Rick Webb Presentation Text

Owner, Louisiana Growers

I am assigned "Plants, Maintenance, and Installation", but I won't even try to stay on topic. Or well, loosely….

First, if this is a chore that you dread, a requirement by a governmental body that you know you'll have to do, please consider: Why else?

Storm water can be caught and controlled in an earthen tank. Sediment is the main pollutant in all waterways. Sediment is held and carried by running water. Still water drops its load. Captured runoff water can be metered out over time and thus mitigate flood potential. A simple recirculation pump that shoots the water into the air for oxidation does a lot to improve the quality. If that is enough, Fine. Build a tank around back of the facility, weed-eat it out once a week, and fence it off. This is the apparently cheap way out.

But if you want to do more than just controlling the water, to clean the water more than just sediment, you want to get at the nutrient loads; you want to create a landscape attraction, you need an active wetland habitat. You need construction of a facility with places for flowering, fruiting greenery. You need intelligent maintenance. Then look for ancillary benefits that justify the apparent expenses
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Consider the value of the water for irrigation. My nursery run-off is guided back to my storage ponds and pumped back over the crop. This cuts my daily consumption of ground water considerably. And then add boardwalks and paths, a pier with a gazebo, benches, and descriptive signage and pamphlets for the people who will be drawn to you new space. You will have flora and fauna to be enjoyed. You can have the Zoo people come and give programs to the kids on turtles while Mom shops at the home supply warehouse. You can have retired couples walking, holding hands, and watching Egrets fish every afternoon in their subdivision. You can have wildflowers and autumn color. Shade. You will have the simple beauties of sparkling water and the sounds of frogs. These things will offset any space issues and costs. This is an opportunity to add value to your project, not a cost item. This can be an asset not a dread.

How to go about it.

(photo of St. Tammany ponds) Note: Site, Scene, Slope, Shelves,
Solution: Construction of the wetland is the most important step.
Draw the profile.
Explain the space requirements of the land / water interface. Give the example of the floating lawnmower.

From
NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD
WETLAND CREATION SEPTEMBER 2001

Criteria for Hydrophytic Vegetation
Establish hydrophytic vegetation typical for the wetland type(s) being established. Establishment of a filter strip or herbaceous riparian area is essential for improved water quality of the wetland. Preference shall be given to native wetland plants with localized genetic material. Plant materials collected or grown from material collected within a 200 mile radius from the site is considered local. Where natural colonization of selected species will realistically dominate within 5 years, then natural regeneration can be left to occur. Adequate substrate material and

site preparation necessary for proper establishment of the selected plant species shall be included in the design. If the targeted hydrophytic vegetation is predominantly herbaceous, several species adapted to the site will be established. Forested wetland establishment will include a minimum of three species, where appropriate.

Before we go further and discuss plants, a little jargon:
Wetland Status (NWI): Source - National list of vascular plant species that occur in wetlands. To have a way of classifying plants as to their relationship to wetlands:

US Fish & Wildlife Service issued Biological Report 88(24) entitled *National Wetlands Inventory*, US Fish & Wildlife Service. 1988 as a result of an agreement between them and EPA., The Corps, and NRCS.
This created a standard to label species and their wetland status in regions around the country.

Plants are labeled:

OBL: Obligate Wetland. Occurs almost always (estimated probability 99%) under natural conditions in wetlands.
FACW: Facultative Wetland. Usually occurs in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
FAC: Facultative. Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
FACU: Facultative Upland. Usually occurs in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1%-33%).

Now about plants from top land to water bottom:

The outer, upper part of the planting serves as a filter strip to slow runoff water and to ready the visitor for what's to come.
Native grasses such as SWITCHGRASS Panicum virgatum FAC, EASTERN GAMAGRASS Tripsacum dactyloides FAC, and BIG BLUESTEM Andropogon gerardii FAC can be used upslope to slow the water and be big ornamentals. These are 6 foot grasses with summer blooms to wavy in the wind and turn golden with fall color. Interplant wildflowers such as TICKSEED Coreopsis species FACU, BLACKEYED SUSAN Rudbeckia hirta FACU and many others on the upland parts to add seasonal color at the larger plants feet.
To add structure to the herbaceous layer add in SOUTHERN WAXMYRTLE Morella cerifera FAC for olive green evergreen foliage and high-fat fruits for birds from the female plants; SOUTHERN ARROW-WOOD Viburnum recognitum FAC for May flowers, blue to black summer fruits and bird nesting and resting cover and all that followed by purple-red fall color; AMERICAN BEAUTYBERRY Callicarpa americana FACU with its large yellow-green foliage and bright purple clustered fruits; or YOUPON HOLLY Ilex vomitoria FAC with its evergreen foliage and bright red (rarely yellow/orange) fruits that can be sheared as a shrub or pruned of its lower branches to produce a small tree.
Plants that would naturally would be small trees might include WHITE FRINGETREE Chionanthus virginicus FACU with its creamy white fine textured spring flower clusters; or PARSLEY HAWTHORN Crataegus marshallii FAC that features spring flowers on twisted character spiny trunks that yield red fruits that persist into fall till the birds clean them out.
Use large trees in groups to frame scenes and to screen big objects. Species here could be SOUTHERN MAGNOLIA Magnolia grandiflora FAC for large coarse-texture evergreen foliage and huge summer fragrant flowers, LIVE OAK Quercus virginiana FAC the "best" tree in the coastal south when properly sited; LONGLEAF PINE Pinus elliotii FACU the dominant pine in the Florida parishes before development; WILLOW OAK Quercus phellos FACW with its clean upright habit and fast fall leaf drop; or numerous others.

Now down on the flat, the part of the construction that ranges from rare inundation to sustained flooding and down to just above the sustained water level. The same structure as above with herbaceous grasses and forbs, shrubs and small trees and large overstory shade trees is demonstrated.

The grasses here would include ELLIOT'S BLUESTEM Andropogon gyrans OBL with its bluish sturdy upright foliage and showy late summer flowers and ELLIOTT'S LOVEGRASS Eragrostis elliottii FACW a willowy fine-textured blue grass that holds its fluffy blooms through September and October or some of several others. Wild flowers could include BEGGARTICK Bidens species OBL with their showy golden yellow flowers; any of one of four MILKWEED Aeclepias species OBL that flower and attract butterflies use then as forage; CAROLINA SPIDERLILY Hymenocallis caroliniana FACW that sprouts the thick green foliage from over-winter bulbs to host large white exotic June flowers; VARIABLELEAF SUNFLOWER Helianthus heterophyllus OBL with its bright yellow-gold flowers in bunches; JOEPYE WEED Eupatorium purpureum FAC with its tall habit crowned by purple flower heads; and again, numerous others.

The shrub layer here is active too. Selections might include VIRGINIA-WILLOW Itea virginica FACW is spreading, suckering to 6' tall shrub with fragrant late Spring creamy flower spikes and striking fall color; COASTAL SWEETPEPPERBUSH Clethra alnifolia FACW another summer bloomer that is a butterfly favorite whose sweet fragrance is commonly the first thing notice;

POSSOMHAW VIBURNUM Viburnum nudum FACW give spring flowers, thick bird-nesting cover and super fall colors; INKBERRY HOLLY Ilex glabra FACW a black-fruited holly that makes 4-6 foot high masses of light green screening; FETTERBUSH Lyonia lucida FACW a arching, spreading large glossy-green shrub to 8 feet with clusters of tiny bell-shaped pink to white spring flowers; DAHOON HOLLY Ilex cassine FACW is an evergreen small tree with red fruits on the females in winter and is used as a large shrub to 15' or as a multiple trunk small tree; as would POSSUMHAW HOLLY Ilex decidua FACW except its deciduous-habit bare winter form shows off its fruits of red, less commonly orange/yellow; SWAMP CYRILLA or TI TI Cyrilla racemiflora FACW which is a large, slowly-suckering shrub to small tree that throws yellow, orange to red fall color throughout the winter from the inside of the plant and has clusters of finger-like flower racemes that set fruit and persist into winter; or another holly

LARGE GALLBERRY Ilex coriacea FACW that is a colonizing open multi-stem evergreen with large black fruit.

Small trees down on the flat should include ROUGH-LEAF DOGWOOD Cornus drummondii FACW that is occasionally colonial with dark reddish stems in winter and flowers in Spring that lead to a small fruit in clusters that is white to a pale blue tint; MAYHAW Crataegus opaca OBL another great hawthorn as a shrubby small tree with spring flowers and fruits that ripen in April;

AMERICAN SNOWBELL Styrax americanus OBL a fine-textured deciduous tree with spring hanging bell-shaped flowers; or SWAMP REDBAY Persea palustris OBL with its fragrant-when-crushed foliage, dense, large evergreen foliage and attract birds to its black summer fruits is our spice tree that is used in gumbos here in the south.

The pallet of large trees for the bottomland is also generous. SPRUCE PINE Pinus glabra FACW makes an excellent large screen in its first decades with its short-needle evergreen foliage; another evergreen is SWEETBAY Magnolia virginiana australis FACW a medium to large tree, to 80', with age and has large light green foliage with their silver undersides that show in the wind and the cup-and-saucer summer, creamy-white fragrant flowers looks great planted in naturalistic grouping or as a stand-alone specimen; deciduous selections could start GREEN ASH Fraxinus pennsylvanica FACW and its fast growth, yellow fall color and abundant food for winter birds; Hackberry (Sugarberry) Celtis laevigata FACW which, beside being a proto-typical tree for these sites, is a host for a specific butterfly caterpillar, AMERICAN ELM Ulmus americana FACW a medium to large deciduous shade tree with a vase-like crown and rough, flakey, scaly bark; or oaks such as SWAMP CHESTNUT OAK Quercus michauxii FACW with the large acorn and foliage on trunks of shaggy bark; SWAMP WHITE OAK Quercus bicolor OBL a large tree with super shaggy bark on older specimens and the foliage is dark green above and velvety white below; NUTTALL OAK Quercus texanum FACW a red oak that makes a grand tree that has shades of red that stand out in autumn leaf drop and spring new growth. But the three of the real winners at sustaining weeks of water are SWAMP RED MAPLE

Acer rubrum var. drummondii OBL that features rapid young growth with sometimes burgundy fall foliage but is named for its spring fruiting display; WATER HICKORY Carya aquatica OBL one of the soft-husked (pecan-like) hickories with strong large bore trunks, yellow fall color and wildlife favorite nuts; or OVERCUP OAK Quercus lyrata OBL with an arborists dream horizontal branch structure and orangey yellow fall color.

In the water from 1- 12" deep is where the world expands. There are so many herbaceous plants that inhabit our native wetlands to chose from in some cases its easier to mention the genera rather than which of dozens of species. Some are SEDGES Carex species OBL with grassy-like foliage and a range of flower spikes; BULRUSH Scirpus or Schoenoplectus species OBL that are some tall growing triangular foliage clumps with interesting flower / seed heads; SPIKERUSH Eleocharis species OBL similar grass-like clumps and seed spikes; LOUISIANA IRIS Iris species OBL that are loosely named from several species that readily hybridize to yield flowers from brown to purple; CATTAIL Typha species OBL the widely recognized tall foliage and seed head native; YELLOW-EYED GRASS Xyris species OBL that has pretty yellow flower tiny-pineapple crowns; or one of several broadleaves such as BULLTONGUE Sagittaria species OBL with its large foliage and showy flower stalk in summer; PICKERLWEED Ponterderia cordata OBL and its large upright foliage with a fine bluish purple summer flower; GREEN ARUM Peltandra virginica OBL that has "elephant ear" foliage and a hooded white flower; LIZARD'S TAIL Saururus cernuus OBL a massing light green spring emergent foliage that supports the unique curving leathery flower spike; or NATIVE CANNA Canna flaccida and its yellow summer flower show.
Two shrubs that love wet feet are BUTTONBUSH Cephanlanthus occidentalis OBL a deciduous one with early summer flower balls that invite jealous butterfly territorial wars and lead to the "button" ball fall fruits and WINTERBERRY HOLLY Ilex verticillata OBL a spreading, suckering tall-as-wide habit to 10 feet with thin elliptical, finely serrated deciduous foliage that yellows nicely in the fall and drops to show the red (some orange) shiny fruit along the nude branches in winter.
Our Louisiana signature trees love the water are PONDCYPRESS Taxodium distichum var. nutans OBL with its rounded "needle" foliage, ascendant habit and unique bark that inhabits slow-moving water in acid bogs and COMMON BALDCYPRESS Taxodium distichum OBL with the flat foliage and is usually associated with riverine habits. Also at home in the water is TUPELO GUM Nyssa sylvatica biflora OBL that long with Taxodium is the most common quality swamp tree in Louisiana with its swollen bases that support a layered canopy of deciduous foliage and summer fruits.

Out in water, there can be WATER LILLY Nymphaea species OBL or SPATTERDOCK Nuphar lutea OBL to add flowers and foliage to the extended garden or EELGRASS Vallisneria species OBL that that spreads by runners and sometimes forms tall underwater meadows.

Now some hints to implementation:

The essential part of getting these plants to work for you is to create a natural basin with the four distinct zones and proper substrate soils and then maintaining it. I want to make clear this kind of planting is specialized; not to be bid at the last minute to the average list of landscape architects or contractors and their subsequent material suppliers.
The best way is to start early and do the research to find the people who can assist you. The more time for planning and material assimilation the better!
Please develop the idea of the storm water system as a garden that will benefit the environment through physical and biologic methods and will give the human bystanders a treat as well.

A few websites:
http://plants.usda.gov/
http://www.plantatlas.usf.edu/
http://www.growit.com