



An Introduction to Aquascaping ¹

Frank J. Mazzotti²

Background

Aquascaping is the planting of aquatic and wetland plants in the enhancement, restoration, or creation of freshwater systems. In enhancement, the current condition of the system is generally good but can be made better. Restoration is the return of a degraded area to its former condition. In creation, wetland systems are established where none existed previously. Created wetlands can mirror natural systems or they can be constructed in a more ornamental fashion.

Types of Wetland Systems

Different types of wetland systems can be aquascaped, including lakes, retention ponds, detention pond, and other low-lying drainage areas. Each year many of these types of sites are created for stormwater management and to provide fill for residential and commercial areas.

Natural wetland systems are often destroyed during the building development process. Wetland systems provide many benefits and values, including flood protection, water purification, and fish and wildlife habitat. Aquascaping areas created during development can replace some of these lost values.

Imitating nature is difficult at best, and even aquascaped areas that appear successful in terms of plant establishment may not be otherwise functioning in a natural manner. In fact, the wildlife values of created wetlands are virtually unknown. However, much progress has been made in learning how to aquascape using selected native aquatic plants.

Successful Aquascaping

A successful aquascape starts with a plan, including an engineering design of the area to be aquascaped. A few carefully considered design conditions can greatly enhance the wildlife value of a wetland planting, while retaining its important stormwater management functions. For example, irregularly shaped retention ponds with islands in the middle generally offer wildlife habitat superior to regularly-shaped ponds (Figure 1). Shoreline areas are essential for the establishment of wetland plants and the creation of wildlife habitat. They also enhance the ability of the aquascape to filter stormwater runoff, while making shoreline areas safer for human activities.

Shoreline shelves should be irregular in size and shape, at least 30 to 50ft (10 to 15m), with at least a

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2. Frank J. Mazzotti, Ph.D., associate professor, Wildlife Ecology and Conservation department, University of Florida, Everglades REC, Belle Glade, FL 33430, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611.

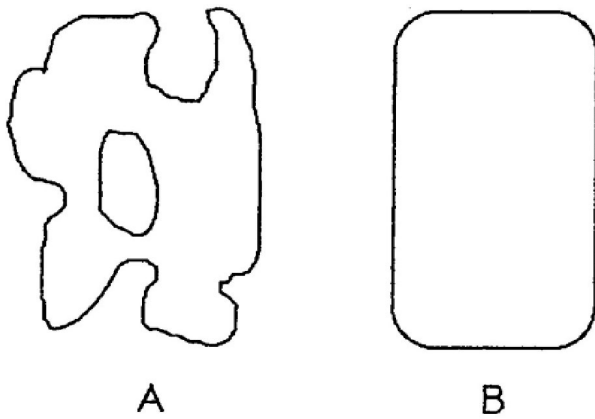


Figure 1. In general, pond A would have a greater shoreline area than pond B, and be of greater value as wildlife habitat.

6:1 slope (at six feet from the edge of the water it would be one foot deep).

Plants are placed according to their tolerance of water depth. A typical marsh shoreline planting includes four zones along a depth range from completely exposed to completely submerged (see Figure 2).

Plants should come from locally grown stock. To avoid disturbing newly established vegetation, deeper-zone vegetation should be planted first. All areas above the aquascape should be landscaped to prevent erosion and siltation of plantings. Once a shoreline has been planted a maintenance program may be necessary to remove nuisance vegetation.

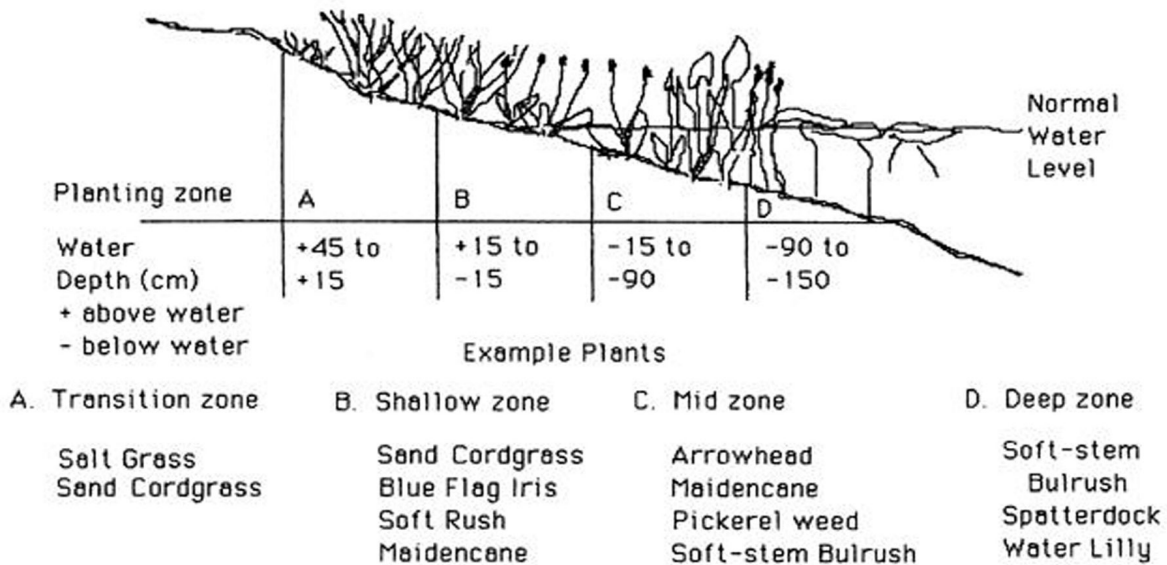


Figure 2. The four planting zones for a typical marsh shoreline planting: transition, shallow, mid-, and deep zones.