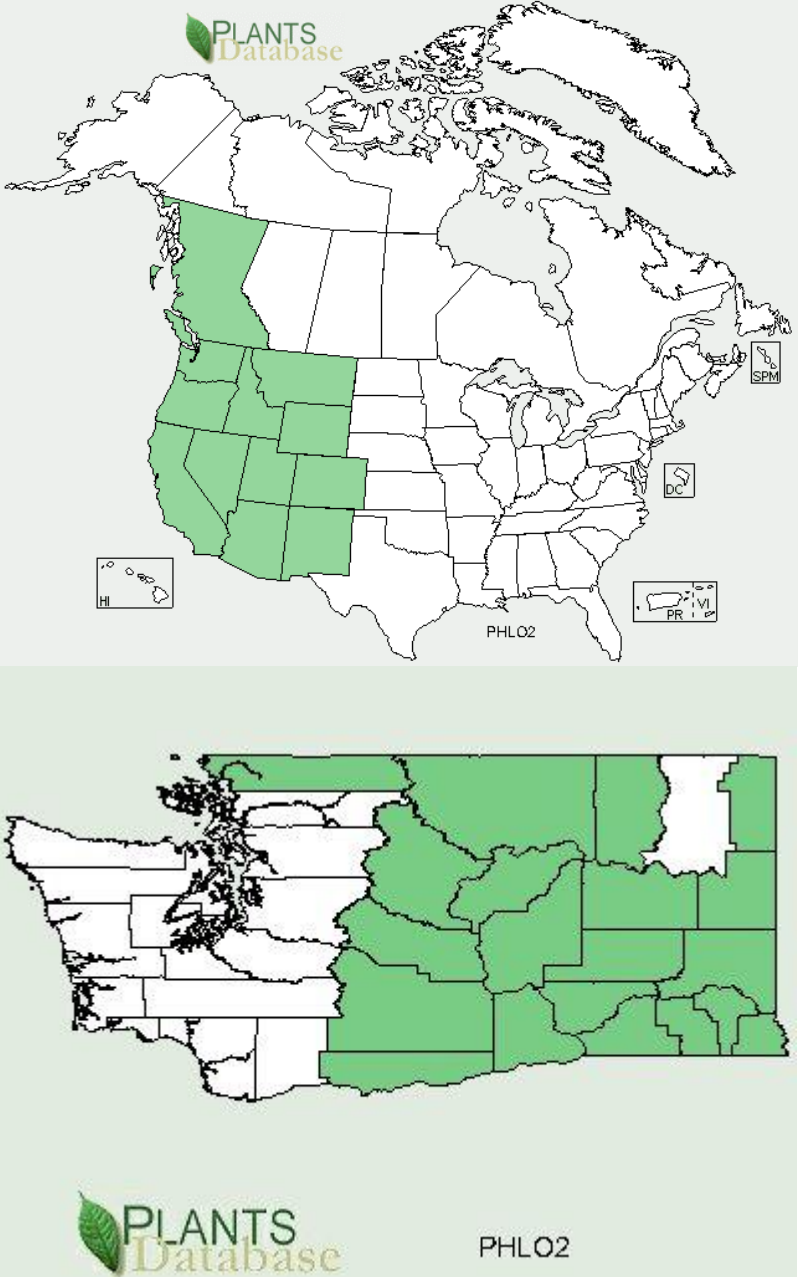


Plant Propagation Protocol for Longleaf Phlox
ESRM 412 – Native Plant Production



Photo credits: Suzette Jones (left) and Matthew Fisk (right)

TAXONOMY	
Family Names	
Family Scientific Name:	Polemoniaceae
Family Common Name:	Phlox
Scientific Names	
Genus:	<i>Phlox</i>
Species:	<i>longifolia</i>
Species Authority:	L.
Variety:	
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	
Common Synonym(s) (include full scientific names (e.g., <i>Elymus glaucus</i> Buckley), including variety or subspecies information)	<p><i>Phlox longifolia</i> Nutt. ssp. <i>brevifolia</i> (A. Gray) H. Mason</p> <p><i>Phlox longifolia</i> Nutt. ssp. <i>longifolia</i> (usda)</p> <p><i>Phlox longifolia</i> ssp. <i>longipes</i> (M.E. Jones) Wherry</p> <p><i>Phlox longifolia</i> var. <i>longipes</i> (M.E. Jones) M. Peck</p> <p><i>Phlox longifolia</i> var. <i>puberula</i> E.E. Nelson (9)</p>
Common Name(s):	Longleaf phlox
Species Code (as per USDA Plants database):	PHLO2
GENERAL INFORMATION	

<p>Geographical range (distribution maps for North America and Washington state)</p>	
<p>Ecological distribution (ecosystems it occurs in, etc):</p>	<p>Regions characterized by fluctuations in moisture and temperature. Low to fairly high elevation (6)</p>
<p>Climate and elevation range</p>	<p>Elevation ranges 235-6300 feet. Mean elevation 1830 feet. (2)</p>
<p>Local habitat and abundance; may include commonly associated species</p>	<p>Common in eastern Cascade range from British Columbia to Oregon. Dry, often rocky, slopes, ridges and outcroppings from canyon lowlands to mid-montane elevations (4) (3) (5) (2)</p>
<p>Plant strategy type /</p>	<p>Not available</p>

successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)	
Plant characteristics (life form (shrub, grass, forb), longevity, key characteristics, etc)	Perennial tap-rooted dicot forb with woody base ranging 4-16” in height. Stems are glabrous to hairy. Leaves up to 3”, linear and opposite, well spaced along stems. Flowers are 5-lobed and tubular, blooming in leafy fragrant clusters between April and July. Calyx membranes strongly keeled. Petals pink to white with 7-15 mm lobes and obovate. Style is several times longer than stigmas. Fruit is 3-valved capsule. (1) (3) (4) (7) (8)
PROPAGATION DETAILS	
Ecotype (this is meant primarily for experimentally derived protocols, and is a description of where the seed that was tested came from):	N/A
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.))	Container plug
Stock Type:	
Time to Grow (from seeding until plants are ready to be outplanted):	Not available
Target Specifications	Seedlings

(size or characteristics of target plants to be produced):	
Propagule Collection (how, when, etc):	
Propagule Processing/Propagule Characteristics (including seed density (# per pound), seed longevity, etc):	Information not available
Pre-Planting Propagule Treatments (cleaning, dormancy treatments, etc):	Not available
Growing Area Preparation / Annual Practices for Perennial Crops (growing media, type and size of containers, etc):	Not available
Establishment Phase (from seeding to germination):	Optimal growing temperature is 7 °C with a maximum of 10 °C. (6)
Length of Establishment Phase:	7-10 days (6)
Active Growth Phase (from germination until plants are no longer actively growing):	Not available
Length of Active Growth Phase:	Not available
Hardening Phase (from end of active growth phase to end of growing season; primarily related to the development of	Not available

cold-hardiness and preparation for winter):	
Length of Hardening Phase:	Not available
Harvesting, Storage and Shipping (of seedlings):	Not available
Length of Storage (of seedlings, between nursery and outplanting):	Not available
Guidelines for Outplanting / Performance on Typical Sites (eg, percent survival, height or diameter growth, elapsed time before flowering):	Not available
Other Comments (including collection restrictions or guidelines, if available):	Not available
INFORMATION SOURCES	
References (full citations):	<ol style="list-style-type: none"> 1) Calflora: Plant info database for California. Phlox Longifolia. 2011. http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=10213. 2) E-Flora BC: Electronic Atlas of the Plants of British Columbia. 2008. http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Phlox%20longifolia 3) Hitchcock, C Leo & Chouglus, Arthur. Flora of the Pacific Northwest. 1976. University of Washington Press, Seattle, WA. 4) Johnson, Charles G. Common Plants of the Inland Pacific Northwest. 1998. USDA – Forest Service. 5) Kozloff, Eugene. Plants of Western Oregon, Washington and

	<p>British Columbia. 1976. Timber Press. Portland, OR.</p> <p>6) Ridout, Mary and Tripepi, Robert. 2009. Improving seed germination of native perennial <i>phlox longifolia</i>. Native Plants Journal. 10(2), 80-88.</p> <p>7) Robson et al. Encyclopedia of Northwest Native Plants for Gardens and Landscapes. 2007. Timber Press. Portland Oregon.</p> <p>8) Toogood, Alan. Plant propagation. 1999. DK Publishing. New York, NY.</p> <p>9) USDA, NRCS. 2002. The PLANTS Database, National Plant Database Center, Baton Rouge, LA. (http://plants.usda.gov).</p>
Other Sources Consulted (but that contained no pertinent information) (full citations):	<p>Baskin, Jerry and Carol Baskin. Seeds—Ecology biogeography and evolution of dormancy and germination. 1998. Academic Press.</p> <p>Franklin, Jerry F. & C. T. Dyrness. Natural Vegetation of Oregon and Washington. 1988. Oregon State University Press, Corvallis OR.</p>

	<p>Hartman et al. Plant Propagation Principles. 2002. Prentice-Hall, Inc., Upper Saddle River, NJ.</p> <p>Native Plant Network. 2011. Propagation Protocol Search. <Plant Network. http://www.nativeplantnetwork.org (17 May 2011)>.</p> <p>Rose, Robin. Propagation of Pacific Northwest Native Plants. 1998. Oregon State University Press, Corvallis, OR.</p> <p>Schopmeyer, C.S. Seeds of woody plants in the United States. 1974. USDA – Forest Service. Heckman Bindery. Manchester, IN.</p> <p>USFS. Range Plant Handbook. USDA – Forest Service. 1988. Dover Publications. Mineola, NY.</p> <p>Young, James A, & Young, Cheryl G. Seeds of Woody Plants in North America. 1992. Dioscorides Press. Portland, OR.</p>
Protocol Author (First and last name):	Jon Klacik
Date Protocol Created or Updated (MM/DD/YY):	15 May 2011

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