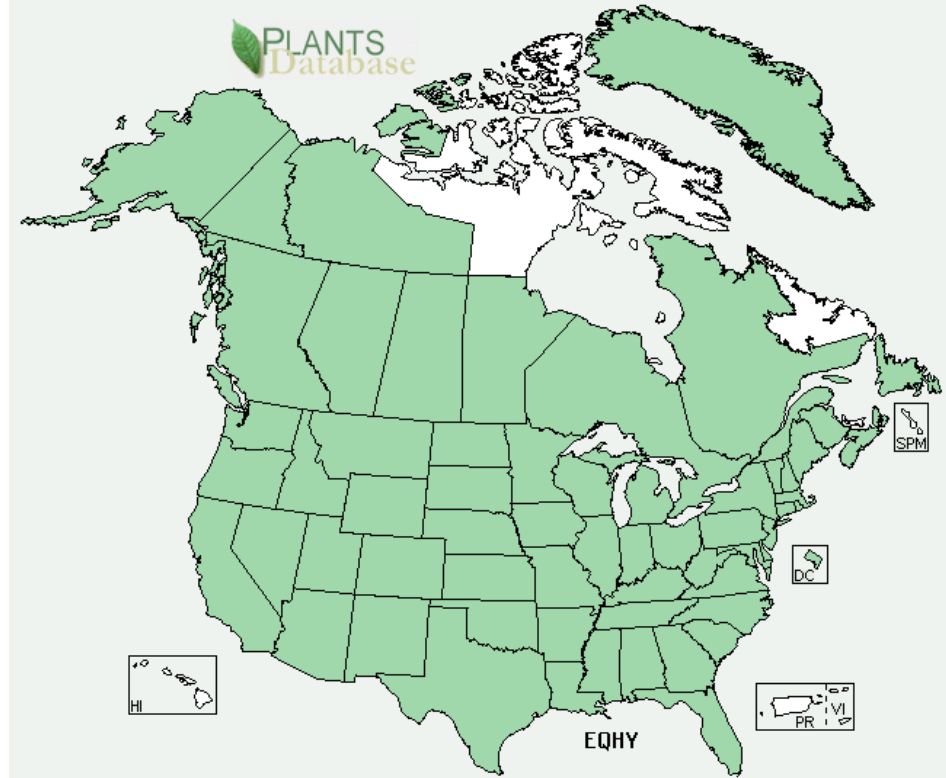
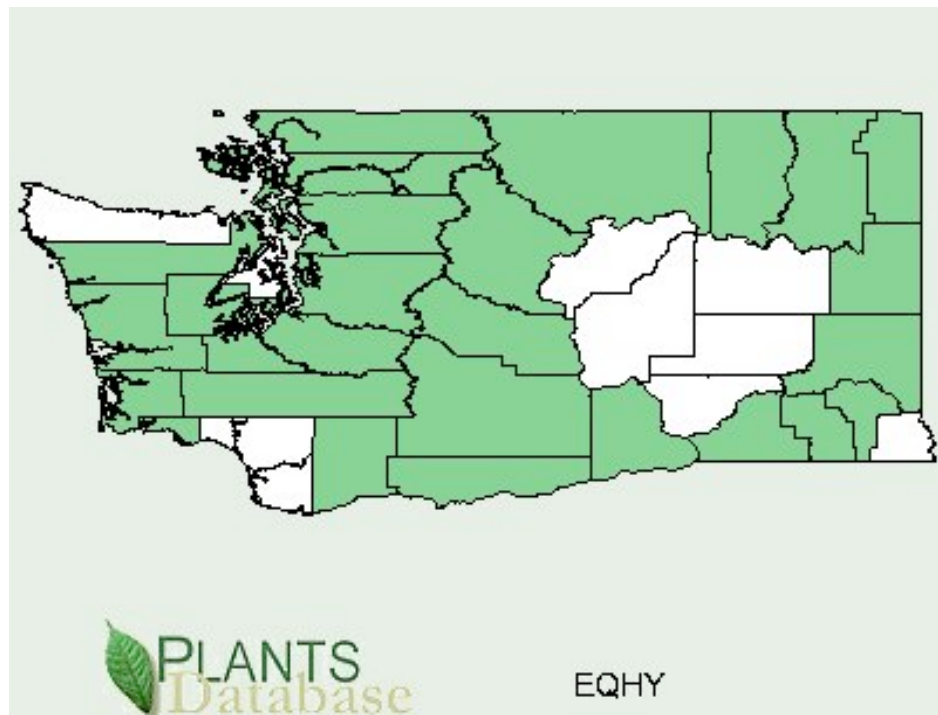


**Plant Propagation Protocol for *[Insert Species]***  
 ESRM 412 – Native Plant Production

<b>TAXONOMY</b>	
Family Names	
Family Scientific Name:	Equisetaceae (2)
Family Common Name:	horsetails
Scientific Names	
Genus:	<i>Equisetum</i>
Species:	<i>hymale</i>
Species Authority:	Linnaeus (1)
Variety:	‘affine’ is the only variety of North America (3)
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	Engelman (1)
Common Synonym(s)	-
Common Name(s):	scouring rush, common scouring rush, scouringrush horsetail, Dutch rush, rough horsetail, fall scouring rush, winter scouring rush (1)(2)(4)(5)(6)(7)(9)
Species Code:	EQHY (1)
<b>GENERAL INFORMATION</b>	
Geographical range	Alaska to Baja California (8) Uncommon north of 51 N. (2) Transcontinental in N America. (6)(10)



(1)



(1)

Ecological  
distribution:

Forested wetland, roadsides. (7) Common in moist and wet sites, along streams and rivers, and in disturbed areas. Grows on open, sunny sandbars and shady

	alluvial forests. (2)
Climate and elevation range	Shade tolerant-intolerant, submontane-montane. (6) Low to mid elevations. (2) Boreal, temperate, cool semiarid, mesothermal, and tropical climates. (6)
Local habitat and abundance:	Grows in large communities and can form large colonies over time, but not very aggressive. (7) (5)
Plant strategy type / successional stage	Colonizes exposed mineral soils, broad-leaved forests, non-forested early seral communities, floodplains and stream edges, indicates fresh and moist soils. (6)
Plant characteristics	Perennial herb with hollow, evergreen, unbranched stems. 2.5 cm long persistent spore bearing cone at end of stems. 20-150 cm tall, 4-14 mm thick stems with black bands containing dark brown to blackish teeth. (7) (2)
<b>PROPAGATION DETAILS</b>	
Ecotype	-
Propagation Goal:	plant
Propagation Method:	Easiest propagation is dividing rhizome clumps in late winter or early spring. Can probably be propagated by spores using methods similar to ferns. (5)(11) A small section of the rhizome can sprout a new plant (9)
Product Type:	Container/plug
Stock Type:	no information found
Time to Grow:	no information found
Target Specifications:	no information found
Propagule Collection:	no information found
Propagule Processing/ Propagule Characteristics:	no information found
Pre-Planting Propagule Treatments:	no information found
Growing Area Preparation / Annual Practices for Perennial Crops:	no information found
Establishment Phase:	no information found
Length of	no information found

Establishment Phase:	
Active Growth Phase:	no information found
Length of Active Growth Phase:	no information found
Hardening Phase:	no information found
Length of Hardening Phase:	no information found
Harvesting, Storage and Shipping:	no information found
Length of Storage	no information found
Guidelines for Outplanting / Performance on Typical Sites:	Plant can be weedy and difficult to remove. Does not have any serious insect or disease problems. (1)(9)
Other Comments:	Not much information on the specifics of propagating <i>Equisetum</i>

### INFORMATION SOURCES

References:	<ol style="list-style-type: none"> <li>1. "Plant Profile: scouring rush." USDA: Natural Resources Conservation Services on-line. <a href="http://plants.usda.gov/java/name">http://plants.usda.gov/java/name</a> Accessed: May 4, 2010.</li> <li>2. Pojar, Jim and Andy MacKinnon. <i>Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia &amp; Alaska</i>. Vancouver: Lone Pine, 1994.</li> <li>3. correspondence with Jon Baker</li> <li>4. Kruckeberg, Arthur R. <i>Gardening with Native Plants of the Pacific Northwest</i>. USA: University of Washington Press, 1982.</li> <li>5. Robson, Kathleen A, Alice Richter and Mariane Filbert. <i>Encyclopedia of Northwest Native Plants for Gardens and Landscapes</i>. Portland: Timber Press, Inc., 2008.</li> <li>6. Klinka, K., V. J. Krajina, A. Ceska, and A. M. Scagel. <i>Indicator Plants of Coastal British Columbia</i>. Vancouver: University of British Columbia Press, 1989.</li> </ol>
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	<p>7. Cooke, Sarah Spear. <i>A Field Guide to the Common Wetland Plants of Western Washington &amp; Northwestern Oregon</i>. Seattle: Seattle Audubon Society, 1997.</p> <p>8. Moore, Michael. <i>Medicinal Plants of the Pacific West</i>. Santa Fe: Red Crane Books, Inc., 1993.</p> <p>9. Missouri Botanical Garden. Kemper Center for Home Gardening.  <a href="http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=C670#lbl_culture">http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=C670#lbl_culture</a></p> <p>10. United States Department of Agriculture Agricultural Research Service, Beltsville Area Germplasm Resources Information Network  <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?400387">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?400387</a></p> <p>11. Ladybird Johnson Wildflower Center. Native Plant Database.  <a href="http://www.wildflower.org/plants/result.php?id_plant=EQHY">http://www.wildflower.org/plants/result.php?id_plant=EQHY</a></p>
Other Sources Consulted:	<p>Baskin, Carol C. and Jerry M. Baskin. <i>Seeds: Ecology, Biogeography, and Evolution of Dormancy and Germination</i>. San Diego: Academic Press, 1998.</p> <p>Hartmann, Hudson T., Dale E. Kester, Fred T. Davies, Jr., Robert L. Geneve. <i>Plant Propagation: Principles and Practices</i>. New Jersey: Pearson Education, Inc., 2002.</p> <p>Franklin, Jerry F. and C.T. Dyrness. <i>Natural Vegetation of Oregon and Washington</i>. Corvallis: Oregon State University Press, 1984.</p>
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