

This WEED REPORT does not constitute a formal recommendation. When using herbicides always read the label, and when in doubt consult your farm advisor or county agent.

This WEED REPORT is an excerpt from the book *Weed Control in Natural Areas in the Western United States* and is available wholesale through the UC Weed Research & Information Center (wric.ucdavis.edu) or retail through the Western Society of Weed Science (wsweedsociety.org) or the California Invasive Species Council (cal-ipc.org).

Typha spp.

Cattails

Family: Typhaceae

Range: All western states.

Habitat: Freshwater wetlands throughout North America including lakeshores, river backwaters, ditches, bogs, fresh or brackish marshes, lakes, and ponds. Cattails tolerate nutrient rich, acidic, alkaline, and slightly saline conditions; generally not shade tolerant.

Origin: Most species are native to North America. Some populations are hybrids.

Impacts: Cattail control is largely dependent on land management goals. Cattails can behave like aggressive introduced weeds, but they are a native element in a variety of natural communities and can provide valuable wildlife habitat. Solid stands can limit biodiversity in wetlands, decrease recreation opportunities, and impede water movement. With sedimentation or changes in hydrology, shallow wetlands, ponds, and slow-moving streams may become vulnerable to cattail monocultures that eliminate open water.

Cattails are emergent perennials that can grow to 10 ft tall. The stems are erect, unbranched, rigid and solid. The leaves are alternate, most near stem bases, linear, thick, and spongy. Rhizomes are tough, creeping, branched, white with fibrous scale leaves. Roots from rhizomes are fibrous and shallow.

Inflorescences are cigar-shaped flower spikes, usually taller than the leaves and densely covered with numerous tiny male and female unisexual flowers. The male flowers are produced above the female flowers on the spike, wind pollinated, and self-compatible. One plant can produce approximately 250,000 soft downy seeds in fall. Seeds are said to remain viable in the seed-bank for up to 100 years, but it more likely that they only survive a couple of years. Seeds germinate primarily in late spring. Most seedlings emerge from the substrate in water to 14 inches deep, but some may emerge from water up to 2.5 ft deep. Local reproduction is primarily vegetative from rhizomes. Most rhizomes survive for less than 3 years. Rhizome fragments frequently disperse with water or substrate movement.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	<p>Cattails can be successfully controlled by physical removal. Hand-pulling or cutting cattails at the end of flowering followed by submergence of all cattail stems gave good control in several studies. Cutting plants below the water-line two to three times before flowering was also effective. It is important to remove all dead and live cattail stems.</p> <p>Crushing, shearing, or disking is effective for severing the aerenchyma (air filled cells) that link rhizomes with the leaves. To reduce plant survival, however, these techniques must be combined with flooding to induce stress from anaerobic starch conversion.</p>
Cultural	<p>If possible, removing sedimentation and increasing water depth will usually discourage cattail monocultures. Maintaining water levels 1.4 to 2 ft over the tops of existing shoots can kill established plants within a couple of years. Water depths over 2 ft can discourage cattail recruitment and seedling survival. Narrow-leaved cattail (<i>Typha angustifolia</i> L.) grows in deeper water and water levels need to be 4 ft or deeper to prevent seedling survival.</p> <p>Fire provides little or no cattail control. However, burning followed by reflooding to about 1 ft in spring controlled cattail in one study. Fire can be helpful for litter cleanup.</p>
Biological	<p>There are no available biological control agents for cattail control, primarily since the species are native to</p>



North America.

CHEMICAL CONTROL

The following specific use information is based on published papers and 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.

AROMATIC AMINO ACID INHIBITORS

Glyphosate <i>Aquamaster</i> , <i>Rodeo</i> and others	<p>Rate: 3 to 4 qt product <i>Rodeo</i> or <i>Aquamaster</i>/acre (3 to 4 lb a.e./acre). Spot treatment: 2 % v/v.</p> <p>Timing: Postemergence, at flowering after heads are formed and before frost.</p> <p>Remarks: Glyphosate will not kill seeds or inhibit germination the following season. Glyphosate has no soil activity. Allow 7 days or longer before clipping or tillage. Flooding after herbicide application improved control in several studies. Adding a surfactant or emulsifier is recommended as cattails have a thick waxy coating on the leaf. Retreatment with herbicides is often necessary for complete control.</p>
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BRANCHED-CHAIN AMINO ACID INHIBITORS

Imazamox <i>Clearcast</i>	<p>Rate: 2 to 4 pt product/acre (0.25 to 0.5 lb a.i./acre)</p> <p>Timing: Postemergence, from new growth through killing frost.</p> <p>Remarks: Imazamox has mixed selectivity and controls several broadleaf and annual grass species. It is registered for control of vegetation in and around aquatic and non-cropland sites. It has irrigation and water use restrictions. Add a spray adjuvant, such as a methylated seed oil, to improve control.</p>
Imazapyr <i>Habitat</i>	<p>Rate: 0.5 to 2 qt product/acre (0.25 to 1 lb a.e./acre)</p> <p>Timing: Postemergence from boot to flowering.</p> <p>Remarks: <i>Habitat</i> is registered for aquatic use. Also effective following early season mowing and/or disking. It is a nonselective herbicide. Imazapyr has long soil residual activity and may leave more bare ground than other treatments, even a year after application. Add a spray adjuvant. Do not apply in the root zone of desirable trees.</p>

RECOMMENDED 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.