dwarf eelgrass
Zostera japonica Aschers. & Graebn.

Synonyms: *Nanozostera americana* (Hartog) Tomlinson & Posluszny, *N. japonica* (Ascherson & Graebner) Tomlinson & Posluszny, *Zostera americana* den Hartog, *Z. nana* Roth.
Other common names: None
Family: Zosteraceae

Invasiveness Rank: **53** The invasiveness rank is calculated based on a species' ecological impacts, biological attributes, distribution, and response to control measures. The ranks are scaled from 0 to 100, with 0 representing a plant that poses no threat to native ecosystems and 100 representing a plant that poses a major threat to native ecosystems.

Description
Dwarf eelgrass is a submerged, hydrophytic plant that grows in saltwater or brackish water. Depending on local climate, dwarf eelgrass can be an annual or short-lived perennial. Plants have creeping rhizomes with two elongated roots and one shoot at each root node. Leaves are up to 15 cm long, 1 to 1.5 mm wide, and three-veined. Leaf sheaths are open, membranous, overlapping, and up to 5.5 cm long. Reproductive shoots are sparsely branched and can grow up to 30 cm long. Inflorescences range from 2 to 9 cm long. Seeds are brown, ovoid, and about 2 mm long (Hitchcock et al. 1969, Flora of North America 1993, Shin and Choi 1998).

Infestation of *Zostera japonica* Aschers. & Graebn.

Similar species: Seawrack (*Zostera marina*) is a native eelgrass that looks similar to dwarf eelgrass. Seawrack can be distinguished from dwarf eelgrass by the presence of longer stems (over 183 cm long), bigger leaves (up to 110 cm long and 12 mm wide), five to eleven veins per leaf, and round leaf apexes. Dwarf eelgrass can be further distinguished from seawrack by the presence of open (rather than tubular) leaf sheaths with 2 membranous flaps that persist without rupturing (Flora of North America 1993, Shin and Choi 1998).

Ecological Impact
Impact on community composition, structure, and interactions: Dwarf eelgrass provides habitats and food for invertebrates, fish, and birds (Harrison 1987). The proliferation of eelgrass plants may decrease the abundance of shrimp and tubeworms (Harrison 1987).
Impact on ecosystem processes: The colonization of sparsely vegetated or bare intertidal flats by dwarf eelgrass will result in a drastic modification of habitat. Increased eelgrass coverage slows water flow, increases sedimentation rates, and reduces mean sediment grain size. Eventually, dwarf eelgrass patches may raise the elevation of mudflats and disrupt ocean currents (Harrison and Bigley 1982, Posey 1988).

Biology and Invasive Potential
Reproductive potential: Dwarf eelgrass produces many seeds and completes its life cycle in 6 to 7 months (Harrison 1979, Harrison 1982).
Role of disturbance in establishment: Dwarf eelgrass establishes on open tidal mudflats (Harrison and Bigley 1982).
Potential for long-distance dispersal: Vegetative and flowering individuals have been observed uprooted and floating, but it is not known if floating plants can establish. Birds may act as a vector for seed dispersal (Harrison and Bigley 1982).
Potential to be spread by human activity: Dwarf eelgrass was introduced to North America with shipments of oysters (Carlton 1989). Plants may be transported inadvertently when tangled on boating or fishing gear (Harrison and Bigley 1982).
Germination requirements: Germination appears to be triggered by light or temperature in the spring (Harrison 1982, Harrison and Bigley 1982).
Growth requirements: Dwarf eelgrass grows in intertidal zones and grows best when completely submerged in water. Growth is favored by warm, bright conditions (Harrison 1982, Harrison 2003).
Congeneric weeds: No other *Zostera* species are known to occur as weeds (USDA 2002).

Legal Listings
☒Has not been declared noxious
☐Listed noxious in Alaska

☐Listed noxious by other states
☐Federal noxious weed
☐Listed noxious in Canada or other countries

Distribution and Abundance
Native and current distribution: Dwarf eelgrass grows on sandy and muddy shores in sheltered bays from subtropical Vietnam to East Asia, mainland Russia and the Sakhalin Islands (Shin and Choi 1998). It was first collected in North America in 1957 (Harrison 1982) and has been recently introduced to British Columbia, Oregon, and Washington (Hitchcock 1969, Harrison and Bigley 1982). Dwarf eelgrass has not been documented from Alaska (Hultén 1968, Welsh 1974, UAM 2004, AKEPIC 2010).

Management
Control methods for dwarf eelgrass have not been investigated.

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