Sustainability Committee of the VillageWalk Garden Club of Bonita Springs

Proposal to Re-Establish a Littoral Planting Zone along one Lake Bank in VillageWalk of Bonita Springs

Why Are Littoral Planting Zones Needed?

- **Littoral plantings are an environmentally productive way to combat erosion.**

- **Erosion along the lake banks in VillageWalk continues to occur and has become a concern of the residents.**

Why Are Littoral Planting Zones Needed?

- **Identification of erosion as an issue was first communicated to the HOA in 2015, as part of the Transition Committee report.**

- **Assessments done annually by the RWA Engineering consistently mention the issue of lake bank erosion and include recommendation for littoral plantings.**

Why Are Littoral Planting Zones Needed?

- Annual maintenance for erosion control costs about $60,000 each year.
  - Maintenance has consisted mostly of extending residents drainage pipes further into the lakes and installing rocks (call Rip Rap) in the most critical areas.

- Previous control methods have been only partially effective.
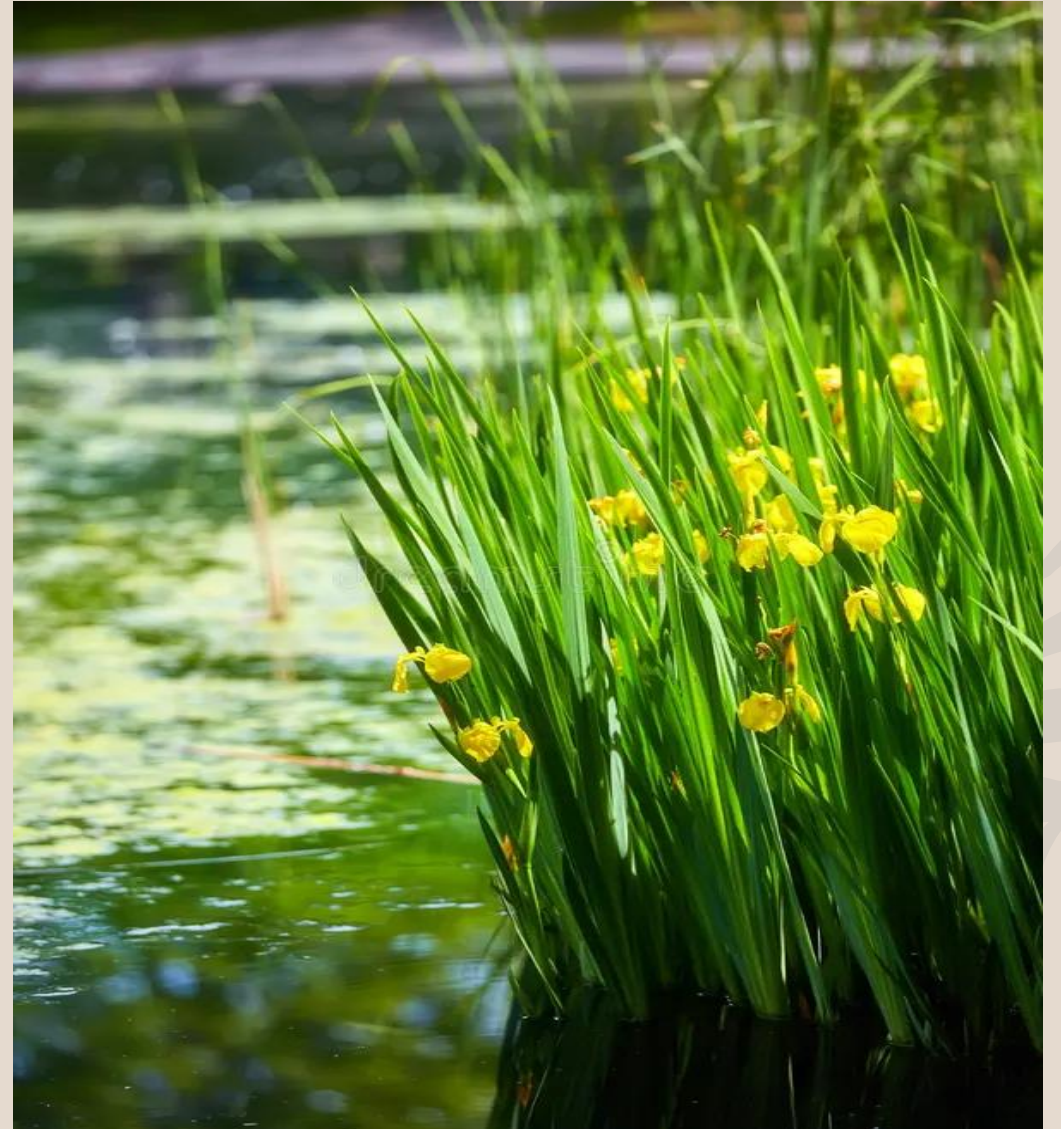
Why Are Littoral Planting Zones Needed?

- The most recent attempts to control erosion have been to allow grasses to grow close to and into the water along the lake banks.
  - Some of the grasses are invasive (Torpedo Grass) and need to be removed.

- The annual lake assessment reports acknowledge grasses to be a means of erosion control, however they encourage native littoral plantings as a **MORE EFFECTIVE** means of erosion control and as water filtering agents.

Why Littoral Plantings

- **Littoral plantings are an environmentally productive way to combat erosion.**

- In addition, littoral plantings:
  - Improve water quality
  - Reduce chemical weed control

    Once established, littoral plantings maintain themselves and crowd out the weeds
  - Increase habitat and food sources for wildlife
  - Prevent algae blooms
  - Reduce carbon footprint
  - **Improve the beauty of the lakes**

Reduce lake maintenance costs

Sample Plants for Littoral Shelf

GOLDEN CANNA

PICKERELWEED

BLUE FLAG IRIS

Soft Rush

Cutgrass

OUR PROPOSAL

Work with the CDD, the HOA and the Garden Club in creating a demonstration littoral planting zone along a portion of one of the lakes in Section 3 or 4.

Planned Actions

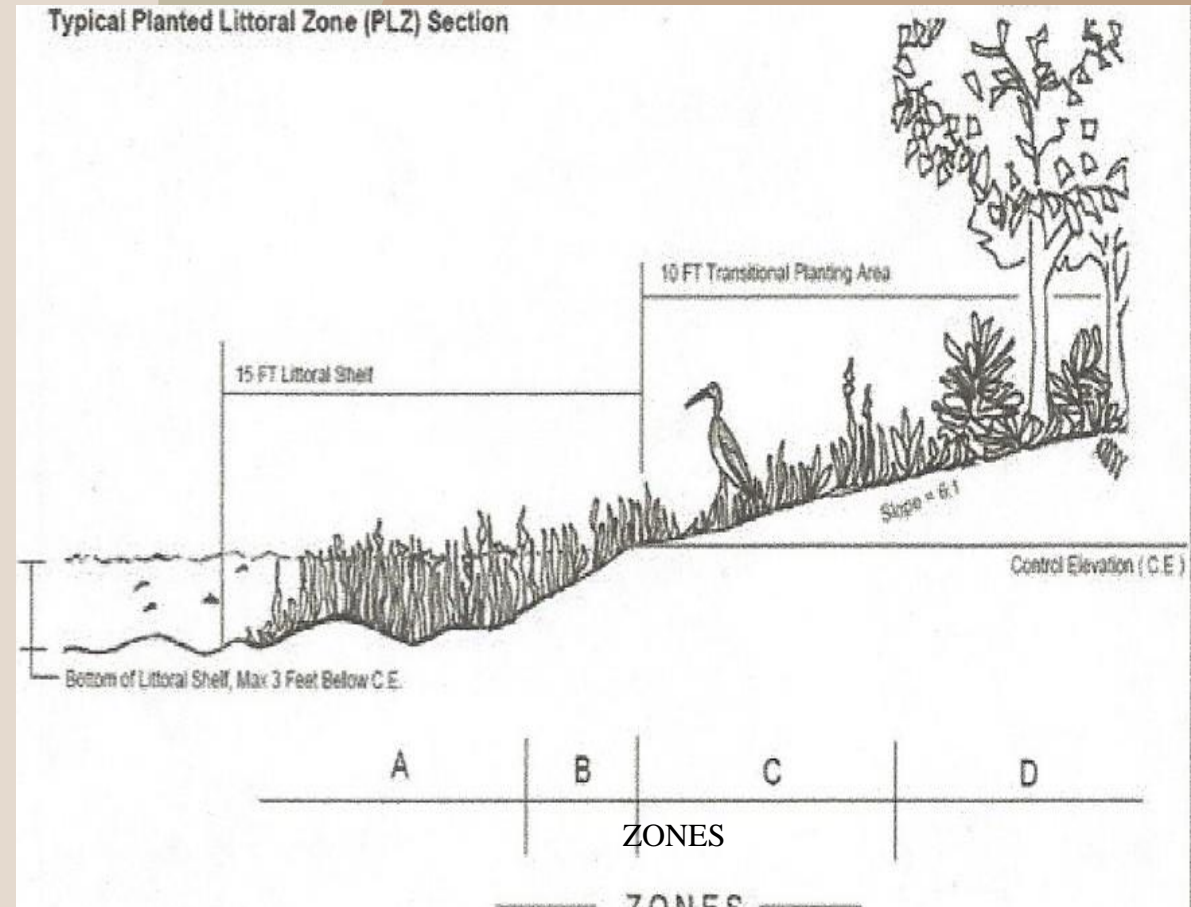Create a littoral landscape design that meets the County and City codes.

Size of littoral planting zone will follow the original site plan:

> 2000 sq. ft.
>
> 100 feet in length (approximate width of 2 lots)
>
> 20 feet of sloping bank down to the water

Identify a Lake bank in Section 3 or 4 that has no littoral plants currently in place.

Typical Planted Littoral Zone (PLZ) Section

10 FT Transitional Planting Area

15 FT Littoral Shelf

Slope = 6:1

Control Elevation (C.E)

Bottom of Littoral Shelf, Max 3 Feet Below C.E.

A   B   C   D

ZONES

Planned Actions

- Develop a complete financial justification for the demonstration zone
  - **Identify cost to prepare the planting area and to purchase and install the necessary plants in the demonstration zone.**
  - **Identify short term maintenance costs**
  - **Compare projected costs to current maintenance costs**

- Identify best plantings
  - **Native flowering plants and attractive grasses**
  - **Plants that 'clean' the water to maintain and improve water quality**

Planned Actions

- Obtain HOA approval and support for the financial cost of the demonstration littoral planting zone

- Obtain CDD approval for use of their land

- Hire a landscape company with an identifiable record of installing littoral plantings

- Select individuals willing to supervise the contractor and help maintain the installation of the plantings during the establishment period (approximately 2 years)

Summary

- **With support from the CDD, HOA, Garden Club and Community, the littoral team expects to complete the demonstration planting plot before rainy season, 2024.**

- **The team will monitor the plantings to ensure lasting growth.**

- **The team will document and review all input gathered from the community.**

- **With the success of the demonstration plot, the goal is to re-establish 5% of the littoral plantings by planting two similar littoral plots per year for 10 years.**

- **Success of the littoral plantings project ensures a reduction in lake maintenance costs.**