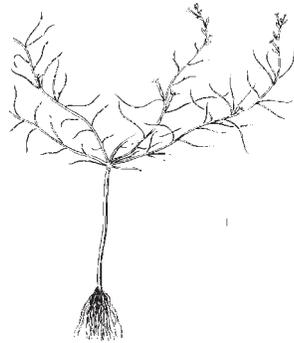


Threatened and Endangered Species

United States Department of Agriculture
Natural Resources Conservation Service
Montana

WATER HOWELLIA *Howellia aquatilis*



OFFICIAL STATUS: Threatened. Threatened species are species that are likely to become endangered within the foreseeable future throughout all or a significant portion of their range.

LISTED: 59 Federal Register 35860; July 14, 1994.

HISTORICAL STATUS: Water howellia once occurred over a large area of the Pacific Northwest region of the United States, from Oregon to California, and west to Montana.

PRESENT STATUS: Water howellia has been extirpated from California, Oregon and some areas in Washington and Idaho. Populations of this aquatic plant still are found in Lake and Missoula counties in Montana as well as limited areas in Washington and Idaho.

HABITAT: Howellia grows in firm consolidated sediments associated with glacial potholes and former river oxbows which flood in spring but usually dry to some degree by late summer. Microhabitats include shallow water and the edges of deep ponds that are partially surrounded by deciduous trees such as black cottonwood and aspen. Ponds are generally found in Engelmann spruce or lodgepole pine forests.

LIFE HISTORY: Water howellia reproduces only by seed which germinates as ponds dry and seeds are exposed to air. This results in annual variability in population size depending on the extent of the previous season's drying. Flowering occurs from July to August.

AID TO IDENTIFICATION: Water howellia is a winter annual, aquatic plant that grows 4-24 inches in height. It has extensively branched, submerged or floating stems and narrow, linear, alternate (sometimes opposite) leaves up to 2 inches in length. Two types of flowers are produced: small, inconspicuous, axillary flowers beneath the water surface and small, white, irregular flowers in a leafy inflorescence at or above the water surface.

REASONS FOR DECLINE: Howellia is threatened by loss of wetland habitat and habitat changes due to timber harvesting, livestock grazing, residential development and competition from introduced plant species; notably reed canary grass and purple loosestrife.

RECOMMENDATIONS: Contact the U.S. Fish and Wildlife Service prior to initiating any activities that may affect water howellia habitat.

COMMENTS: The lack of genetic variation between populations of water howellia, and its extremely specialized habitat requirements add to the vulnerability of the species.

REFERENCES: Federal Register- Vol. 59, No. 134, Thursday, July 14, 1994.

Montana

