



RECOMMENDED EROSION CONTROL OPTIONS




FRIENDS OF BAYOU LAFOURCHE has worked with the Bayou Lafourche Fresh Water District, the Barataria-Terrebonne National Estuary Program, Nicholls State University Farm, and the Golden Meadow Plant Materials Center to compile erosion control and bank stability options for landowners along Bayou Lafourche. The bayou's slope, current, and salinity levels vary in different areas therefore a variety of vegetative, semi-vegetative, and non-vegetative options are listed. The methods listed here are intended to provide recommendations for public and private landowners.

The **MISSION** of Friends of Friends of Bayou Lafourche is to raise the awareness of the importance of Bayou Lafourche and its revitalization, through education and informational outreach, and by the creation of recreation and beautification opportunities along the bayou.

All local, state, and federal agency regulations should be followed when making bature improvements. Those constructing permanent structures (pilings, concrete, bulkhead, etc.) should contact the Bayou Lafourche Fresh Water District as to not construct enhancements over the permitted limit boundary.

VEGETATIVE OPTIONS

 **PLANT ON STEEP SLOPE**

 **PLANT ON SHALLOW SLOPE**

 **CONDUCTIVE FOR FISHING FROM BOAT WITH PROPERTY PRIVACY**

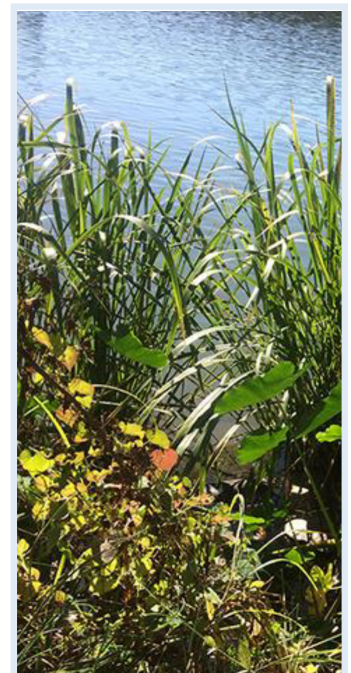
 **CONDUCTIVE FOR BANK FISHING WITH MINIMAL PRIVACY**

  **CUTGRASS** (*Zizaniopsis miliacea*)

» **HEIGHT:** 3-9 ft.

» **GROWTH CHARACTERISTICS:** Although a warm-season grass, giant cutgrass grows some in late fall along the gulf coast. It produces seed mostly in spring and early summer. It grows in dense bunches from large, creeping rhizomes. Mature plants turn yellowish after first frost, but usually have green basal leaves all year. It grows primarily on firm mineral clays or silt soils. Also, it grows in fresh-water marshes and swamps, on creek and riverbanks, and in drainage ditches and canals. It tolerates a small amount of salt in free soil water. It does best if the water level fluctuates from soil surface to 12 inches above.

» **WILDLIFE HABITATS:** Giant cut grass provides a shelter and nesting area to wildlife. Wildlife also feed off of the seeds of giant cut grass. Submerged portions of all aquatic plants provide habitats for many micro and macro invertebrates. These invertebrates in turn are used as food by fish and other wildlife species (e.g. amphibians, reptiles, ducks, etc.). After aquatic plants die, their decomposition by bacteria and fungi provides food (called "detritus") for many aquatic invertebrates.





CALIFORNIA BULRUSH (*Schoenoplectus californicus*)

- » **HEIGHT:** 5 to 8 ft.
- » **GROWTH CHARACTERISTICS:** Pruning is usually not required, but spreading rhizomes may need to be removed periodically to restrain its aggressive tendencies. It is a definitive species of freshwater or brackish marshes, found in perennially inundated areas such as lakes and ponds, but generally not in flowing water.
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SALTMEADOW (*Marshhay*) **CORDGRASS** (*Spartina patens*)

- » **HEIGHT:** 1 to 4 ft.
- » **GROWTH CHARACTERISTICS:** Stems and rhizomes of this grass respond well to applications of well balanced commercial fertilizers. Saltmeadow cordgrass is commonly found growing in saline to brackish marshes, sandy beaches and low dunes, tidal flats and marsh ridges from normal high tide to about 13 feet above sea level, from Newfoundland to Quebec, south to Florida and along the Gulf Coast into south Texas; it can also be found along the shores of the Great Lakes. This grass is adapted to a wide range of soils from coarse sands to silty clay sediments with pHs ranging from 3.7 to 7.9. Saltmeadow cordgrass will tolerate irregular inundations with 0 to 35 parts per thousand salinity.
- » **WILDLIFE HABITATS:** Saltmeadow cordgrass provides a habitat for muskrats, mink, otters, and alligators. Under climax conditions, vegetation becomes too dense for waterfowl but provides homes for a host of songbirds and other wildlife species.



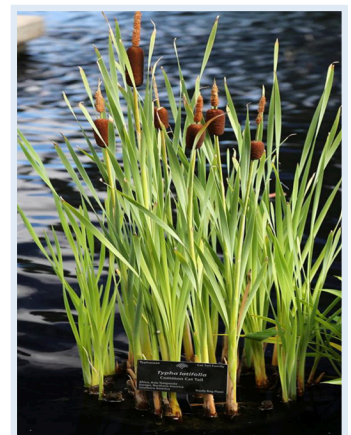
ARROWROOT (*Maranta arundinacea*)

- » **HEIGHT:** 1 to 5 ft
- » **GROWTH CHARACTERISTICS:** Suitable for light (sandy), medium (loamy) and heavy (clay) soils and prefers well-drained soil. Suitable pH: acid, neutral and basic (alkaline) soils and can grow in very acid soils. It can grow in full shade (deep woodland) semi-shade (light woodland) or no shade. It prefers moist or wet soil.



CATTAIL (*Typha*)

- » **HEIGHT:** 3 to 10 ft
- » **GROWTH CHARACTERISTICS:** Because cattails grow in the muddy areas around rivers and ponds, they are accustomed to silty soil that is rich in nutrients. Providing cattails with a low phosphorus balanced fertilizer will provide them with the macronutrients they need, including nitrogen and potassium as well as several micronutrients, such as calcium, copper and molybdenum. A low phosphorus fertilizer can also help prevent excess phosphorus, which can spur harmful algae blooms, from escaping into the water feature.
- » **WILDLIFE HABITATS:** Cattails provide nesting sites for red-winged blackbirds, ducks, geese and fish. Nutria, muskrats and beavers enjoy the shoots and roots, while teal ducks, finches and least bitterns eat the seeds.



  **SALT MARSH HIBISCUS** (*Hibiscus moscheutos*)

- » **HEIGHT:** 3 to 8 ft.
- » **GROWTH CHARACTERISTICS:** Grows best in moist to wet, slightly acidic soils. Requires very little maintenance. When the plant goes dormant in winter, dry stems may need to be cut down to 3”.
- » **WILDLIFE HABITATS:** Attracts hummingbirds, bees, butterflies, and other pollinators



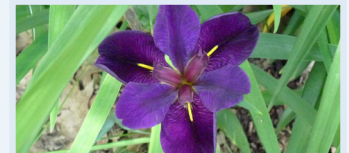
  **GULF MUHLY** (*Muhlenbergia capillaris*)

- » **HEIGHT:** 1½ to 3 ft.
- » **GROWTH CHARACTERISTICS:** Muhly grasses can be trimmed back to the ground, or stumps of stems about 2 to 6 inches tall anytime after fall or winter frosts and freezes turn foliage tan and dead.
- » **WILDLIFE HABITATS:** Seeds eaten by many species of birds and wildlife. Grasses are host plants for many of the skipper species.



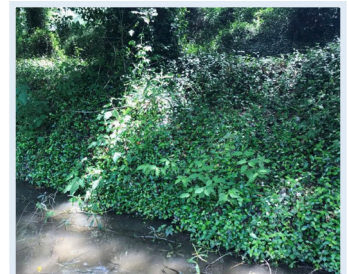
   **GIANT BLUE IRIS** (*Iris giganteaerulea*)

- » **HEIGHT:** 3 to 6 ft.
- » **GROWTH CHARACTERISTICS:** They need full sunlight or partial shade, moist, acidic soils (ph level of 6.5) with a high organic and high fertility content (or humus rich).



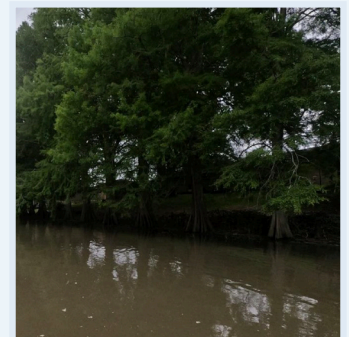
   **ASIAN JASMINE GROUND COVER** (*Trachelospermum Asiaticum*)

- » **HEIGHT:** 6” to 18”
- » **GROWTH CHARACTERISTICS:** This non-native vine-like woody plant is a climbing groundcover that slowly extend across the ground and create a dense, tangled blanket. Asiatic jasmine requires little mowing, but edges should be trimmed occasionally.
- » **WILDLIFE HABITATS:** This ground cover plant will provide safe habitats for birds, rabbits, and other insects.



   **CYPRESS TREE** (*Cupressaceae*) – Bald or Pond Cypress Trees

- » **HEIGHT:** Bald Cypress 50 to 100+ ft, Pond Cypress 40 to 80 ft
- » **GROWTH CHARACTERISTICS:** Cypress trees are the only recommended tree for planting along Bayou Lafourche. Many hardwood trees (oak, pecan, maple, etc.) tend to grow out over the water and eventually fall into the bayou, whereas cypress trees grow almost straight up, provide hardy root systems for bank stabilization, and are rarely impacted by high winds.
- » **WILDLIFE HABITATS:** Frogs, toads, and salamanders use cypress tree for breeding. Wood ducks nest in hollow trunks, catfish spawn in the submerged hollow logs, and large birds such as bald eagles use the trees for nesting.



SEMI & NON VEGETATIVE OPTIONS

BULKHEAD

- » Bulkheading is a popular and effective way of controlling erosion along various types of waterways. While wood and steel sheet piles can be used, vinyl



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is the most preferred option for residential and recreational applications. The initial investment costs of bulkheading is higher than some other options, but because it requires minimal upkeep and lasts for many years, it is a common means of shoring land along water.



REVTMENT MATS *(open or closed)*

» There are various types and sizes of revetment mats that can control erosion along waterways. There are many manufacturers of these mats, but generally they consist of precast concrete blocks that are held together with cables. The concrete blocks are available in open or closed cell. The voids in the matting can be filled with limestone or soil if the user wants vegetation to grow through. While this is a higher priced option, it is a long-term solution for sloping applications.

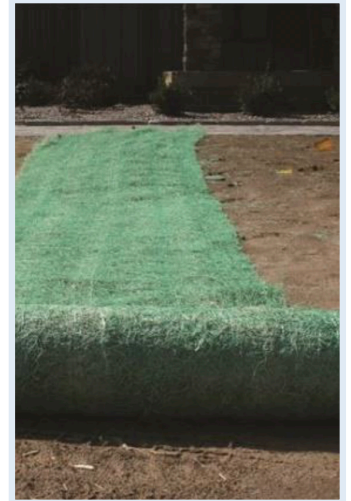


OPTIONS FOR STABILIZING VEGETATIVE GROWTH

TURF REINFORCEMENT MATS *(degradable and non-degradable)*

» These mats are a great and inexpensive option for subtle and steep slopes to promote vegetation growth. They are anchored in place to hold soil and promote plant growth while being exposed to water runoff and wave action. There is an abundance of manufacturers, designs, and sizes. There are basically two types of TRMs:

1. Degradable, these mats are made of bio-degradable/natural fiber materials and will eventually dissipate post vegetation growth, and
2. Non-Degradable, these mats are made of synthetic materials and will remain in place below the vegetation.



GEOCELL GRID

» A Cellular confinement system is used for erosion control, soil stabilization on flat ground and steep slopes, channel protection, and structural reinforcement for load support and earth retention. This application can be used to promote vegetation growth and/or to hold limestone in place.



PERMEABLE PAVERS

» Permeable Pavers allow for a sturdier means of holding soil for plant growth, and limestone stabilization. This product can be installed on sloping and level surfaces. They are installed by interlocking the pavers and securing with stakes. This option is built for heavy loads and remain permeable to rain and water runoff.

