Crack Willow *Salix fragilis* L.

Common Names: crack willow, brittle willow
Native Origin: Eurasia; introduced as a fast-growing ornamental

Description: A large deciduous tree, in the willow family (Salicaceae) growing 65 feet in height and often dividing into several large branches low on the trunk, or even at the ground level. The dark brown or dark gray bark is deeply divided into scaly forking ridges. Leaves are alternate, long, lanceolate or linear-lanceolate, 2.8-5 inches long and 0.6-1.2 inches wide, finely serrate, shiny yellowish-green above, pale to white-hairless below. Flowers are grouped catkins 1.2-2.4 inches long at ends of short leafy branches. Many small flowers with yellowish hairy scales, pistillate and staminate on different trees, appear in early spring. Numerous conical fruit capsules release many small cottony-tufted seeds in late spring. Seeds germinate immediately after wind or water dispersal on moist, bare mineral soils. It reproduces vegetatively by twigs breaking off and taking root, and from root suckers.

branch

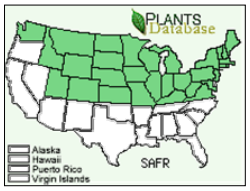
leaves

female ament

twig

bark

Habitat: The plant occurs on light (sandy), medium (loamy) and heavy (clay) soils that are acid to neutral and moist or wet. It cannot grow in the shade. It favors sites along streams, marshes, fens, wet woods and disturbed areas with moist soils. It tolerates periodic soil surface inundation.



Distribution: This species is reported from states shaded on Plants Database map. States that report it invasive include: CO, IL, MA, MI, MN, NV, NY, PA, and UT.

Ecological Impacts: It is called crack willow because it is highly susceptible to wind, ice and snow damage. It has escaped cultivation and can forms pure stands. Willows can spread easily from detached twigs floating downstream.

Note: Hybrids between this species and white willow (*Salix alba*) exist, and can be difficult to identify. It could also be hybridize with black willow (*Salix nigra*), a native.

Control and Management:

- **Manual**- Cut tree off at or just above ground level as level as possible then apply herbicides.
- **Chemical**- It can be effectively controlled using a water registered glyphosate product. Paint, swab, or squirt an herbicide onto the sapwood immediately after the stem or trunk has been cut through. Remove stems, branches and leaves from the site (chip or burn). Repeat applications may be necessary to reduce densities. Follow label and state requirements. Managers should evaluate the specific circumstances of each infestation, seek professional advice and guidance if necessary, and use the herbicide in a manner that is consistent with the product label and other state requirements

References: http://plants.usda.gov, www.nps.gov/plants/alien/map/safr1.htm, www.invasive.org/browse/detail.cfm?imgnum=1379028, www.greeningaustralia.org.au/NR/rdonlyres/0D16FD21-60EF-470D-8227-1FB8D364C172/3360/willowmgtinfosheet.pdf, www.uwgb.edu/biodiversity/herbarium/trees/salfra01.htm www.botany.wisc.edu/wisflora/scripts/detail.asp?SpCode=SALFRA, www.biosurvey.ou.edu/shrub/safr.htm, http://www.ibiblio.org/pfaf/cgi-bin/arr_html?Salix+fragilis&CAN=COMIND, www.npwrc.usgs.gov/resource/1999/vascplnt/species/sfra.htm
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Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants