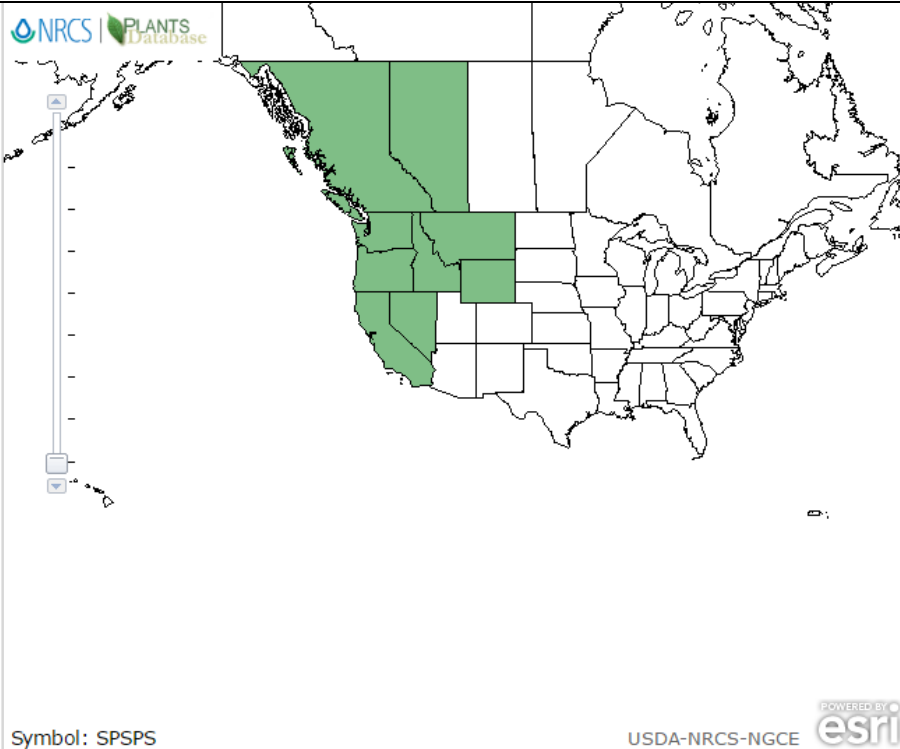


Plant Propagation Protocol for *[Insert Species]*
 ESRM 412 – Native Plant Production
 Protocol URL: <https://courses.washington.edu/esrm412/protocols/SPSPS>

TAXONOMY	
Plant Family	Rosaceae
Scientific Name	<i>Spiraea splendens</i> Baumann ex K. Koch var. <i>splendens</i> [10]
Varieties	<i>Spiraea splendens</i> Baumann ex K. Koch var. <i>splendens</i>
Sub-species	None
Cultivar	None
Common Synonym(s)	<i>Spiraea densiflora</i> var. <i>splendens</i> <i>Spiraea densiflora</i> Nutt. ex Greenm. subsp. <i>splendens</i> (Baumann ex K. Koch) Abrams <i>Spiraea densiflora</i> Nutt. ex Greenm. var. <i>splendens</i> (Baumann ex K. Koch) C.L. Hitchc. [10]
Common Name(s)	Rose Meadowsweet [10]
Species Code (as per USDA Plants database)	SPSPS [10]
GENERAL INFORMATION	

Geographical range	 <p>Symbol: SPSPS</p> <p>USDA-NRCS-NGCE</p> <p>POWERED BY esri</p>
	[10]
Ecological distribution (ecosystems it occurs in, etc)	<p>Rocky slopes and forest clearings in moist soil at mid to high elevations. [1]</p> <p>Meadows, grassland, thickets. [2] In California, this plant appears in Yellow Pine, Red Fir, Lodgepole and Subalpine forests. [8]</p>
Climate and elevation range	
Local habitat and abundance (may include commonly associated species)	<p>Highly abundant with no cause for conservatory measures in Washington State. [1] Vulnerable to critically imperiled in Western Canada and Montana. [3]</p>
Plant strategy type / successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)	Seral
Plant characteristics (life form (shrub, grass, forb), longevity, key characteristics, etc.)	<p>A perennial shrub that grows up to a meter tall and flowers in the summer. The flowers are dense inflorescences of 1-2mm flowers. It grows in hardiness zones 3-7. Can hybridize with Douglas Spiraea. [9]</p>
PROPAGATION DETAILS	

Propagation Goal (Options: Plants, Cuttings, Seeds, Bulbs, Somatic Embryos, and/or Other Propagules)	Plants
Propagation Method (Options: Seed or Vegetative)	Seed
Product Type (options: Container (plug), Bareroot (field grown), Plug + (container-field grown hybrids, and/or Propagules (seeds, cuttings, poles, etc.))	
Stock Type	Plants in one-gallon pots.
Time to Grow (from seeding until plants are ready to be outplanted)	2 years [6]
Target Specifications (size or characteristics of target plants to be produced)	Multiple stems with extensive root system.
Propagule Collection Instructions (how, when, etc)	Capsular fruits can be collected directly off the plant after they have dried. [6]
Propagule Processing/Propagule Characteristics (including seed density (# per pound), seed longevity, etc)	The capsules can be processed through a screen to separate seeds from the flesh of the fruit. Some washing may be required. [6]
Pre-Planting Propagule Treatments (cleaning, storage, dormancy treatments, etc)	Some seeds germinate without treatment but 30-50 days of cold-moist stratification is optimal. [5] [6]

Growing Area Preparation / Annual Practices for Perennial Crops (growing media, type and size of containers, etc)	Sow seeds 5-8 per container in deep Cone-tainers. Use soil with good drainage and water retention capacities. [6]
Establishment Phase Details (from seeding to germination)	Put seedlings in a greenhouse or roundhouse that can mimic early spring conditions, or keep seedlings covered outside during early spring.
Length of Establishment Phase	2-3 months [6]
Active Growth Phase (from germination until plants are no longer actively growing)	Place plants under 50% shade cloth on hot days. [6]
Length of Active Growth Phase	May to August [6]
Hardening Phase (from end of active growth phase to end of growing season; primarily related to the development of cold-hardiness and preparation for winter)	Plants should be gradually hardened to tolerate heat, full sun, and dry conditions or conditions similar to outplanting site.
Length of Hardening Phase	6 weeks [6]
Harvesting, Storage and Shipping (of seedlings)	Can be stored in cones in a greenhouse during winter. [6]
Length of Storage (of seedlings, between	Winter Season

nursery and outplanting)	
Guidelines for Outplanting / Performance on Typical Sites (eg, percent survival, height or diameter growth, elapsed time before flowering)	Plants with well-developed root systems will typically perform very well. [6]
Other Comments (including collection restrictions or guidelines, if available)	The shrubs grow very rapidly after establishment. [7]
INFORMATION SOURCES	
References (full citations)	<p>[1] http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Spiraea&Species=densiflora Giblin, David. "WTU Herbarium Image Collection - Burke Museum." <i>Spiraea splendens</i>. Burke Museum, n.d. Web. 18 May 2016.</p> <p>[2] http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Spiraea%20splendens Klinkenberg, Brian. (Editor) 2015. <i>E-Flora BC: Electronic Atlas of the Plants of British Columbia</i>. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver. Web. 18 May 2016</p> <p>[3] http://explorer.natureserve.org/servlet/NatureServe?searchName=Spiraea+splendens NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life. Version 7.1. NatureServe, Arlington, Virginia. Web 18 May 2016.</p> <p>[4] http://www.wnps.org/landscaping/herbarium/pages/spiraea-densiflora.html</p>

	<p>"Spiraea splendens." <i>Washington Native Plant Society: Starflower Image Herbarium</i>. Washington Native Plants Society, 27 Oct. 2007. Web. 18 May 2016.</p> <p>[5] http://www.wildflower.org/plants/result.php?id_plant=SPSPS TWC Staff. "NPIN: Native Plant Database." <i>Lady Bird Johnson Wildflower Center</i>. University of Texas, 05 July 2014. Web. 19 May 2016.</p> <p>[6] http://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/orpmcot9932.pdf Trindle, Joan DC; Flessner, Theresa R. 2003. Propagation protocol for production of container <i>Spiraea splendens</i> Baumann ex K. Koch <i>splendens</i> plants (1-gallon containers); USDA NRCS - Corvallis Plant Materials Center, Corvallis, Oregon. In: Native Plant Network. Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery. Web. 6 January 2016.</p> <p>[7] http://www.sevenoaksnativenursery.com/native-plants/shrubs/spiraea-densiflora-s-splendens-var-splendens/ "Spiraea Densiflora (S. Splendens Var. Splendens) Subalpine Spirea." <i>Seven Oaks Native Nursery</i>. Seven Oaks Native Nursery, n.d. Web. 19 May 2016.</p> <p>[8] http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Spiraea+densiflora Gray, A., and Torrey. "Spiraea Densiflora." <i>Califlora</i>. Califlora, n.d. Web. 19 May 2016.</p> <p>[9] http://www.plantoregon.com/product.asp?specific=2342 "Spiraea Densiflora." <i>Plant Oregon</i>. Plant Oregon, n.d. Web. 19 May 2016.</p> <p>[10] http://plants.usda.gov/core/profile?symbol=SPSPS "Plants Profile for <i>Spiraea Splendens Splendens</i> (rose Meadowsweet)." <i>Plants Profile for Spiraea Splendens Splendens (rose Meadowsweet)</i>. USDA NRCS, 06 June 2003. Web. 19 May 2016.</p>
Protocol Author	Jake Friend

Date Protocol Created or Updated (MM/DD/YY)	05/20/2016