Plant Propagation Protocol for *Salix planifolia* Pursh ssp. *planifolia*
ESRM 412 – Native Plant Production
Protocol URL: https://courses.washington.edu/esrm412/protocols/*SAPLP4.pdf*

Figure 1: US Distribution Map [1]

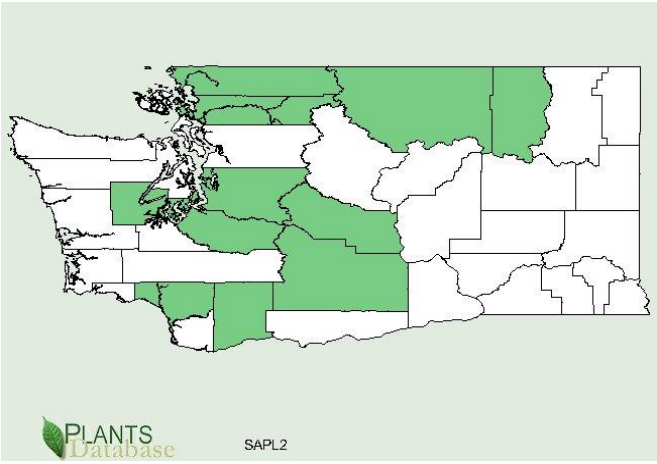

Figure 2: WA Distribution [1]

TAXONOMY	
Plant Family	
Scientific Name	Salicaceae
Common Name	Willow Family
Species Scientific Name	
Scientific Name	
Genus:	Salix L.
Species:	planifolia
Species Authority:	Pursh
Variety:	
Sub-species:	planifolia
Cultivar:	
Authority for Variety/Subspecies:	
Common Synonym(s)	SAPE17 *Salix pennata* C.R. Ball SAPLM *Salix planifolia* Pursh var. *monica* (Bebb) C.K. Schneid. SAPLP3 *Salix planifolia* Pursh var. *pennata* (C.R. Ball) C.R. Ball ex Dutilly, Lepage & Daman SAMO10 *Salix monica* Bebb

	SACHP2 *Salix chlorophylla* Andersson var. *pychnocarpa* (Andersson) Andersson SAPLN *Salix planifolia* Pursh var. *nelsonii* (C.R. Ball) C.R. Ball ex E.C. Sm. SANE7 *Salix nelsonii* C.R. Ball SAPHM *Salix phylicifolia* L. var. *monica* (Bebb) Jeps. SAPHP2 *Salix phylicifolia* L. var. *pennata* (C.R. Ball) Cronquist SAPY3 *Salix pychnocarpa* Andersson SAPHP4 *Salix phylicifolia* L. ssp. *planifolia* (Pursh) Hiitonen SACH12 *Salix chlorophylla* Andersson SACHM *Salix chlorophylla* Andersson var. *monica* (Bebb) Flod. SACHN *Salix chlorophylla* Andersson var. *nelsonii* (C.R. Ball) Flod.
Common Name(s)	Diamondleaf Willow
Species Code (as per USDA Plants database)	SAPLP4
GENERAL INFORMATION	
Geographical range	**USA:** (AK, AZ, CA, CO, ID, ME, MI, MN, MT, NH, NM, NV, OR, SD, UT, VT, WA, WI, WY), **CAN** (AB, BC, LB, MB, NF, NT, NU, ON, QC, SK, YT) "Diamondleaf willow grows throughout most of Alaska and the Yukon Territory. It also occurs in the northwestern Northwest Territories,and in northwestern British Columbia." [2] "S. planifolia is found from Alaska to Newfoundland and south to New Hampshire, Maine, Wisconsin, Minnesota, South Dakota and south through the western states to new Mexico, Arizona, and California." [5]
Ecological distribution	Diamondleaf willows grow in wet; meadows, lakeshores, streambanks, rocky places. [3]
Climate and elevation range	Climate: "Wet Season of 5-8 months, maximum temperature range at 60 degrees Fahrenheit, summer high temperatures range from 60-70 degrees Fahrenheit, winter low temperatures range from 10-20 degrees Fahrenheit." Elevation: 2390 to 3620 meters [4]
Local habitat and abundance	"Diamondleaf willows grow in arctic and alpine tundras, open black and white spruce woodlands, muskegs, and carex fens. In open spruce woodlands diamondleaf willows are usually scattered individuals but become more dense along riparian areas. In open black spruce woodlands they often attain highest cover in areas with shallow, perched water tables on the surface of permafrost" [2].

Plant strategy type / successional stage	"Foote reported diamondleaf willow occurring in early successional stages following wildfire in black spruce forests. It reached its greatest abundance about 30 years after fire, but thereafter declined as it was overtopped by trees; by 56 years after fire, it was absent. Along the Chena River in interior Alaska, diamondleaf willow was not found in successional terrace communities but grew only as scattered individuals in climax black spruce/sphagnum moss stands. These climax stands provided favorable sites for diamondleaf willow because they were relatively open and wet due to extensive permafrost." [2] Post Fire Regeneration Strategy : "Survivor species; on-site surviving root crown or caudex off-site colonizer; seed carried by wind; postfire years 1 and 2 off-site colonizer; seed carried by animals or water; postfire yr 1&2." [2]
Plant characteristics	Shrub Subshrub Tree [1] "The small, capsule-like fruits of the flat-leaved willow contain an abundance of small, light-weight, cottony seeds, which the plant begins to produce at around two years old. When the fruit reaches maturity, it splits open and releases the seeds, which are dispersed by the wind and water." [2]
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Plants [5]
Propagation Method	Seed [5]
Product Type	Container (plug) [5]
Stock Type	Cuttings, plugs, potted plants [6]
Time to Grow	
Target Specifications	
Propagule Collection Instructions	
Propagule Processing/Propagule Characteristics	Seeds are non-dormant. [5]
Pre-Planting Propagule Treatments	Germination occurs at 5 to 25C. [5]
Growing Area Preparation /	

Annual Practices for Perennial Crops	
Establishment Phase Details	
Length of Establishment Phase	
Active Growth Phase	Spring and Summer [1]
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	Maximum height (mature) is 30 feet (tree) and 8 feet (shrub). Fruit/Seed period begins in the spring and ends in the summer. [1]
Other Comments	Status as threatened in some areas.
INFORMATION SOURCES	
References	1. USDA, NRCS. 2014. "Diamondleaf willow". The PLANTS Database. <http://plants.usda.gov/core/profile?symbol=SAPLP4>, 23 April 2014). National Plant Data Team, Greensboro, NC 27401-4901 USA. 2. Uchytil, Ronald J. 1991. Salix planifolia. In: Fire Effects Information System. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Web. April 23, 2014. <http://www.fs.fed.us/database/feis/>. 3. Salix planifolia: UW-Stevens Point Freckmann Herbarium: Plant Details Page. (2012, January 1). *Salix planifolia: UW-Stevens Point Freckmann Herbarium: Plant Details Page*. April 24, 2014. <http://wisplants.uwsp.edu/scripts/detail.asp?SpCode=SALPLAsPLA>.

	4. “Salix planifolia”. *Calflora*. Web. April 23, 2014. <http://www.calflora.org/entry/plantchar.html?crn=10340>. 5. Baskin, Carol C.; Baskin, Jerry M. 2002. Propagation protocol for production of container *Salix planifolia*Pursh plants; University of Kentucky, Lexington, Kentucky. In: Native Plant Network. Web. 23 April 2014. <http://www.nativeplantnetwork.org>. Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery. 6. "Growing Forward." *Planning Your Riparian Planting Project In Alberta* . Cows and Fish, 1 Feb. 2014. Web. 23 Apr. 2014. <http://www.growingforward.alberta.ca/cs/idcplg?IdcService=GET_FILE&dDocName=AGUCMINT-67658&RevisionSelectionMethod=LatestReleased>.
Other Sources Consulted	"CNPS Inventory Plant Detail." California Native Plant Society, 1 Jan. 2014. Web. 23 Apr. 2014. <http://www.rareplants.cnps.org/detail/3002.html>. "Western Wetland Flora." *Northern Prairie Wildlife Reasearch Center*. USGS, 2 Feb. 2013. Web. 23 Apr. 2014. <http://www.npwrc.usgs.gov/resource/plants/florawe/species/5/saliplan.htm>.
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