Shoreline Plants and Landscaping

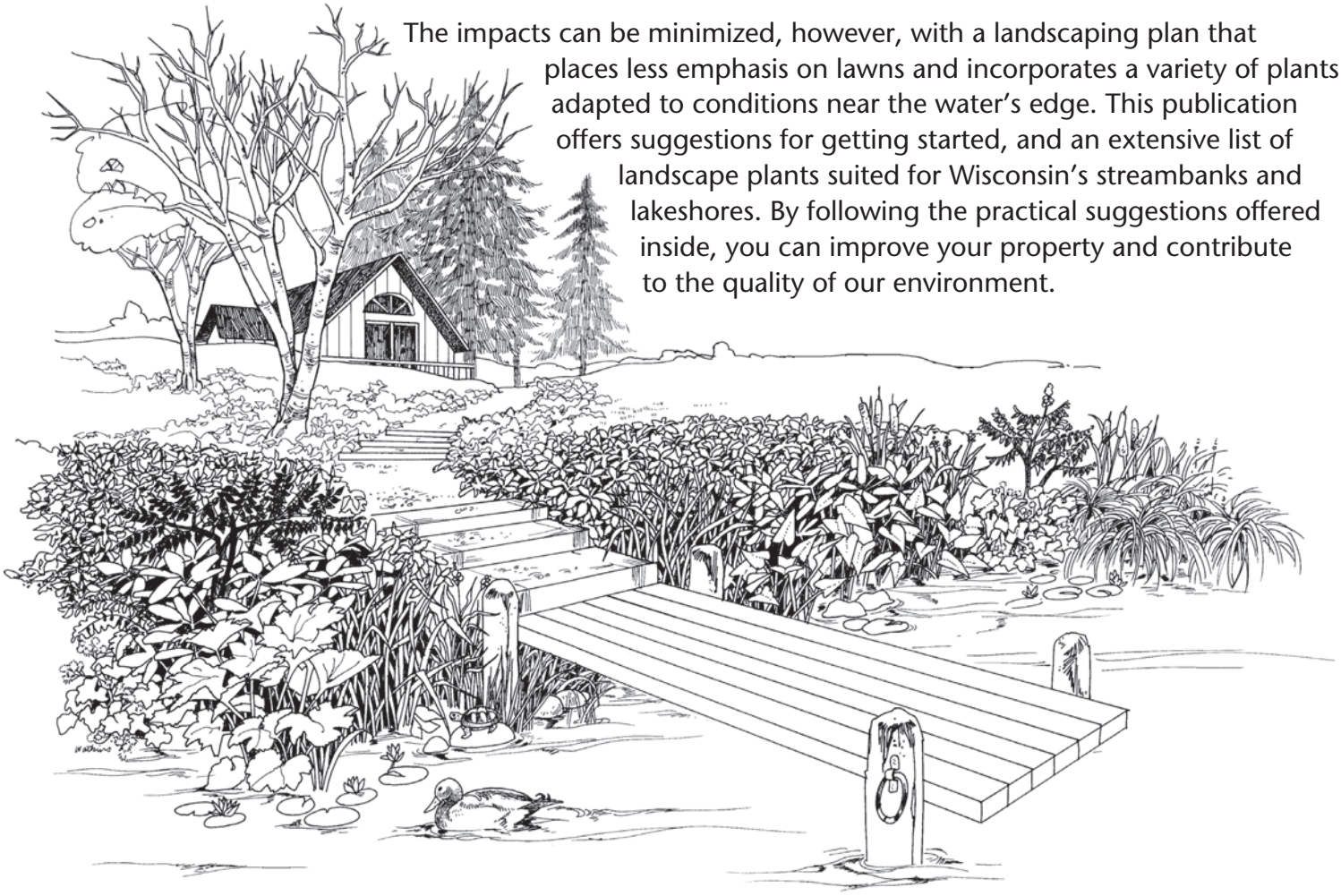
A SERIES OF WATER QUALITY FACT SHEETS FOR RESIDENTIAL AREAS

Wisconsin's lakes and streams offer an escape for residents and visitors alike. From northwoods flowages to southeastern glacial lakes, our waters provide abundant recreational opportunities, as well as a chance to simply get away from the sights and sounds of an urbanizing society.

The escape has become so popular that many lakeshores and streambanks are now growing more houses than trees, often with more consequences than meet the eye. Soil exposed during construction can wash into the water, and the development itself permanently alters a portion of the natural landscape. Buildings and access drives replace vegetation, increasing the amount of storm water runoff and pollutants entering the lake or stream.

Owners of existing and new homes typically bring with them traditional landscaping ideas centered on the conventional yard. Too often that means manicured lawns extending to the water's edge, along with the fertilizer and pesticide applications that are the norm in the cities and villages left behind. Over time, and combined with other sources of pollution, shoreline development can have profound impacts on water quality.

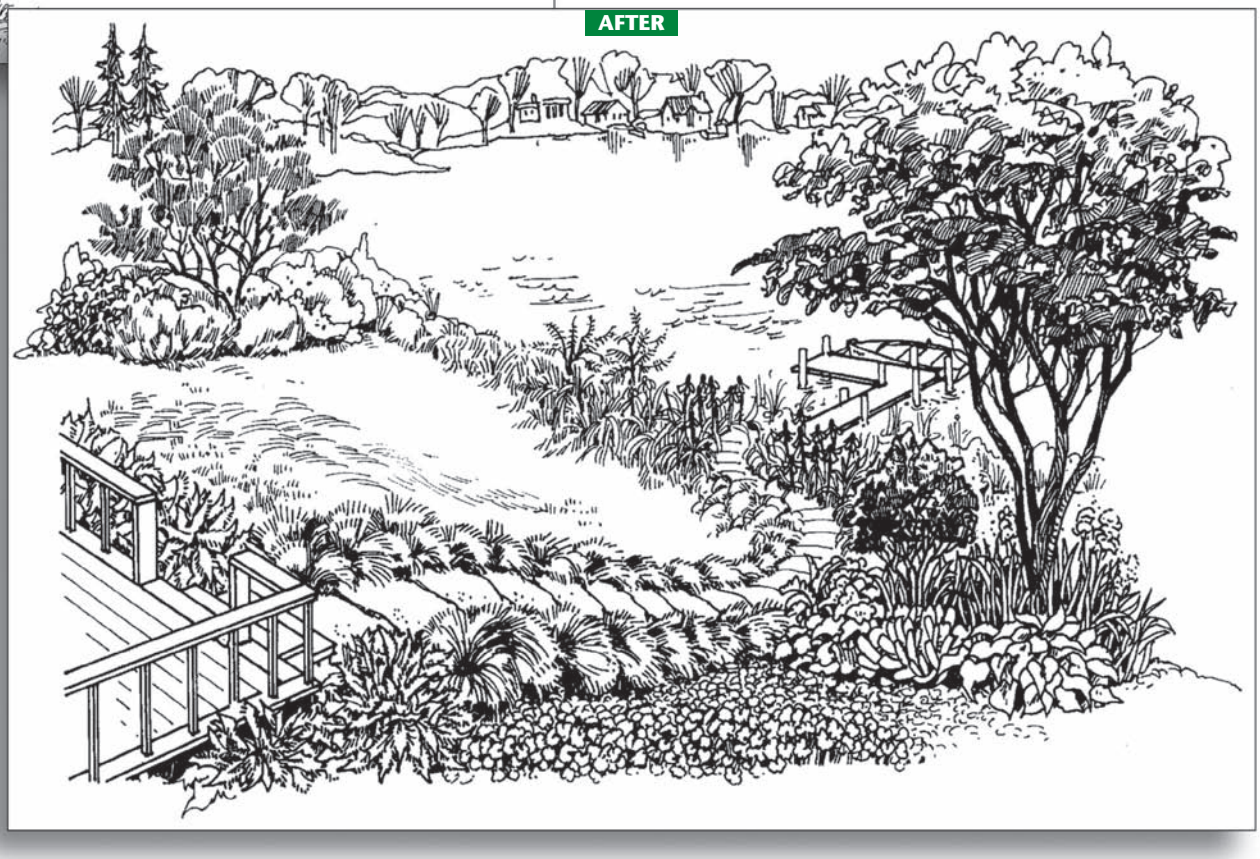
The impacts can be minimized, however, with a landscaping plan that places less emphasis on lawns and incorporates a variety of plants adapted to conditions near the water's edge. This publication offers suggestions for getting started, and an extensive list of landscape plants suited for Wisconsin's streambanks and lakeshores. By following the practical suggestions offered inside, you can improve your property and contribute to the quality of our environment.



BEFORE & AFTER: ALTERNATIVES TO THE TRADITIONAL LAWN

Grass planted to the water's edge (top illustration) is seldom the best choice, from either an esthetic or water quality standpoint. Why not try an alternative (bottom illustration)? Substituting a variety of plants for at least parts of the lawn has numerous advantages:

- ✔ Screens undesirable views while framing good ones.
- ✔ Reduces the time spent on lawn maintenance and reliance on fertilizers and other lawn chemicals.
- ✔ Helps filter pollutants that wash off roofs, driveways and other hard surfaces.
- ✔ Preserves the natural appearance of the shoreline.
- ✔ Offers better protection against shoreline erosion and requires less formal repair.
- ✔ Provides increased diversity and improved habitat for wildlife.



Protecting the Water During Construction

With development comes bare soil, but careful planning can minimize erosion and the resulting water quality problems.

- The further the construction site is from the lake or stream and the less ground that is disturbed, the better for water quality. Greater setbacks from the water can also help overcome site limitations such as wet soils or steep slopes.
- Indiscriminate removal of trees during construction promotes soil erosion and is also a questionable practice from the standpoint of property values. A better alternative is to carefully trim trees to frame views of the lake and screen undesirable views.
- During construction, use filter fabric fences or straw bales as temporary sediment barriers along the shoreline.
- Immediately after construction of any soil-disturbing activity, the soil should be seeded, sodded or planted to natural vegetation and mulched. Once established, the vegetation becomes a permanent sediment filter. A fact sheet on Lawn Establishment (A3434) is available from county UW-Extension offices.

Landscaping for Established Yards

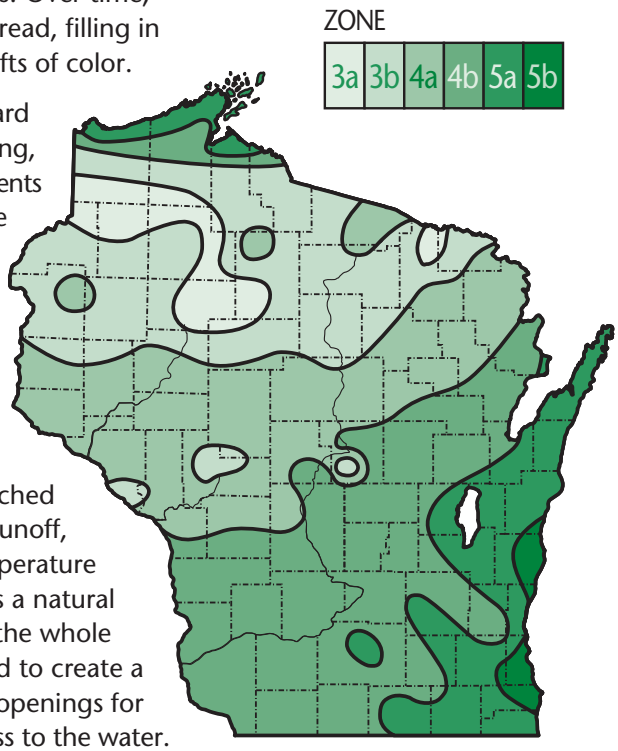
Proper landscape design and selection of plant material can greatly reduce the effects of shoreline development on water quality. Lawns groomed right up to the water's edge can be redesigned to allow a buffer zone along the lake or stream. Banks can be planted to stabilize the soil and eliminate lawn mowing and fertilizing.

Treatments can vary from low-cost, limited alterations to moderate-cost, significant changes. The specific shoreline treatment depends on the site and desires of the property owner, but here are a few basics:

- Leaving a 35-foot (or wider) buffer of unmowed turf along shorelines is usually the first step in reducing runoff of soil, fertilizer and pesticides. The grasses will grow 12-24" tall before going to seed. Mow the buffer zone's inland edge along a natural-looking curve. Also, use a smooth-flowing curve when mowing pathways through the buffer zone to the water's edge.
- Planting appropriate bulbs, perennial flowers, and groundcovers in the grasses of a buffer zone will add seasonal diversity. Working up small areas and mulching around new plantings will reduce competition from the grasses and reduce runoff of rainfall or melting snow.
- Native plants are adapted to Wisconsin's climate and are the best choice for the shoreline landscape.
- Planted through the grass in the buffer zone, native flowers can provide an ever-changing foreground to the view of the water. The buffer zone can be planted to native shore plants and prairie by gradually working up small areas (to reduce potential erosion) and seeding or transplanting shallow water plants or wet prairie grasses and forbs. UW-Extension's Prairie Primer (G2736) provides prairie restoration and maintenance details. Over time, the native plants will spread, filling in the buffer zone with drifts of color.
- Although the view toward the water is often pleasing, there may be visual elements that are unappealing. The noise of lake activities may also be disruptive. Trees and shrubs in the buffer zone can frame good views, screen poor views, and reduce sounds. Incorporating trees and shrubs in mulched planting beds reduces runoff, improves moisture/temperature conditions and provides a natural appearance. Gradually the whole shoreline can be planted to create a woodland setting with openings for visual and physical access to the water.

LANDSCAPE PLANT HARDINESS ZONES:

When selecting shoreline landscape plants from the list that follows, be sure they are identified as hardy for your area. While some plants may survive in a sheltered spot north of their recommended zone, it is usually best to plant reliable hardy species.

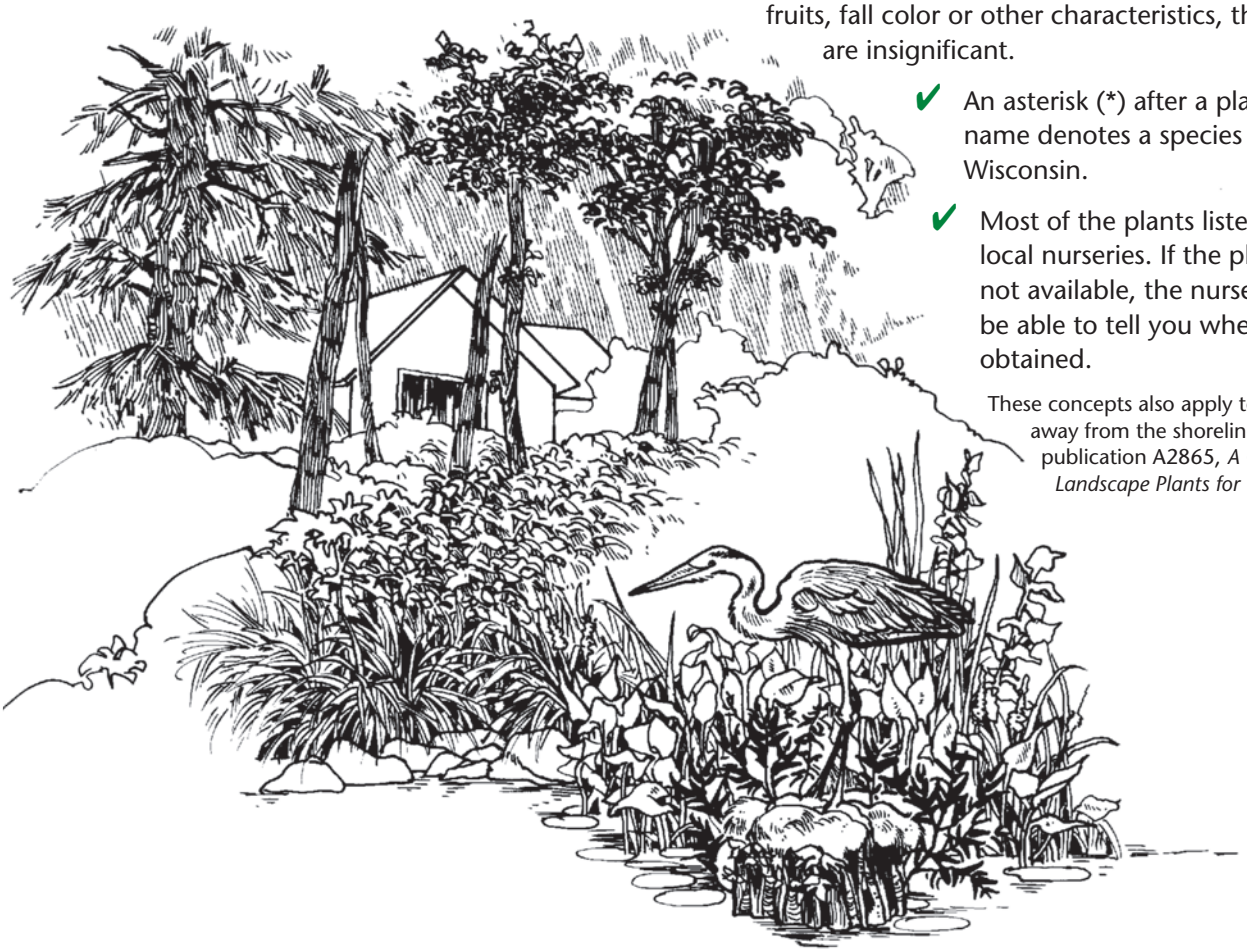


A Guide to Shoreline Landscape Plants

The list of plants on the following pages includes most of the better native and ornamental plant species and cultivars (cultivated varieties) that are usually available for sale in Wisconsin. The list includes the botanical and common names of recommended plants, growth rate (F = fast, M = medium, S = slow), hardiness zone and plant characteristics. When selecting plants, please keep the following points in mind:

- ✔ Wisconsin is divided into six zones based on minimum winter temperatures. (See map on previous page.) Always try to select plants that are hardy in your area.
- ✔ Be sure to review all the plant characteristics before you select trees, shrubs and ground covers for your situation. Many plants are sensitive to poorly drained soil conditions. Use only species tolerant of poor drainage in low, wet spots. Where shade is indicated as one of the plant characteristics, it refers to tolerance, not a requirement for shade.
- ✔ When selecting plants, one often tends to consider the flower display first. However, it is also important to consider the year-round interest the plant will provide in the landscape. Remember that a flower display often lasts only a week or two, while other interesting features such as the bark or fruits may be noticeable for several months. Where the list includes no mention of flowers, fruits, fall color or other characteristics, those features are insignificant.
- ✔ An asterisk (*) after a plant's botanical name denotes a species native to Wisconsin.
- ✔ Most of the plants listed are available at local nurseries. If the plant you desire is not available, the nursery dealer should be able to tell you where it can be obtained.

These concepts also apply to landscape plants away from the shoreline. Refer to Extension publication A2865, *A Guide to Selecting Landscape Plants for Wisconsin.*



Grasses, Forbs & Aquatics

Most aquatic plants have not been extensively studied for landscape purposes. However, landowners can help establish stable, diverse plant communities by encouraging these plants along the water's edge.

Moist Shore Areas (moist to wet soils in full sun)

PLANT NAMES		GROWTH RATE	HARDINESS ZONE	PLANT CHARACTERISTICS
botanical	common			
Andropogon gerardi*	Big Bluestem Grass	—	3a	Flowers/seed heads branch into three parts, looks like a turkey's foot in fall; 3-8′ height; lush green leaves turn to reddish fall color; stems blue/purple; most prevalent of all prairie grasses.
Asclepias incarnata*	Swamp Milkweed	—	3a	Pink flowers in midsummer; 2-4′ height; narrow, lance-shaped, smooth-edged leaves.
Aster novae-angliae*	New England Aster	—	3a	Bright violet, rose, or magenta flowers with yellow centers in late fall; 3-6′ height; important late-season nectar source for a variety of butterflies.
Aster simplex*	Panicled Aster	—	3a	White flowers in fall; 3-6′ height; short, stalked willow-like leaves.
Calamagrastis canadensis*	Canada Bluejoint Grass	—	3a	Typical grass flowers and seeds in fall; 2-4′ height; grows in heavy clumps.
Cicuta maculata*	Cowbane or Water Hemlock	—	3a	White flowers in large umbel in summer; 3-6′ height; twice- or thrice-compound leaves; stem streaked with purple; poisonous.
Dodecatheon meadia*	Shooting Star	—	3a	Pink flowers with swept-back petals in spring; 1-2′ height; leaves in rosette at ground level.
Eupotorium maculatum*	Spotted Joe-Pye Weed	—	3a	Flat-topped clusters of pale purple flowers in late summer; 4-6′; height; stem is deep purple.
Galium boreale*	Northern Bedstraw	—	3a	Tiny white clustered flowers in early summer; 1-3′ height; narrow leaves in whorls of four.
Gentiana andrewsii*	Bottle Gentian	—	3a	Bright blue flowers in late fall never fully open; 1-2′ height.
Hypoxis hirsuta*	Stargrass	—	4a	Six-pointed star-like yellow flowers in summer; 3-7″ height; narrow, grass-like leaves.
Iris versicolor*	Blue Flag (Wild Iris)	—	3a	Showy lavender flowers in late spring; 2-3′ height; graceful, sword-like leaves.
Lilium superbum*	Turk's-Cap Lily	—	4a	Large, nodding, bright orange flowers with maroon-spotted petals in summer; 3-6′ height.
Panicum virgatum*	Switch Grass	—	3a	Typical grass flowers and seeds in fall; 3-6′ height; can be aggressive; thick stands make good winter and early spring wildlife cover.
Phlox pilosa*	Downy Phlox	—	3a	Pale purple flowers in late spring; 2-3′ height; narrow, pointed leaves.
Pycnanthemum species*	Mountain Mint	_	3a	Flat-topped, branching clusters of white flowers in late summer; 1-3′ height; square stems; mint-like odor if crushed.

(MOIST SHORE AREAS – CONTINUED)

PLANT NAMES		GROWTH RATE	HARDINESS ZONE	PLANT CHARACTERISTICS
botanical	common			
Rudbeckia hirta*	Black-eyed Susan	_	3a	Showy, big single yellow flowers with chocolate-colored center disks in summer; 1-3′ height; easy to grow.
Sorghastrum nutans*	Indian Grass	_	3a	Flower clusters filled with short, soft, golden-brown hairs; typical grass seed head in fall; 4-8′ height; grows rapidly.
Spartina pectinata*	Prairie Cordgrass	_	3a	Flowers and seed heads arranged on one side of stem in fall; 3-5′ height; gracefully arching narrow leaves; bright yellow fall color.
Thalictrum dasycarpum*	Meadowrue	_	3a	Delicate white dioecious flowers in spring; 2-5′ height; lacy bluish-green leaves.
Veronicastrum virginicum*	Culver's Root	_	3a	White tube-like flowers in mid-summer; 2-5′ height; slender, sharp-toothed leaves in whorls of 3-7.
Viola cucullata*	Marsh Blue Violet	_	3a	Violet flowers taller than leaves in spring; 5-10″ height.
Zizia aurea*	Golden Alexanders	_	3a	Tiny golden flowers in spring; 1-3′ height; doubly compound leaves; red-tinged stems.

Shallow Water to Wet Shore Plants

PLANT NAMES		GROWTH RATE	HARDINESS ZONE	PLANT CHARACTERISTICS
botanical	common			
Acorus calamus*	Sweet Flag	_	3a	Flowers are spadix of small greenish-yellow florets in early summer; 1-4′ height; rigid, sword-like leaves; flat, blade-like stem.
Sagittaria latifolia*	Arrowhead	_	3b	White flowers in whorls of three in summer; 1-3′ height; lance-like to broad, arrow-shaped leaves.
Scirpus species*	Bulrushes	_	3-4	Solitary or clustered spikelet flowers in summer; 6-8′ height; grass-like leaves at base of plant.
Sparaganium eurycarpum*	Giant Bur-Reed	_	3b	Green to brown flowers; fruits are bur-like balls; 4-6′ height; linear iris-like leaves.
Typha latifolia*	Cattail	_	3a	Brown head of tightly packed flowers; fruits are attached to fluffy, cotton-like material; 3-9′ height; erect, blade-like leaves.