessed: 14 June 2017) 3. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 4. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 5. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 6. GardensOnline. http://www.gardensonline.com.au/GardenShed/PlantFinder/Show_1410.aspx (Accessed: 14 June 2017) 7. Arizona State University. http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/gauralindheimeri.html (Accessed: 14 June 2017)</p>	<p>1. Figure 3. Florida North Zone: Hardiness zones 8 and 9. Central Zone: Hardiness zones 9 and 10. South Zone: Hardiness zone 10. 2. Native to Northern America, United States: Texas and Louisiana and naturalized in Australia 3. "native to Texas and Louisiana" 4. "native to southeastern Texas, Louisiana, and Mexico"; "hardy in zones 5-9" 5. "Zone: 5 to 9" 6. Zones 7-10 7. "USDA 5-11"</p>
2.02		Native range well known
2.03	<p>1. The University of Melbourne. Köppen-Geiger Climate Map of the World. http://people.eng.unimelb.edu.au/mpeel/koppen.html (Accessed: 14 June 2017) 2. US National Plant Germplasm System. https://npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?id=458527 (Accessed: 14 June 2017) 3. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 4. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017)</p>	<p>1. Native or naturalized to Köppen-Geiger Climate Zones: BWh, BWk, BSh, and Cfa. 2. Native to Northern America, United States: Texas and Louisiana and naturalized in Australia 3. "native to Texas and Louisiana" 4. "native to southeastern Texas, Louisiana, and Mexico". Note Cfa is the Köppen-Geiger Climate Zone that covers most of North and Central Florida</p>
2.04	<p>1. Climate Charts. World Climate Maps. http://www.climate-charts.com/World-Climate-Maps.html#rain (Accessed: 14 June 2017) 2. US National Plant Germplasm System. https://npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?id=458527 (Accessed: 14 June 2017) 3. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 4. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017)</p>	<p>1. Native and naturalized in areas with rainfall within these ranges. 2. Native to Northern America, United States: Texas and Louisiana and naturalized in Australia 3. "native to Texas and Louisiana" 4. "native to southeastern Texas, Louisiana, and Mexico"</p>

2.05	<p>1. US National Plant Germplasm System. https://npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?id=458527 (Accessed: 14 June 2017) 2. I Can Garden. http://www.icangarden.com/neweden/blushingbutterflies.htm (Accessed: 14 June 2017) 3. Gardening Express. https://www.gardeningexpress.co.uk/p10039-gaura-lindheimeri-melody/ (Accessed: 14 June 2017)</p>	<p>1. Naturalized in Australia 2. Introduced to Canada 3. Introduced to the UK</p>
3.01	<p>1. US National Plant Germplasm System. https://npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?id=458527 (Accessed: 14 June 2017) 2. High Country Gardens. http://www.highcountrygardens.com/perennial-plants/unique-plants/gaura-lindheimeri-intermountain-beauty (Accessed: 14 June 2017) 3. Anisko, Tomasz. When Perennials Bloom: An Almanac for Planning and Planting. https://books.google.com/books?id=ODYpMZXFnsQc&pg=PA207&lpg=PA207&dq=%22Gaura+lindheimeri%22+naturalized&source=bl&ots=HGnteUODLI&sig=5N_aQAQy_tNV2kWzu2ZTsE-0T4U&hl=en&sa=X&ved=0ahUKEwj0zJL8xdfUAhWJIYKHVZVATs4ChDoAQghMAA#v=onepage&q=%22Gaura%20lindheimeri%22%20naturalized&f=false (Accessed: 14 June 2017)</p>	<p>1. Naturalized in Australia 2. "'Intermountain Beauty' is a selected form of native Gaura that has naturalized in the Salt Lake City area" 3. "It has become naturalized in parts of Australia"</p>
3.02	<p>1. Queensland Government. https://keyserver.lucidcentral.org/weeds/data/media/Html/oenot_hera_lindheimeri.htm (Accessed: 15 June 2017) 2. Global Compendium of Weeds. http://www.hear.org/gcw/species/gaura_lindheimeri/ (Accessed: 15 June 2017)</p>	<p>1. "Butterfly bush (<i>Oenothera lindheimeri</i>) was recently listed as a priority environmental weed in at least one Natural Resource Management region and was also recently declared as a noxious weed in New South Wales. At present it is mainly a weed of disturbed sites and roadsides close to where it has been cultivated, however it is also beginning to spread into more natural areas (e.g. sandy sites and riparian zones)." 2. Classified as a garden thug</p>
3.03	<p>1. Global Compendium of Weeds. http://www.hear.org/gcw/species/gaura_lindheimeri/ (Accessed: 15 June 2017)</p>	<p>1. Classified as an agricultural weed</p>
3.04	<p>1. Queensland Government. https://keyserver.lucidcentral.org/weeds/data/media/Html/oenot_hera_lindheimeri.htm (Accessed: 15 June 2017) 2. Australian Capital Territory Government. http://www.fotpin.org.au/docs/Weed-ControlGuidelines_8th_Jul_2013.pdf (Accessed: 15 June 2017) 3. Global Compendium of Weeds. http://www.hear.org/gcw/species/gaura_lindheimeri/ (Accessed: 15 June 2017)</p>	<p>1. "Butterfly bush (<i>Oenothera lindheimeri</i>) was recently listed as a priority environmental weed in at least one Natural Resource Management region and was also recently declared as a noxious weed in New South Wales. At present it is mainly a weed of disturbed sites and roadsides close to where it has been cultivated, however it is also beginning to spread into more natural areas (e.g. sandy sites and riparian zones)." 2. Low risk environmental weed 3. Classified as an environmental weed</p>
3.05	<p>1. Floridata. http://www.floridata.com/Plants/Onagraceae/Gaura%20lindheimeri/715 (Accessed: 14 June 2017) 2. Global Compendium of Weeds. http://www.hear.org/gcw/scientificnames/scinameg.htm (Accessed: 15 June 2017)</p>	<p>1. "There are about 20 species of Gaura, all native to the New World. Some are common roadside weeds in the southeastern United States." 2. <i>Gaura coccinea</i>, <i>Gaura drummondii</i>, and <i>Gaura sinuata</i> are classified as noxious weeds</p>

4.01	<p>1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. North Creek Nurseries. http://www.northcreeknurseries.com/plantName/Gaura-lindheimeri-Whirling-Butterflies (Accessed: 16 June 2017) 3. Floridata. https://floridata.com/Plants/Onagraceae/Gaura%20lindheimeri/715 (Accessed: 16 June 2017)</p>	1,2,&3. No description of these characteristics
4.02		No evidence
4.03		No evidence
4.04	<p>1. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 2. Swallowtail Garden Seeds. https://www.swallowtailgardenseeds.com/tips_lists/deer_resistant_list.html (Accessed: 16 June 2017) 3. Knollwood Garden Center. http://www.knollwoodgardens.com/media/Perennial%20flyer%20%20deer%20resistant.pdf (Accessed: 16 June 2017)</p>	1. "It is not favored by deer." 2. Deer seldom browse this plant. 3. Resistant to deer, but not rabbits
4.05	<p>1. Crescent Bloom. http://crescentbloom.com/plants/specimen/GA/Gaura%20lindheimeri.htm (Accessed: 16 June 2017) 2. Gardeners' World. Effects: No toxic effects reported for this plant. (Accessed: 16 June 2017)</p>	1. "Internal poison:no, Dermatologic poison:no, Livestock poison:no" 2. "Effects: No toxic effects reported for this plant."
4.06	<p>1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 3. University of Florida Institute of Food and Agricultural Sciences. http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/gaulina.pdf (Accessed: 14 June 2017) 4. Arizona State University. http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/gauralindheimeri.html (Accessed: 16 June 2017)</p>	1. "No serious insect or disease problems. Root rot may occur in heavy and/or poorly drained soils. Rust and powdery mildew may also occur. Watch for aphids, whitefly and flea beetles." 2. "Guara has few insect or disease problems, although Japanese beetles frequent the flowers in my yard and root rot may be an issue in heavy, poorly drained soils. Leaf spots, rust and mildews occasionally affect plants... Gaura is one of many host plants of the caterpillars of the white-lined sphinx moth." 3. "Pest resistance: long-term health usually not affected by pests"; "Pests and Diseases: No pests or diseases are of major concern." 4. "Disease and pests: None"
4.07	<p>1. The Guardian. https://www.theguardian.com/lifeandstyle/2013/may/03/low-allergen-garden-pollen-asthma-hay-fever (Accessed: 16 June 2017) 2. Landscape Online. http://www.landscapeonline.com/research/article-a.php?number=4241 (Accessed: 16 June 2017) 3. Crescent Bloom. http://crescentbloom.com/plants/specimen/GA/Gaura%20lindheimeri.htm (Accessed: 16 June 2017) 4. Gardeners' World. Effects: No toxic effects reported for this plant. (Accessed: 16 June 2017)</p>	1. Listed as a grass alternative for allergy sufferers 2. Listed on American Lung Association of Virginia Breath Easy(R) Office Plant List 3. "Internal poison:no, Dermatologic poison:no, Livestock poison:no" 4. "Effects: No toxic effects reported for this plant."
4.08	<p>1. Birds & Blooms. http://www.birdsandblooms.com/blog/fire-resistant-plants-for-your-landscape/ (Accessed: 16 June 2017)</p>	1. Listed as a fire resistant plant

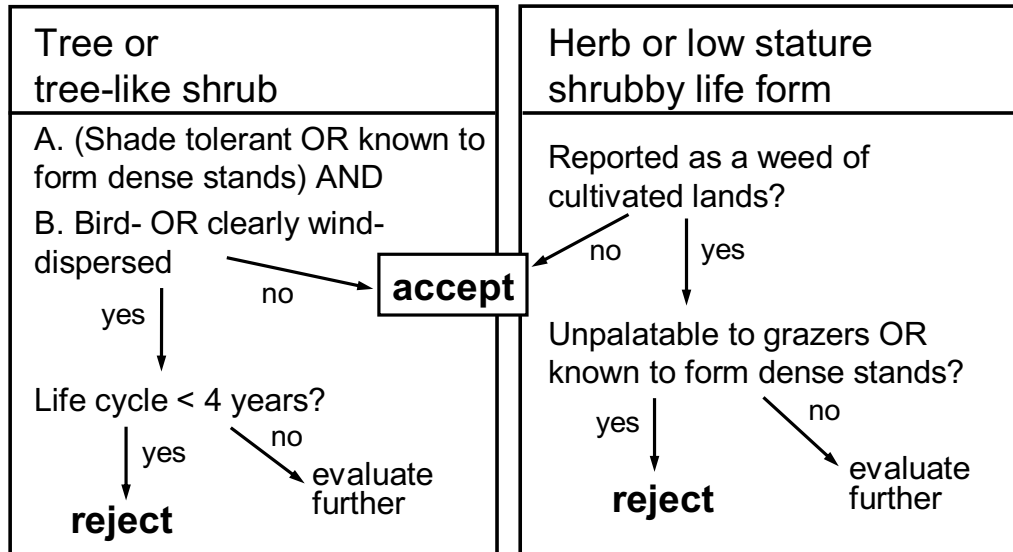
4.09	<p>1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. GardensOnline. http://www.gardensonline.com.au/GardenShed/PlantFinder/Show_1410.aspx (Accessed: 14 June 2017) 3. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 4. Arizona State University. http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/gauralindheimeri.html (Accessed: 14 June 2017)</p>	<p>1. "Sun: Full sun" 2. "Light: Full sun" 3. "Grow gaura in full sun." 4. "Light: Full sun to partial shade"</p>
4.10	<p>1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 3. University of Florida Institute of Food and Agricultural Sciences. http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/gaulina.pdf (Accessed: 14 June 2017)</p>	<p>1, "Best grown in sandy, loamy, well-drained soils in full sun. Good drainage is essential." 2. "It prefers light soils, but tolerates clay, as long as it is well-drained." 3. "Soil tolerances: acidic; sand; loam; clay"</p>
4.11	<p>1. USDA Plants Database. https://plants.usda.gov/core/profile?symbol=OELI2 (Accessed: 14 June 2017)</p>	<p>1. "Growth Habit: Forb/herb"</p>
4.12		<p>No evidence</p>
5.01	<p>1. Crescent Bloom. http://crescentbloom.com/plants/specimen/GA/Gaura%20lindheimeri.htm (Accessed: 16 June 2017)</p>	<p>1. "Terrestrial"</p>
5.02	<p>1. USDA Plants Database. https://plants.usda.gov/core/profile?symbol=OELI2 (Accessed: 14 June 2017)</p>	<p>1. "Growth Habit: Forb/herb"</p>
5.03	<p>1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. Floridata. http://www.floridata.com/Plants/Onagraceae/Gaura%20lindheimeri/715 (Accessed: 14 June 2017) 3. USDA Plants Database. https://plants.usda.gov/core/profile?symbol=OELI2 (Accessed: 14 June 2017)</p>	<p>1. "Type: Herbaceous perennial" 2. "herbaceous" 3. "Family: Onagraceae"</p>
5.04	<p>1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. North Creek Nurseries. http://www.northcreeknurseries.com/plantName/Gaura-lindheimeri-Whirling-Butterflies (Accessed: 16 June 2017) 3. Floridata. https://floridata.com/Plants/Onagraceae/Gaura%20lindheimeri/715 (Accessed: 20 June 2017)</p>	<p>1,2,&3. No evidence of these specialized structures</p>
6.01		<p>No evidence</p>

6.02	<p>1. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 2. Arizona State University. http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/gauralindheimeri.html (Accessed: 14 June 2017)</p>	<p>1. "The species and some cultivars are easily propagated by seed sown in spring or fall, and can also be propagated by division in spring (a challenge with the large root) or from basal cuttings taken in summer. Many cultivars are vegetatively propagated only." 2. "Propagation: Seed, cutting. Can reseed in urban landscapes."</p>
6.03	<p>1. B. L. Carr, D. P. Gregory, P. H. Raven and W. Tai. 1986. Experimental Hybridization and Chromosomal Diversity within <i>Gaura</i> sect. <i>Gaura</i> (Onagraceae). <i>Systematic Botany</i> 11(1): 98-111. (Accessed: 16 June 2017)</p>	<p>1. "Though natural hybrids of <i>G. lindheimeri</i>-<i>G. longiflora</i> have been reported, the degree of interspecific fertility in section <i>Gaura</i> is unknown...Natural hybrids with morning-opening flowers occur in mixed populations of <i>G. longiflora</i> and <i>G. lindheimeri</i>, and <i>G. demareei</i> has been reported as far south as Nacogdoches and Harrison counties, Texas (Hoff and Nixon 1977)."</p>
6.04	<p>1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. Floridata. http://www.floridata.com/Plants/Onagraceae/Gaura%20lindheimeri/715 (Accessed: 14 June 2017) 3. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 16 June 2017) 4. Outside Pride. http://www.outsidepride.com/seed/flower-seed/gaura-flower-seed.html (Accessed: 20 June 2017)</p>	<p>1. "May self-seed if spent flower stems are left in place in the fall." 2. "does tend to self sow" 3. "will also readily self-sow in favorable conditions" 4. "self-sows its own flower seeds easily"</p>
6.05	<p>1. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 2. Outside Pride. http://www.outsidepride.com/seed/flower-seed/gaura-flower-seed.html (Accessed: 16 June 2017) 3.)Carr, Bruce L.; Crisci, Jorge V.; Hoch, Peter C. 1990. A cladistic analysis of the genus <i>Gaura</i> (Onagraceae) <i>Systematic Botany</i> 15 (3) : 454-461 (Accessed: 16 June 2017)</p>	<p>1. "Flowers are readily visited by many types of long-tongue bees and bumblebees, and may also attract butterflies." 2. "Hummingbirds, bees and butterflies will be busy with the <i>Gaura</i> in your garden!" 3. "<i>Gaura</i> is of particular interest because of its diversity of pollination syndromes, including hawkmoth pollination, and ..."</p>
6.06	<p>1. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 2. Gardening Oracle. http://gardenoracle.com/images/gaura-lindheimeri.html (Accessed: 20 June 2017)</p>	<p>1. "The species and some cultivars are easily propagated by seed sown in spring or fall, and can also be propagated by division in spring (a challenge with the large root) or from basal cuttings taken in summer. Many cultivars are vegetatively propagated only." 2. "Spreads by rhizomes."</p>
6.07	<p>1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 3. Peters, William L.; Anderson, Neil O. 2006. Statistical discrimination between pollen tube growth and seed set in establishing self incompatibility in <i>Gaura lindheimeri</i> <i>Euphytica</i> 149 (1-2) : 237-250. (Accessed: 16 June 2017)</p>	<p>1. "Type: Herbaceous perennial" 2. "Plants can bloom the first year from seed if started in early spring." 3. "When grown from seed it will flower in the first year."</p>

7.01	1. Queensland Government. https://keyserver.lucidcentral.org/weeds/data/media/Html/oenot_hera_lindheimeri.htm (Accessed: 15 June 2017)	1. "Butterfly bush (<i>Oenothera lindheimeri</i>) was recently listed as a priority environmental weed in at least one Natural Resource Management region and was also recently declared as a noxious weed in New South Wales. At present it is mainly a weed of disturbed sites and roadsides close to where it has been cultivated, however it is also beginning to spread into more natural areas (e.g. sandy sites and riparian zones)."
7.02	1. Floridata. http://www.floridata.com/Plants/Onagraceae/Gaura%20lindheimeri/715 (Accessed: 14 June 2017) 2. Arizona State University. http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/gauralindheimeri.html (Accessed: 14 June 2017) 3. Outside Pride. http://www.outsidepride.com/seed/flower-seed/gaura-flower-seed.html (Accessed: 16 June 2017)	1. "ornamental" 2. "Used all over United States as perennial border accent" 3. Seeds available for purchase online in the US
7.03		No evidence
7.04	1. University of Wisconsin - Extension. Master Gardener Program. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 20 June 2017)	No evidence 1) See photos. No clear adaptation for wind dispersal.
7.05		No evidence
7.06		No evidence
7.07	1. University of Wisconsin - Extension. Master Gardener Program. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 20 June 2017)	No evidence 1) See photos. No evidence of a mechanism for attachment.
7.08		No evidence
8.01		No evidence
8.02		No evidence
8.03	1. Kelly Solutions. http://www.kellysolutions.com/erenewals/documentssubmit/KellyData/OK/pesticide/Product%20Label/58185/58185-34/58185-34_Everris_Jewel__Pre_Emergent_Herbicide_11_12_2015_12_07_11_PM.pdf (Accessed: 16 June 2017) 2. NC State University. https://projects.ncsu.edu/cals/hort_sci/people/staff/pages/documents/HFL14GauraDimensionssummary.pdf (Accessed: 20 June 2017)	1. "tolerant to Jewel® Pre-emergent Herbicide" 2. "Significant reductions in flowering were observed with all doses of Dimension. Low doses caused little or no visible injury to the foliage but higher doses caused some foliar discoloration."
8.04	1. Outside Pride. http://www.outsidepride.com/seed/flower-seed/gaura-flower-seed.html (Accessed: 16 June 2017)	1. "Do not be hesitant to cut this plant back severely each year; it grows very rapidly and will reach its mature size in one season."
8.05	1. Missouri Botanical Garden. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=c840 (Accessed: 14 June 2017) 2. University of Wisconsin - Extension. http://wimastergardener.org/article/gaura-gaura-lindheimeri/ (Accessed: 14 June 2017) 3. University of Florida Institute of Food and Agricultural Sciences. http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/gaulina.pdf (Accessed: 16 June 2017) 4. Arizona State University. http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/gauralindheimeri.html (Accessed: 20 June 2017)	1. "No serious insect or disease problems. Root rot may occur in heavy and/or poorly drained soils. Rust and powdery mildew may also occur. Watch for aphids, whitefly and flea beetles." 2. "Guara has few insect or disease problems, although Japanese beetles frequent the flowers in my yard and root rot may be an issue in heavy, poorly drained soils. Leaf spots, rust and mildews occasionally affect plants... Gaura is one of many host plants of the caterpillars of the white-lined sphinx moth." 3. "Pest resistance: long-term health usually not affected by pests"; "Pests and Diseases: No pests or diseases are of major concern." 4. "Disease and pests: None"

Pacific second screening: decision rules for species with WRA scores between 1 and 6

(from Daehler *et al.* 2004)



Vines must pass both tests

The answer to question 3.03 “Weed of agriculture/horticulture/forestry” was unknown. Therefore, this species remains in the EVALUATE FURTHER category.