Ruppia maritima L.

Widgeongrass

Family: Potamogetonaceae or Ruppiaceae
Range: Coastal states, including California, Oregon and Washington.
Habitat: Marshes, ponds, sloughs, tidal estuaries, ditches, canals. Typically inhabits brackish, alkaline, or saline waters to several meters deep.
Origin: A widespread native with a nearly worldwide distribution.
Impacts: Widgeongrass is a valuable food and habitat plant for wildlife and is not considered a weed in most natural areas. However, it can be weedy in ditches, irrigation channels, and other controlled aquatic systems.

Widgeongrass is a submersed aquatic perennial, often in brackish water, with linear leaves and rhizomes. Like most submerged plants, the foliage is glabrous. The stems are branched, up to 3 ft long, and rooting at the nodes. The leaves are narrow and strap-like (0.5 mm wide) and sessile, bright green with most leaves alternate but some opposite. Leaves can be 4 inches long. Rhizomes are slender.

Inflorescences are submerged, consisting of two minute flowers on a straight stalk. The flowers lack sepals and petals. The carpel stalks elongate as fruits develop. Flowers are self-pollinated underwater; the pollen is transported on the surface of clinging bubbles. The fruiting heads are umbel-like, with each fruit on a long stalk (to nearly 2 inches long). Plants reproduce vegetatively from rhizomes and stem fragments and by seed. Seed production can be high. Seeds are dispersed with water, mud, and by clinging to the feet, fur, or feathers of animals. Seeds lack a hard coat and germinate in spring. It is unknown how long seeds can survive in the soil substrate.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, dredging)	Repeated mechanical harvesting can help reduce stem densities, but escaped stem fragments can drift elsewhere and develop into new plants. Removing and destroying stem fragments from recreational equipment, such as boat propellers, docking lines, and fishing gear can help prevent the spread of widgeongrass. Several types of "bottom barriers" are available and are used to cover and smother specific infested areas. Materials used include polyvinyl chloride sheets, small-mesh screens and natural fibers such as jute. Bottom barriers are best installed in spring before plants produce large biomass and exceed 10 inches tall.
Cultural	Dewatering infested areas during periods of high temperature in summer can suppress regrowth. Suppression of flowering and seed production by dewatering may reduce subsequent spring growth.
Biological	The sterile triploid grass carp (white amur) is a relatively nonselective herbivorous fish that will consume widgeongrass if it is growing in fresh water. However, grass carp do not tolerate saline conditions. Usually grass carp first consumes its preferred submersed plants such as native pondweeds.

CHEMICAL CONTROL

Little information has been published on the control of widgeongrass. The following specific use information is based on reports by researchers and land managers. Other trade names may be available, and other compounds also are labeled for this weed. Directions for use may vary between brands; see label before use.

Herbicides are listed by mode of action and then alphabetically. The order of herbicide listing is not reflective of the order of efficacy or preference.

BRANCHED-CHAIN AMINO ACID INHIBITORS	
Imazamox *Clearcast*	**Rate:** In-water applications: 200 ppb. Dewatered (drawdown) applications: 64 oz product/acre (8 oz a.i./acre); first flush of water in canals must NOT be used for irrigation. **Timing:** Apply to water in early spring to early summer (rapid growth). Dewatered applications should be made in late winter at least 14 days before water will be reintroduced. **Remarks:** Use an approved surfactant.
CONTACT PHOTOSYNTHETIC INHIBITORS	
Diquat *Reward*	**Rate:** In-water applications: 0.1 to 0.25 ppm **Timing:** Apply to water in late spring to early summer. Diquat is a fast-acting contact herbicide that can be effective in mid to late summer, but if biomass is large, only a portion of the infested sites should be treated to minimize effects of decreasing dissolved oxygen. **Remarks:** Diquat is quickly bound to, and becomes inactivated on, suspended clay particles and it should not be used in moderately or highly turbid water.
NON-HERBICIDAL CHEMICALS	
Dyes or colorants *Aquashade*	Although technically not herbicides, dyes and colorants control submerged aquatic plants by absorbing light in the water column and reducing photosynthesis. Applications should be made in early spring and repeated to maintain the concentration recommended on the label. Colorants are not as effective on well-established plants in mid- to late summer.

ECOMMENDED CITATION: DiTomaso, J.M., G.B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center, University of California. 544 pp.