Fact Sheet on *Spiranthes diluvialis* (Ute ladies'-tresses)

Ute ladies'-tresses is a member of the orchid family. It was described in 1984 by C. J. Sheviak. At the time it was only known from Utah and Colorado. It was federally listed as Threatened in January 1992. Since 1992, additional populations have been found in Utah, Colorado, Wyoming, Montana, Nevada, and Idaho. In Idaho, most populations have been found along the Snake River or its tributaries. In 1997, a small population (less than 20 plants) was found in Okanogan County, Washington. The three new populations along the Rocky Reach reservoir are the second, third, and fourth populations found in Washington.

Ute ladies'-tresses are found in open wetland and riparian areas, including spring habitats, mesic to wet meadows, river meanders, and floodplains. They seem to require "permanent sub-irrigation", indicating a close affinity with floodplain areas where the water table is close to the surface throughout the growing season. They also require open habitats, and populations decline if trees and shrubs invade the habitat. They are not tolerant of permanent standing water, and do not compete well with aggressive species such as reed canarygrass or purple loosestrife. They colonize early successional riparian habitats such as point bars, sand bars, and low lying gravelly, sandy, or cobbly edges.

Ute ladies'-tresses bloom in late summer. Research has shown that plants can remain dormant for several growing seasons, or produce only vegetative shoots, complicating inventory and an understanding of population structure. They probably require a symbiotic association with mycorrhizal fungi for germination, and also require pollinators to set seed. They appear to have a very low reproductive rate.

The habitat requirements and life history features of the species make it vulnerable to the combined impacts of land conversion, changes in hydrology, invasions of weedy species, loss of pollinators, and diminishing potential habitat.

Three populations were found in late July through late August along the Rocky Reach reservoir. All three populations are in Chelan County above Beebe Bridge. The first population is associated with a small pond. The pond appears to be hydrologically linked to the reservoir, although separated from it by 75-100 feet. The second population is along a moist gravel bar, 5-50 ft. from the edge of the reservoir. The northern portion of the population is associated with a backwater wetland. The third population is within a grassy backwater wetland which is inundated through early summer. The plants are 5 to 50 ft. from the edge of the reservoir.