

## **Shoreline Restoration**

### **Request for Proposal**

#### **Part I**

#### **Introduction**

The Valley Lakes Community Association, an Illinois not for profit corporation, is soliciting for proposals to implement a long term shoreline stabilization and prairie restoration project on various properties owned by the Association in Round Lake, Illinois.

The Valley Lakes Community Association owns approximately 285 acres of open space consisting of newly created detention ponds, landscape buffers, new and existing wetlands as well as dry detention basins and wooded areas. The Association is interested in not only enhancing the beauty, controlling erosion and enhancing downstream water quality of these areas, but also in reducing long term maintenance costs.

#### **Project Scope**

The scope of this project is focused on improving and maintaining the newly created wet detention basins and surrounding upland terrain. The immediate scope of this project is confined to two ponds with the possibility of additional ponds being added to the project in future years. The long term plan for this project will touch on each of the 22 detention ponds throughout the development as well as one or more of the dry detention basins and landscaped upland areas. The successful completion of this phase of the project will help determine the feasibility of additional implementations.

The winning proposal will be awarded a multi-year contract for the installation, establishment and care of approximately 62,500 square feet of shoreline stabilization / prairie restoration (approximately 2500 feet of shoreline with an average width of 25 feet) surrounding the pond at Valley Lakes Blvd and Nippersink Road and the pond east of Wilson Road south of Spring Valley Way (see attached map). The winning proposal will include a mix of 5 plant communities; deep water emergent, shallow water emergent, sedge meadow, wet mesic and mesic. The primary purpose of this project is to stabilize the shoreline of the detention ponds and reduce maintenance; however the aesthetic value of the project is also of utmost importance. Finally the winning proposal will be the one that offers the most comprehensive solution and best value to the community.



## Bid requirements

1. Bidder shall submit a complete proposal indicating fulfillment of all qualifications within, or exceptions taken to these requirements. Unless otherwise noted, bidder shall be expected to comply with all requirements outlined within.
2. Bidder may submit alternate plans which will meet the goals outlined above, but may not be in line with the specifications within. In this case an explanation shall be provided for the reason(s) for alternative methods.
3. The winning bid shall be in writing and submitted to the Association management NO LATER than December 2<sup>nd</sup>, 2005.
4. The Association management or Board may ask for additional presentations from bidders during the month of December 2005.
5. The Association management or a member of the Board will be available for questions prior to the submission deadline. Questions should be addressed to Sharon Rzyzsko at 847-918-0000 or e-mail to [info@valleylakes.org](mailto:info@valleylakes.org)

## Bidder qualifications

1. The submitting bidders shall be, and have been, actively and directly engaged in shoreline restoration / wetland and/or prairie plant installation for a period of two (2) or more years. Provide proof of three (3) or more successful installations.
2. Qualified bidders shall possess specialized equipment for working in and around water, including a small boat, hip waders, and floatation life preservers to be worn while working in water.
3. Bidder shall supply all necessary equipment
4. Bidder shall possess and supply certification of adequate insurance coverage

## Environmental Requirements

1. Installation shall be performed in mid to late spring, specifically between April 1<sup>st</sup> and July 1<sup>st</sup>.
2. Hydrology shall be established prior to installation. Detention pond must have an established water level to utilize as a reference for planting.
3. Surrounding uplands shall be stabilized with the grass seed mix as required. No pre-emergent herbicides shall be applied to surrounding turf during the six months prior to installation and for at least 1 year following installation.
4. Emergent plants shall be installed prior to seeded communities.



## Material Requirements

1. All native seed shall be refrigerated for at least 90 days prior to installation.
2. All native seed must be of wild ecotype from approved local source. No hybrids or cultivars may be included.
3. Local genotype seed shall be used whenever possible due to its adaptation to Northern Illinois soil and climate.
4. These specifications do not apply to a temporary matrix.
5. Container grown plants shall be used for the emergent plant communities.
6. Container grown plant must be nursery propagated of wild ecotype in 2 3/8" square by 3 3/4" deep open-bottomed pots from approved local source.
7. Container grown plants shall be inoculated with VAM (Vesicular Arbuscular Mycorrhizae) endomycorrhizal fungi.

Completed Bids shall be mailed or delivered to:

Valley Lakes Community Association  
175 E. Hawthorne Parkway  
Suite 235  
Vernon Hills, Illinois 60060  
Attn: Sharon Rzytko

**No Later than December 2<sup>nd</sup>, 2005**



## Part 2 Material Specifications

Seed mixtures and plants shall at a minimum meet the following requirements unless the bidder suggests changes based on prior experience.

### Seed Mixture

#### I. Mesic Community

##### a. Temporary Matrix

<i>Species</i>	<i>Latin Name</i>	<i>Amount per 1000 sq ft</i>
Seed Oats	<i>Avena sativa</i>	1 lb
Annual Rye	<i>Lolium multiflorum</i>	6 oz

##### b. Permanent Matrix - Grasses Permanent Matrix - Forbs and Wildflowers

<i>Species</i>	<i>Latin Name</i>	<i>Amount per 1000 sq ft</i>
Big Bluestem	<i>Andropogon gerardii</i>	1 oz
Little Bluestem	<i>Andropogon scoparius</i>	1 oz
Sideoats Grama	<i>Bouteloua curtipendula</i>	.25 oz
Canada Wild Rye	<i>Elymus canadensis</i>	.5 oz
Switchgrass	<i>Panicum virgatum</i>	.1 oz
Indian Grass	<i>Sorghastrum nutans</i>	1 oz
Heath Aster	<i>Aster ericoides</i>	.05 oz
Smooth Aster	<i>Aster laevis</i>	.05 oz
New England Aster	<i>Aster novae-angliae</i>	.05 oz
White False Indigo	<i>Baptisia leucantha</i>	.1 oz
Wild Senna	<i>Cassia hebecarpa</i>	.1 oz
Tall Coreopsis	<i>Coreopsis tripteris</i>	.05 oz
Pale Purple Coneflower	<i>Echinacea pallida</i>	.2 oz
Purple Coneflower	<i>Echinacea purpurea</i>	.25 oz
Rattlesnake Master	<i>Eryngium yuccifolium</i>	.2 oz
False Sunflower	<i>Heliopsis helianthoides</i>	.1 oz
Western Sunflower	<i>Helianthus occidentalis</i>	.1 oz
Roundheaded Bushclover	<i>Lespedeza capitata</i>	.1 oz
Rough Blazing Star	<i>Liatis aspera</i>	.1 oz



Dense Blazing Star	Liatris spicata	.1 oz
Wild Bergamot	Monarda fistulosa	.05 oz
Purple Prairie Clover	Petalostemum purpureum	.05 oz
Mountain Mint	Pycnanthemum virginianum	.05 oz
Prairie Coneflower	Ratibida pinnata	.25 oz
Black-Eyed Susan	Rudbeckia hirta	.20 oz
Sweet Black-Eyed Susan	Rudbeckia subtomentosa	.20 oz
Rosinweed	Silphium integrifolium	.20 oz
Prairie Dock	Silphium terebinthinaceum	.10 oz
Stiff Goldenrod	Solidago rigida	.10 oz
Tall Ironweed	Vernonia altissima	.10 oz

2. Wet-Mesic Community

a. Temporary Matrix

<i>Species</i>	<i>Latin Name</i>	<i>Amount per 1000 sq ft</i>
Seed Oats	Avena sativa	1 lb
Annual Rye	Lolium multiflorum	6 oz

b. Permanent Matrix -Grasses and Sedges

<i>Species</i>	<i>Latin Name</i>	<i>Amount per 1000 sq ft</i>
Big Bluestem	Andropogon gerardii	.75 oz
Fox Sedge	Carex vulpinoidea	.4 oz
Canada Wild Rye	Elymus canadensis	.5 oz
Virginia Wild Rye	Elymus virginicus	.5 oz
Switch Grass	Panicum virgatum	.1 oz
Indian Grass	Sorghastrum nutans	.2 oz

c. Permanent Matrix - Forbs and Wildflowers

<i>Species</i>	<i>Latin Name</i>	<i>Amount per 1000 sq ft</i>
New England Aster	Aster novae-angliae	.05 oz
White False Indigo	Baptisia leucantha	.10 oz
Tall Coreopsis	Coreopsis tripteris	.05 oz



Dense Blazing Star	Liatris spicata	.05 oz
Wild Bergamot	Monarda fistulosa	.10 oz
Foxglove Beardtongue	Penstemon digitalis	.05 oz
Mountain Mint	Pycnanthemum virginianum	.05 oz
Yellow Coneflower	Ratibida pinnata	.20 oz
Showy Black-Eyed Susan	Rudbeckia fulgida speciosa	.10 oz
Black-Eyed Susan	Rudbeckia hirta	.20 oz
Prairie Dock	Silphium terebinthinaceum	.10 oz
Riddell's Goldenrod	Solidago riddellii	.05 oz
Culver's Root	Veronicastrum virginicum	.02 oz
Golden Alexanders	Zizia aurea	.10 oz

### 3. Sedge Meadow

#### a. Temporary Matrix

<i>Species</i>	<i>Latin Name</i>	<i>Amount per 1000 sq ft.</i>
Seed Oats	Avena sativa	12 oz
Creeping Bentgrass	Agrostis alba palustris	.10 oz
Annual Rye	Lolium multiflorum	4 oz

#### b. Permanent Matrix -Grasses and Sedges

<i>Species</i>	<i>Latin Name</i>	<i>Amount per 1000 sq ft.</i>
Crested Sedge	Carex cristatella	.25 oz
Frank's Sedge	Carex frankii	.25 oz
Meadow Sedge	Carex granularis	.10 oz
Bottlebrush Sedge	Carex lurida	.10 oz
Tussock Sedge	Carex stricta	.05 oz
Fox Sedge	Carex vulpinoidea	.50 oz
Virginia Wild Rye	Elymus virginica	.50 oz
Fowl Manna Grass	Glyceria striata	.30 oz
Switchgrass	Panicum virgatum	.05 oz
Dark Green Bulrush	Scirpus atrovirens	.25 oz



## c. Permanent Matrix - Forbs and Wildflowers

<i>Common Name</i>	<i>Latin Name</i>	<i>Amount per 1000 sq ft.</i>
Swamp Milkweed	Asclepias incarnate	.50 oz
New England Aster	Aster novae-angliae	.25 oz
Swamp Aster	Aster puniceus	.10 oz
Bur Marigold	Bidens cernua	.25 oz
Spotted Joe-Pye Weed	Eupatorium maculatum	.10 oz
Boneset	Eupatorium perfoliatum	.25 oz
Autumn Sneezeweed	Helenium autumnale	.25 oz
Cardinal Flower	Lobelia cardinalis	.05 oz
Great Blue Lobelia	Lobelia siphilitica	.05 oz
Foxglove Beardtongue	Penstemon digitalis	.10 oz
Mountain Mint	Pycnanthemum virginianum	.10 oz
Black-Eyed Susan	Rudbeckia fulgida speciosa	.25 oz
Riddell's Goldenrod	Solidago riddellii	.25 oz
Blue Vervain	Verbena hastate	.50 oz

**Plants**

## I. Shallow Water Emergent Community

<i>Common Name</i>	<i>Latin Name</i>	<i>Size (1 per lineal foot)</i>
Sweet Flag	Acorus calamus	2 3/8" X 3 3/4" deep pot
Riverbank Tussock Sedge *	Carex emoryi	2 3/8" X 3 3/4" deep pot
Lake Sedge*	Carex lacustris	2 3/8" X 3 3/4" deep pot
Creeping Spike Rush	Eleocharis palustris	2 3/8" X 3 3/4" deep pot
Blue Flag Iris	Iris virginica shrevei	2 3/8" X 3 3/4" deep pot
Soft Rush	Juncus effusus	2 3/8" X 3 3/4" deep pot
Water Willow	Justicia americana	2 3/8" X 3 3/4" deep pot
Common Arrowhead	Sagittaria latifolia	2 3/8" X 3 3/4" deep pot
Hardstem Bulrush	Scirpus acutus	2 3/8" X 3 3/4" deep pot
Three-Square Bulrush	Scirpus pungens	2 3/8" X 3 3/4" deep pot



Woolgrass	Scirpus cyperinus	2 3/8" X 3 3/4" deep pot
Softstem Bulrush	Scirpus validus	2 3/8" X 3 3/4" deep pot
Giant Burreed	Sparganium eurycarpum	2 3/8" X 3 3/4" deep pot

Those species denoted with an asterisk (\*) shall be installed at the shoreline. All others shall be installed in 2" to 6" of water.

## 2. Deep Water Emergent or Floating Leaf Community

<i>Common Name</i>	<i>Latin Name</i>	<i>Size (3 per lineal foot)</i>
Yellow Pond Lily	Nuphar luteum	Bare root
White Water Lily	Nymphaea odorata	Bare root

## Accessories

### Waterfowl Exclusion

1. Posts - 6 foot lightweight fence posts or 6 foot length of #4 rebar or equivalent.
2. Fence - 5 foot height.

### Other

1. Sand - Dry, Coarse Sand that is free from chemical contamination.
2. Erosion Control Blanket - North American Green SC-150 or equivalent

## Part 3 Minimum Execution Requirements

### I. Examination

- a. Verify that a stable water level has been established in the detention pond.
  - i. Consultation with the Association's water management contractor is required.
  - ii. The winning bidder is expected to work closely with the Association's water management contractor(s) to ensure that no work is done to the pond that will adversely affect the emergent plant community, or that the emergent plant community will adversely affect the health of the pond
- b. Verify that the surrounding uplands have been stabilized with grass seed mix if required
  - i. Consultation with the Association's landscape maintenance contractor is required.
  - ii. The winning bidder is expected to work closely with the Association's landscape management firm to ensure that no work done on the pond adversely affects the surrounding landscaping and that no landscaping work done surrounding the pond adversely affects the emergent plant community.



## 2. Preparation

- a. Final upland limit of mesic community shall be marked and approved by Association Management or delegate at least three weeks prior to installation.
    - i. Straight edges should be avoided
    - ii. A space of 36" shall be maintained between any existing beds and the upper limit of the mesic community.
  - b. Two weeks (14 days) prior to installation, apply a glyphosate herbicide approved for use around water (Rodeo) to the area to kill existing lawn grasses and other vegetation.
    - i. Protect area with stakes and fencing as necessary
    - ii. Signs shall be posted at least every 50 feet surrounding the perimeter that shall include:
      1. a general description of the project ( "Shoreline Restoration")
      2. a warning indicating the use of herbicide
      3. contact information for either the Association management or the contractor
  - c. Additional manual removal of vegetation surrounding the pond may be necessary.
  - d. Contractor is responsible for notifying J.U.L.I.E. prior to installation.
  - e. Following a complete kill of existing vegetation, begin installation by tilling area to be seeded to a depth of 3 inches. Till as close to the shoreline as soil moisture conditions permit.
  - f. Remove all dead plant material from the site and dispose of properly
  - g. Examine and test soil to ensure optimal quality and supplement as necessary
- ## 3. Installation of waterfowl exclusion fence
- a. Place posts in 2' foot water depth at 15 foot intervals around the entire pond. Each post shall be driven approximately 1 foot into the pond bottom.
  - b. Attach fence to posts with wire ties so that the fence extends to the pond bottom and at least 36 inches above the water's surface.
- ## 4. Installation of Plants
- a. All aquatic plants must be installed in the appropriate water depths between the waterfowl exclusion fence and the shore.
  - b. Deep water emergent or floating leaf plants shall be installed in 1 to 2 foot water depths. Place 3 plants per 10 lineal feet of community.
  - c. Shallow water emergent plants shall be installed in 2 to 6 inch water depths with the exception of shoreline species (noted with an asterisk in species list) which shall be installed at the water's edge. Place 1 plant per lineal feet of community. Evenly distribute each species around the pond, planting in groups of 3 to 5 plants of each species.
  - d. All plants shall be installed by creating a hole with a spade or dibble, placing the plants in the hole and firmly packing the soil around them. Plants allowed to float to the surface following installation shall result in rejection of the installation.
- ## 5. Seeding
- a. All seed shall be hand broadcast with a coarse sand / seed mixture.



- b. Seed mixture shall be applied in sections alternating around the community to avoid clumps of any particular species and to ensure even distribution
  - c. Lightly firm seedbed with a roller where soil moisture permits. Do not roll areas where soil is moist enough to stick to the roller.
  - d. Apply 1 width of erosion blanket starting just above the normal waterline. Secure with 2 staples per square yd.
6. Protection
- a. Protect seeded areas with stakes and tape around area periphery
  - b. Signs shall be posted at least every 50 feet surrounding the perimeter that shall include (at minimum):
    - i. a general description of the project ( "Shoreline Restoration")
    - ii. a "NO TRESPASSING" warning
    - iii. contact information for either the Association or the contractor
    - iv. other educational information the contractor deems necessary
7. Maintenance
- a. If weed growth exceeds ten inches in height in seeded communities, trim or mow to 4 inches. Do not cut plants in the emergent community.
  - b. Maintain waterfowl exclusion fence and signs for 1 year. At the end of that period, remove fence, posts and signs.
  - c. Written Reports will be provided to the Association at the end of the first year, and at 18, 24 and 36 months following installation. The report shall include
    - i. a general summary of existing conditions including an inventory of plants that have newly grown or failed to appear.
    - ii. recommended instructions for care over the short term (3-6 month) period
    - iii. recommended instructions for care over the next 12 months
    - iv. specification on any additional work required to ensure long term viability
8. Acceptance
- a. Planted Aquatic Communities - For acceptance at the end of the first growing season, the following condition shall be met.
    - i. 75% of the species planted shall be alive and present.
    - ii. 50 % of the water surface in the shallow water community shall be covered with vegetation.
    - iii. 25 % of the water surface in the floating leaf community shall be covered with vegetation.
  - b. Seeded Native Communities - For acceptance at the beginning of the second growing season, the following conditions shall be met.
    - i. Coverage - 80 % of each plant community shall be covered with by vegetation.
    - ii. Presence - 50 % of the species planted should be alive and present.
    - iii. Abundance - 50 % of the vegetation should native species of the permanent matrix.

