



United States Department of Agriculture  
Natural Resources Conservation Service  
Plant Materials Program

# 'Plumas' Sitka willow

*Salix sitchensis* Sanson ex Bong.

A Conservation Plant Release by USDA NRCS Corvallis Plant Materials Center, Corvallis, Oregon



'Plumas' Sitka willow (*Salix sitchensis*) is a vegetatively propagated cultivar released in 1988 in cooperation with the Oregon Agricultural Experiment Station and Washington Agricultural Research Center. It is well suited to streambank stabilization and wildlife habitat improvement along shorelines and in other wet areas.

## Description

Plumas Sitka willow is a medium to large shrub that grows to a height of 10 to 23 ft depending on the site. Mature shrubs that are well spaced and grown in full sun are typically multi-stemmed, open, and predominately upright in form. The leaves are smooth or slightly wavy along the margins, two to four times as long as they are wide, dull green above, and covered with dense, silvery hairs beneath. The broad leaves have margins that are smooth to somewhat wavy. They are alternate and deciduous, falling by mid to late November. Young twigs are red, brown, or green while the bark of older limbs is gray and smooth. Plumas is a male clone and, as such, bears only staminate (male) catkins in late March or April. They are upright and appear about the same time as the foliage.

## Source

The original vegetative material for Plumas Sitka willow was collected in 1978 near the city of Susanville in Lassen County, California. Plumas (9004795, PI 508558) was evaluated in an observational row nursery against 105 clones or collections comprising at least eight native willow species. As one of 22 sources of Sitka willow

tested, it was chosen for its higher basal stem density, upright growth habit, rapid initial growth rate, and male sex.

## Conservation Uses

Plumas Sitka willow is recommended for stabilizing the banks of low velocity streams, improving wildlife habitat, and renovating riparian areas. Deer, elk, moose, and rabbits browse the stems. Its male catkins are food for small game and songbirds and a source of pollen for beneficial insects in spring. The shade created by willows along a stream reduces water temperatures and improves conditions for many fish.

Dormant limbs and stems of this variety may also be used for certain stream and slope protection measures such as live stakes, live posts, fascines, brush mats, or branch packing; it may be used alone or with traditional hard treatments such as rock riprap (refer to publications on soil bioengineering for further explanation of these practices). Other applications of Plumas include natural area landscaping, screens, borders, and windbreaks on moist sites.

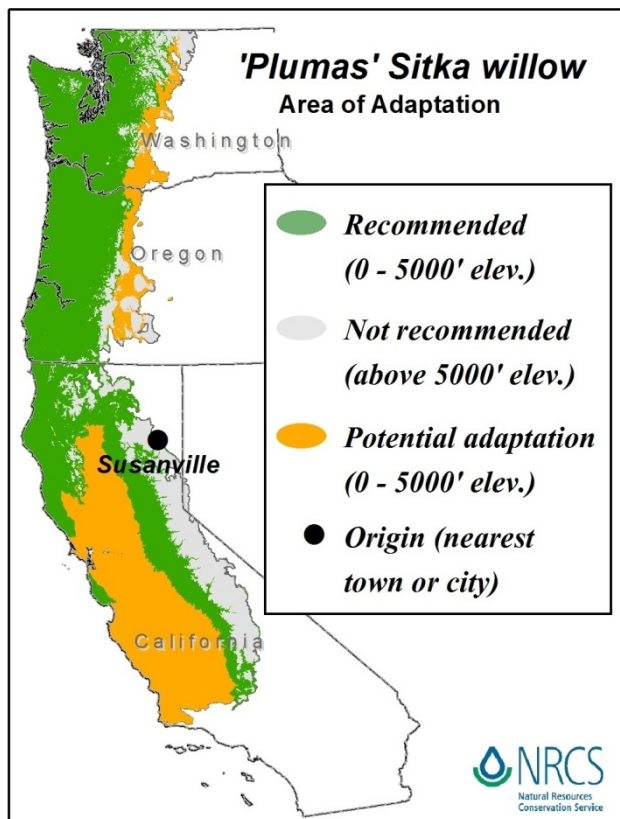
## Area of Adaptation and Use

Plumas Sitka willow is tolerant of most soil textural types and drainage classes where moisture is not limiting. The species does best on moist sandy or mucky sites, but can withstand prolonged if not indefinite soil saturation and flooding. On better drained upland sites the average annual precipitation should exceed 35 inches. Plumas does well along riparian areas, freshwater beaches, and forest openings where sunlight is abundant. Known area of adaptation and recommended use for Plumas includes the Cascades of western Oregon and western Washington to the Pacific coastline, as well as northwestern California and the Sierra Nevada Mountains and foothills below an elevation of 5,000 ft (see map below).

## Establishment and Management for Conservation Plantings

Plumas Sitka willow should be planted in the fall once the rainy season commences and the root zone is moist. Winter is the next best season in areas with a milder climate, followed by early spring. Use dormant stock such as unrooted hardwood cuttings, containerized rooted cuttings, or bareroot plants. For direct planting on revegetation sites, cuttings (slips, live stakes) should be 18 to 30 inches long and at least ½ inch in diameter. Make a pilot hole with a steel bar or water drill and insert or tap two thirds or more of the length of the cutting into the soil. However, at least two nodes (buds) should remain exposed above ground. Tamp the soil firmly

around each slip to remove air pockets. Larger and longer material (such as live poles and live posts) can be used in places where competing vegetation is tall or planting depth must be increased to reach reliable moisture.



Area of adaptation and recommended use for 'Plumas' Sitka willow. Map by Ian Reid.

Prior to planting, competing vegetation should be minimized by localized scalping of the soil surface or spot treating with an approved herbicide. Apply herbicides according to label instructions and in areas where the contamination of surface water and wildlife are not threatened. For vegetative streambank stabilization, planting on a 2- to 3-foot spacing is generally recommended, beginning just above the protected toe of the slope and proceeding to the top of the bank. Consider establishing several selections or sources of Sitka willow, as well as other willows and riparian shrubs for habitat diversity. For maximum survival and growth on some sites, irrigation or mulch may be needed the first summer, along with weed suppression, wildlife damage control, and livestock exclusion the first few years.

### Ecological Considerations

Plumas Sitka willow can be susceptible to certain insect pests such as aphids, scales, willow leaf gall sawfly, and poplar borers, as well as the leaf disease powdery mildew. In some years, significant die off of large branches or entire plant mortality can occur from borers tunneling into

and girdling the base of the trunk. Plumas is a male clone and therefore cannot produce seed and spread from seedlings.

### Seed and Plant Production

This cultivar is vegetatively propagated. Carefully weeded, fertilized, and irrigated mother plants or "cutting blocks" are the best source of healthy cuttings for direct planting on revegetation sites, container production, and bareroot nursery culture. Cuttings as short as 6 inches with at least two nodes will root readily year round in moist potting media under greenhouse or outdoor conditions, but hardening off and winter dormant periods must be observed. Treatment with rooting hormone is unnecessary. Fall and winter are the preferred seasons for harvesting and planting.

### Availability

*For conservation use:* Cuttings or rooted stock of Plumas Sitka willow are only available from a few specialized nursery growers and certain Soil and Water Conservation Districts.

*For plant increase:* The NRCS Corvallis Plant Materials Center maintains foundation equivalent, vegetative stock of Plumas Sitka willow, as well as four other native willow cultivars, for distribution to commercial nurseries, arboreta, wetland scientists, and other researchers.

*For more information, contact:*  
 USDA-NRCS Corvallis Plant Materials Center  
 3415 NE Granger Ave  
 Corvallis, OR 97330  
 Phone: 541-757-4812  
 Fax: 541-757-4733  
<http://plant-materials.nrcs.usda.gov/orpmc/>

### Citation

USDA-NRCS. 2013. Release brochure for 'Plumas' Sitka willow (*Salix sitchensis*). USDA-Natural Resources Conservation Service, Corvallis Plant Materials Center, Corvallis, OR.

For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

*Helping People Help The Land*

USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER