



MISSISSIPPI STATE UNIVERSITY

EXTENSION

# Canadian Waterweed | *Elodea canadensis*



*Elodea canadensis*.



Pond full of *Elodea canadensis*.

Elodea, or Canadian waterweed, is a native species to North America but is frequently moved to new locations both locally and globally. It is soft to the touch, with medium to dark green leaves that are long, flexible, and narrow at the tips. **Leaves are in whorls of three** around the stem.

This species is easily confused with two non-native species, Brazilian egeria (*Egeria densa*) and hydrilla (*Hydrilla verticillata*). Elodea has three leaves per whorl and **feels smooth** when pulled through the hand (no midrib teeth).

The plant roots in muddy bottom sediments and sends stems toward the surface. Stems can be up to 5 feet in length. Growth is entirely submersed. However, in some situations, plants can form nuisance mats of vegetation at the water surface.

Plants reproduce sexually by flowering, with separate male and female plants, and produce small seeds in oval capsules. Elodea can also reproduce by fragmentation, and a single fragment can quickly expand asexually to fill a pond with a male- or female-only infestation. Floating fragments can grow vigorously without rooting.

### Management Value

This species is important as a food and substrate for insects and invertebrates, which are important to higher order species like fish, mammals, and birds. In moderation, this species can provide good habitat for ambush species like largemouth bass; however, it can quickly become too abundant.

		
Hydrilla	Brazilian Egeria	Canadian Waterweed
<ul style="list-style-type: none"> <li>• 4-8 leaves per leaf whorl</li> <li>• Leaf margins serrated</li> <li>• Mid-rib teeth</li> <li>• Feels rough when pulled through hand</li> </ul>	<ul style="list-style-type: none"> <li>• 3-6 leaves per leaf whorl</li> <li>• Leaf serrations very fine</li> <li>• No mid-rib teeth</li> <li>• Feels smooth when pulled through hand</li> </ul>	<ul style="list-style-type: none"> <li>• Always 3 leaves</li> <li>• Leaf margins smooth</li> <li>• No mid-rib teeth</li> <li>• Feels smooth when pulled through hand</li> </ul>

Comparison of *Hydrilla verticillata*, *Egeria densa*, and *Elodea canadensis*.

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## Recommended Controls

**Option 1:** Triploid Grass Carp. Stock 5 to 10 grass carp per acre to reduce moderate elodea infestations; stock 15 or more per acre for severe infestations. Note that abundant grass carp can impact other fish and can survive 20 years.

**Stock 8- to 10-inch triploid grass carp in ponds that have established largemouth bass populations.**

**Option 2:** Diquat (3.73-pound formulation). Diquat (0.5 gallon per acre-foot of water) should be applied as a submersed injection (application using a wand or hose). Determine pond volume prior to application. Do not exceed annual herbicide rate limits as stated on the product label.

**Option 3:** Endothall (4.23-pound formulation). Endothall should be applied as a submersed injection (1.9 gallons per acre-foot of water). Determine pond volume prior to application. Do not exceed annual herbicide rate limits as stated on the product label.

**Option 4:** Flumioxazin (4.0-pound formulation). Flumioxazin should be applied as a submersed injection (1.5 pints per acre-foot of water). Determine pond volume prior to application. Use a buffering agent when mixing with water with pH greater than 7.0. Do not exceed annual herbicide rate limits as stated on the product label.

**NOTE:** Acre-foot = average depth of pond multiplied by pond acreage; average depth is calculated by taking the depth at 20 points across a water body and averaging the values.

**Treat ponds when the plants are actively growing and the water temperature is at least 60°F. It would be best to treat one-third of the pond at a time for larger water bodies, with 2 weeks or more separating applications. After the entire pond has been treated, a repeat whole-pond application may be necessary to eliminate remaining plants.**

■ Read and follow all chemical label instructions, especially the section on the use of personal protection equipment.

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By **Wes Neal**, PhD, Extension/Research Professor, Wildlife, Fisheries, and Aquaculture; **Dennis Riecke**, Fisheries Coordinator, Mississippi Department of Wildlife, Fisheries, and Parks; and **Gray Turnage**, PhD, Assistant Research/Extension Professor, GeoSystems Research Institute.

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