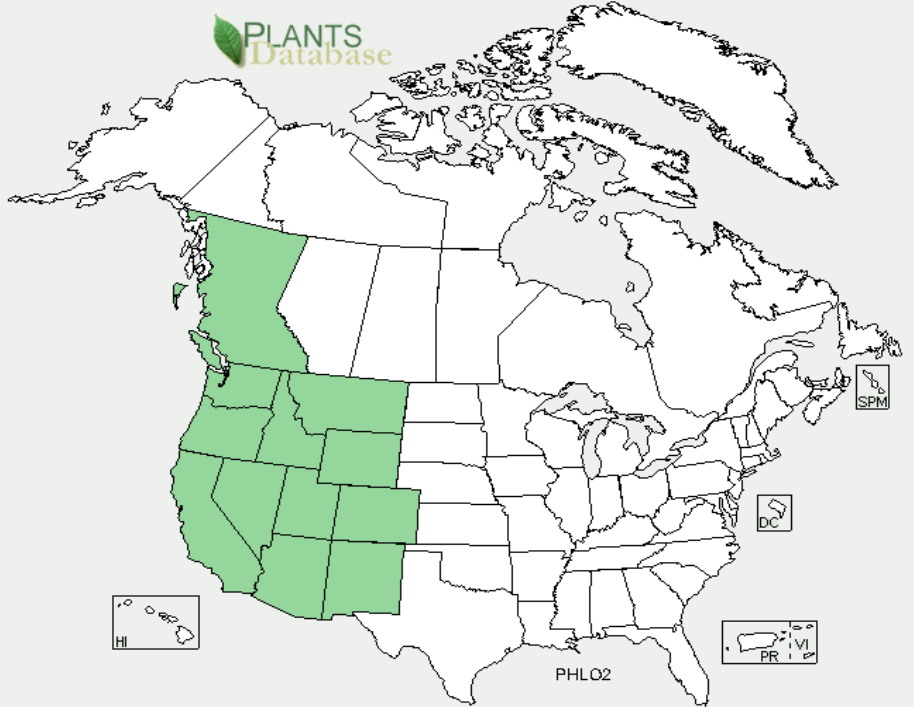
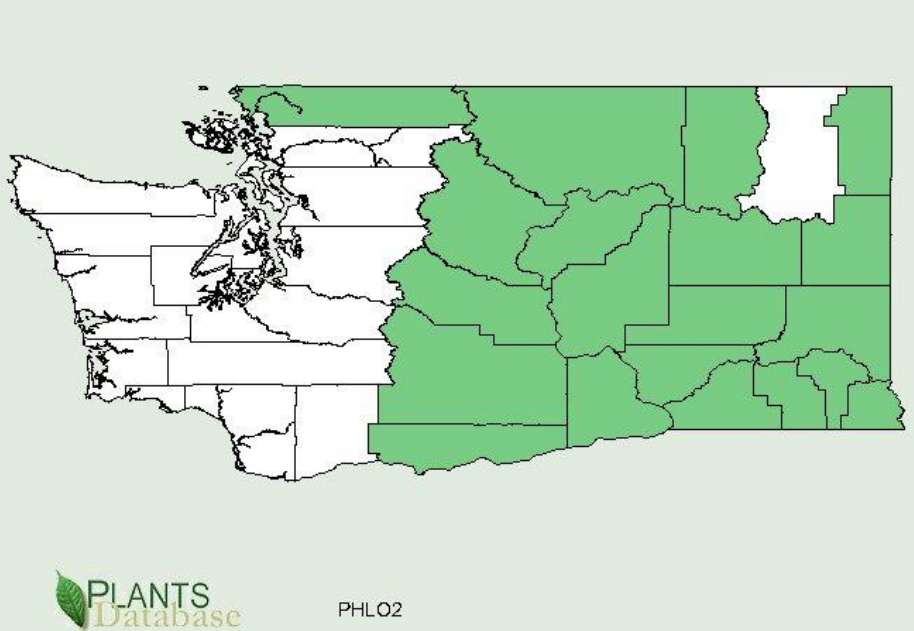


Plant Propagation Protocol for [*Phlox longifolia*]
ESRM 412 – Native Plant Production

TAXONOMY	
Family Names	
Family Scientific Name:	Polemoniaceae
Family Common Name:	Phlox
Scientific Names	
Genus:	Phlox
Species:	longifolia
Species Authority:	Nutt.
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)	
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</p>	<p>British Columbia and Western United States: WA, ID, MT, OR, CO, CA, NV, NM, UT, WY- In WA- East of Cascades and South of BC.</p>
<p>Climate and elevation range</p>	<p>Sunny and dry with well-draining soils, from low to high elevation; alpine and sub alpine.</p>
<p>Local habitat and abundance; may include commonly associated species</p>	<p>Most common on high plains and sagebrush steppe, found growing up through the sagebrush branches.</p>

Plant strategy type / successional stage	Early summer perennial, drought tolerant, found commonly growing through other larger, sturdier plants due to the weakness of stems.
Plant characteristics	Subshrub, shrub, forb/ herb- the <i>Longleaf phlox</i> has it all. Perennial, woody base, requires seed dormancy, known to be common growing up through sturdier branches of other plants such as sagebrush on the plains. Longleaf refers to the 1-3” leaves, long among Phlox, fluorescence names for “flames” due to bring showy flowers.(6) Blooms are from white to pink to magenta, 5 lobed flowers in leafy clusters at tips from mid-spring to mid-summer, up to 1” across and generally fragrant. Shoots usually 16” long with opposite linear leaves, 8cm long, well spaced on stems and possess pointed, not sharp, leaf tips. (1)
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Seed; (6) noted as “surest” way, or stem cutting. (2)
Propagation Method	Seed (optimal 45 degrees F. cold dormancy treatment, then germination within 7-10 days with over 90% success) (4) Cutting- root small rosette or stem offshoots from parent. (2) *Majority of successful cuttings attributed to other <i>Phlox</i> species.
Product Type	N/A
Stock Type:	
Time to Grow	
Target Specifications	
Propagule Collection	Freshly harvested seeds may be enhanced by addition of Potassium Nitrate. (3)
Propagule Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	Freshly harvested seeds may be enhanced by addition of Potassium Nitrate. (3) Seed (optimal 45 degrees F. cold dormancy treatment, then germination within 7-10 days with over 90% success) (4)
Growing Area Preparation / Annual Practices for Perennial Crops	
Establishment Phase	7-10 days (4)
Length of Establishment Phase:	
Active Growth Phase	
Length of Active Growth Phase:	
Hardening Phase	
Length of Hardening Phase:	
Harvesting, Storage and Shipping	

Length of Storage

Guidelines for Outplanting
/ Performance on Typical
Sites



Other Comments

Kruckeberg is the only author to reference a stem cutting and does not elaborate. All other entries referring to cuttings are for other *Phlox* species. There is information on ideal seed dormancy for high germination but no further protocol guidelines.

INFORMATION SOURCES

References (full citations):	<p>1)Robson, Kathleen A., Alice Richter, and Marianne Filbert. <i>Encyclopedia of Northwest Native Plants for Gardens and Landscapes</i>. Portland, Or.: Timber, 2008. Print.</p> <p>2) Kruckeberg, Arthur R. <i>Gardening with Native Plants of the Pacific Northwest: An Illustrated Guide</i>. Seattle: University of Washington, 1982. Print.</p> <p>3) Young, James A., and Cheryl G. Young. <i>Collecting, Processing, and Germinating Seeds of Wildland Plants</i>. Portland, Or.: Timber, 1986. Print.</p> <p>4)Ridout, Mary E., and Robert R. Tripepi. "Phlox Longifolia." <i>Native Plants Journal</i> (Indiana U. Press) 10.2 (2009): 80-89 Garden, Landscape and Horticulture Index. Web 10 April 2012</p> <p>5)Taylor, Ronald J. <i>Sagebrush Country: A Wildflower Sanctuary</i>. Missoula, MT: Mountain Pub., 1992. Print.</p> <p>6)<i>Range Plant Handbook</i>. New York: Dover Publications, 1988. Print.</p> <p>7)Turner, Mark, and Phyllis Gustafson. <i>Wildflowers of the Pacific Northwest</i>. Portland, Or.: Timber, 2006. Print.</p> <p>8)Hartmann, Hudson Thomas, and Dale E. Kester. <i>Plant Propagation: Principles and Practices</i>. 8th ed. New Delhi: Prentice-Hall, 2011. Print.</p> <p>9)Arbury, Jim, Richard Bird, and Mike Honour. <i>The Complete Book of Plant Propagation</i>. Newtown: Taunton, 1997. Print.</p> <p>10)"Phlox Longifolia Information from NPGS/GRIN." <i>Phlox Longifolia Information from NPGS/GRIN</i>. Web. 15 May 2012. <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?432056>.</p> <p>11)<i>Wildflower.org</i>. The University of Texas at Austin. Web. 12 May 2012. <http://www.wildflower.org/plants/result.php?id_plant=PHLO2>.</p> <p>12)"Welcome to the PLANTS Database USDA PLANTS." <i>Welcome to the PLANTS Database USDA PLANTS</i>. PLANTS Profile Phlox Longifolia Nutt. Longleaf Phlox. Web. 15 May 2012. <http://plants.usda.gov/java/>.</p>
Other Sources Consulted (but that contained no pertinent information) (full citations):	<p>1)Johnson, Lorraine. <i>100 Easy-to-grow Native Plants: For American Gardens in Temperate Zones</i>. New York: Firefly, 2009. Print.</p> <p>2)Leigh, Michael. <i>Grow Your Own Native Landscape: A Guide to Identifying, Propagating & Landscaping with Western Washington Native Plants</i>. Olympia, WA: Native Plant Salvage Project, Washington State University Cooperative Extension, Thurston County, 1999. Print.</p>

	<p>3)Spurr, Joy. <i>Wild Shrubs: Finding and Growing Your Own</i>. Seattle: Pacific Search, 1978. Print.</p> <p>4)Art, Henry Warren. <i>The Wildflower Gardener's Guide</i>. Pownal, VT: Garden Way Pub., 1990. Print.</p> <p>5)Franklin, Jerry F., and Tawny Blinn. <i>Natural Vegetation of Oregon and Washington: Commentary and Bibliographic Supplement</i>. [Corvallis?]: Published by the Oregon State UP for the USDA Forest Service, Pacific Northwest Research Station, 1988. Print.</p> <p>6)"Results of Search." <i>Results of Search</i>. Web. 15 May 2012. <http://herb.umd.umich.edu/herb/search.pl?searchstring=Phlox longifolia>.</p>
Protocol Author (First and last name):	Amelia Colasurdo
Date Protocol Created or Updated (MM/DD/YY):	05/15/2012

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