



Prospect Heights Natural Resources Commission

Naturalization Plan for the Prospect Heights Slough

June 16, 2016

It is the mission of the Natural Resources Commission to preserve, protect and restore natural areas and raise awareness of environmental issues affecting Prospect Heights Illinois.

The Prospect Heights Natural Resources commission will present the current state of the planning for the restoration of the Prospect Heights Slough. The plan draws heavily from the problems/issues as outlined in the Hey report dated 11.02.2016 and the solutions proposed by the PHNRC implementation plan dated 02.04.2016.

Both documents may be downloaded or viewed at our website phnrc.com



Summary of the Hey Report

Main Problems:

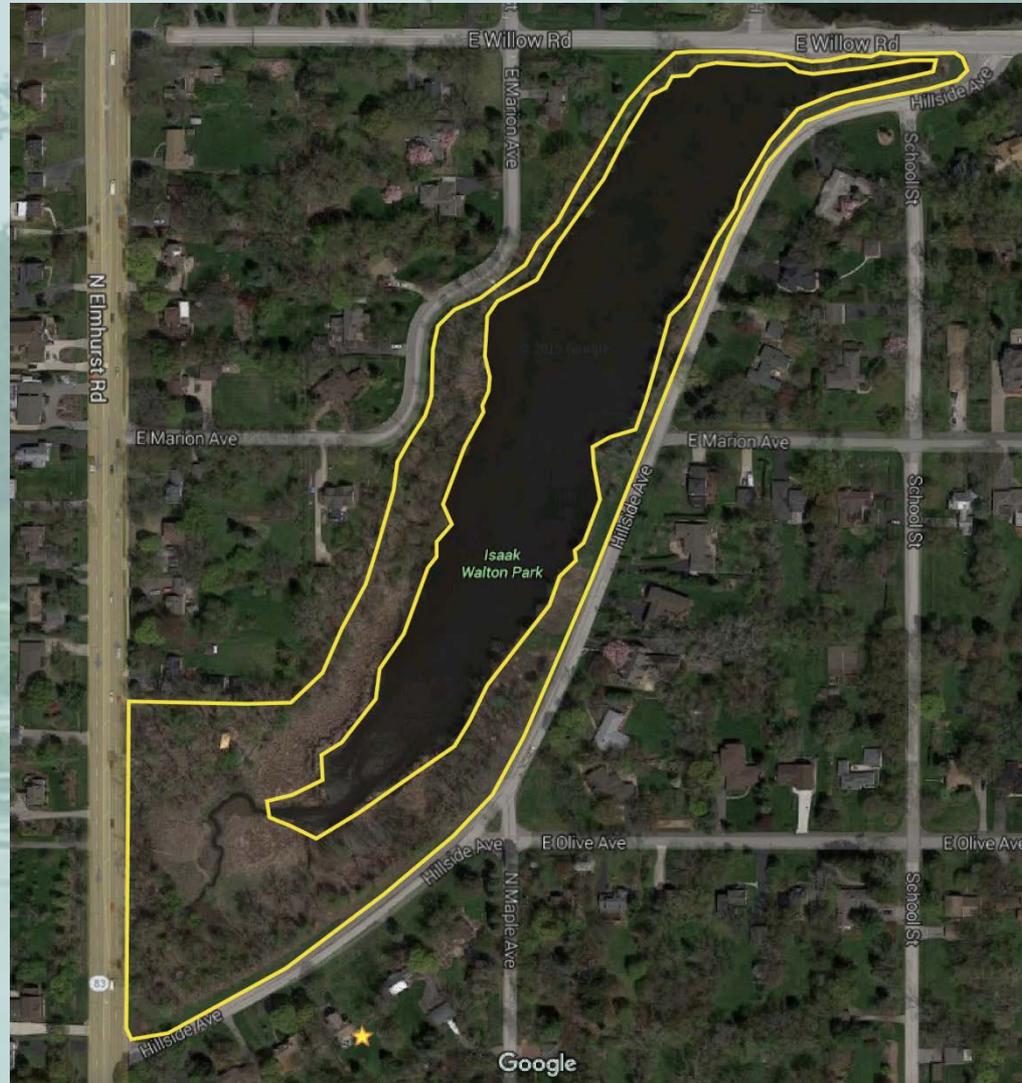
1. Shoreline erosion
2. High nutrient loads
3. Excessive native aquatic growth
4. Large goose population
5. Shallow water depth
6. Invasive plant species

Recommended Solutions:

1. Removal of turf grass at the shorelines
2. Re-vegetation of shorelines with native plants
3. Reduction of goose populations
4. Removal of invasives
5. Community outreach and education
6. Detain, retain or filter incoming storm water
7. Controlled burns or scheduled mowing

Slough – Problems: Shoreline erosion, nutrient overload, invasive aquatic growth, goose population, invasive plant species, contaminated storm water runoff, low water levels.

Slough remove invasive plants and turf grass and plant 8 acres of vegetated buffer strips. Plant native aquatic plantings from the shoreline out into the water to enhance the shoreline's visual appeal while providing habitat and shading out other aquatic plants.



Prospect Heights Natural Resources Commission
Slough Work Area - 

Why are invasive plants bad and what role did they play in all this?

Invasive removal is the first step in restoration. While buckthorn is the most prolific and destructive of the invasives, cattails, reed canary, garlic mustard, ragweed, honeysuckle, teasel, Canadian thistle and several other species populate the slough.

1. Native plants have evolved over time into balanced ecosystems supporting a wide range of life.
2. Invasive plants form monocultures, or large stands of only one species. This decreases the biodiversity that all animals have come to depend on.
3. Instead of hundreds of different native plants and hundreds of species of insects and animals there is one stand of buckthorn or acres of teasel or reed canary grass and a limited amount of inhabitants.
4. Buckthorn eliminates any hope of native growth, making the ground as absorbent as pavement and increasing runoff into the water.
5. Reed canary and cattails spread like wildfire creating large monocultures, decreasing habitat for birds.

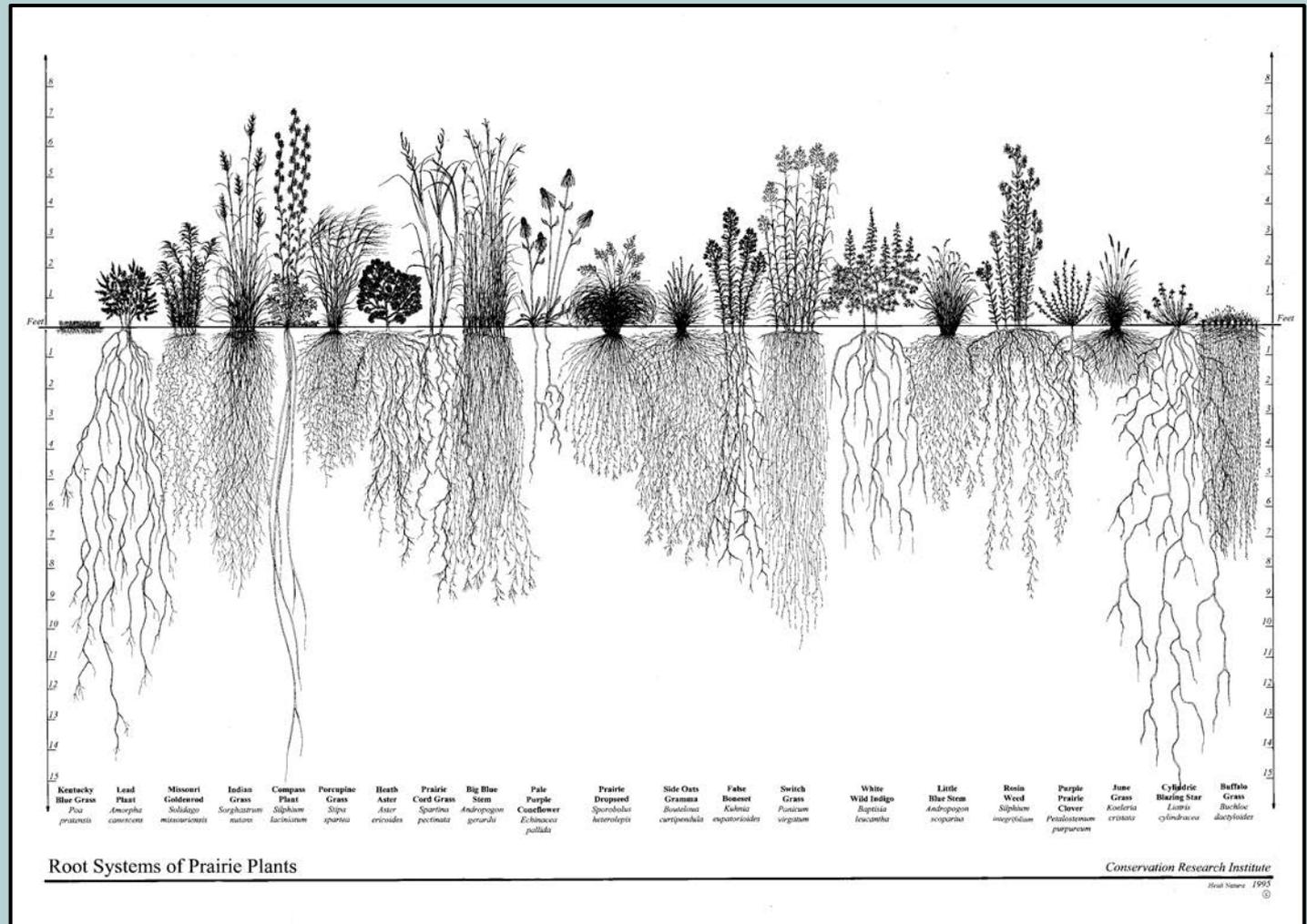
Why are vegetative buffers important and what role do they play ?

Vegetative buffers play a major role in solving our problems. Turf grass while not invasive, is not native and does not provide food, shelter or any other ecological benefit. Additionally, it's very shallow root system provides little water retention or shoreline stabilization.

Native plants have very deep root systems up to 15 feet. Native plants typically have more biomass below ground than above ground.

It is easy to see how native plants will prevent soil erosion, filter harmful elements, and hold back more runoff, reducing the volume of inflow into the watershed.

Over time, vegetative buffers are very effective is reducing nutrient load and stabilizing the ecosystem.



Buffer strips also enhance the visual appeal of the environment.





Buffer strips are created in several ways. Once invasives are removed, the native seed bank has the opportunity to emerge in the presence of light, water and nutrients and contribute significantly.

Prepared areas are also seeded with native seeds, native plugs and plantings of trees and shrubs. It takes time for buffers to fully mature as native plants spend the first two years developing their root systems. This is why community outreach and education are so important in this time of transition.



Buffer strips will also reduce the goose population as it does not provide favorable habitat for geese. Mow paths provide public access through the buffer strips.

It is hard to remember the Slough just a short time ago. Much has been accomplished already over the last 2 ½ years.









































So why does restoration take so long and look so bad sometimes? Why are there so many weeds? Why don't you go after all of them?

1. Not all weeds are bad.
2. Some are annuals and will go away on their own, some are biannual and have a two year life cycle, some are non-invasive and some are very invasive.
3. Non-invasive weeds actually serve a very valuable service. One of the cardinal rules of restoration is if there is space available, something will move in and take it.
4. Better it be a non-invasive annual weed than something highly invasive.
5. Disturbance is anything that disrupts the soil and existing plant community, changing resource availability and allowing other plants to grow.
6. Removing buckthorn, foot traffic from work days and wildlife traffic are all examples of disturbance to the soil.
7. Many weed seeds lie dormant in the soil waiting for a disturbance to give them the opportunity to come to the forefront. This is why we see a flush of weeds at the Slough after invasive removal.
8. Many weeds arrive courtesy of animal transport.
9. Weeds happen.



Invasive weeds like Canada thistle, teasel, clover and reed canary, need to be completely taken out with the use of herbicides as they spread underground and are close to impossible to irradiate.

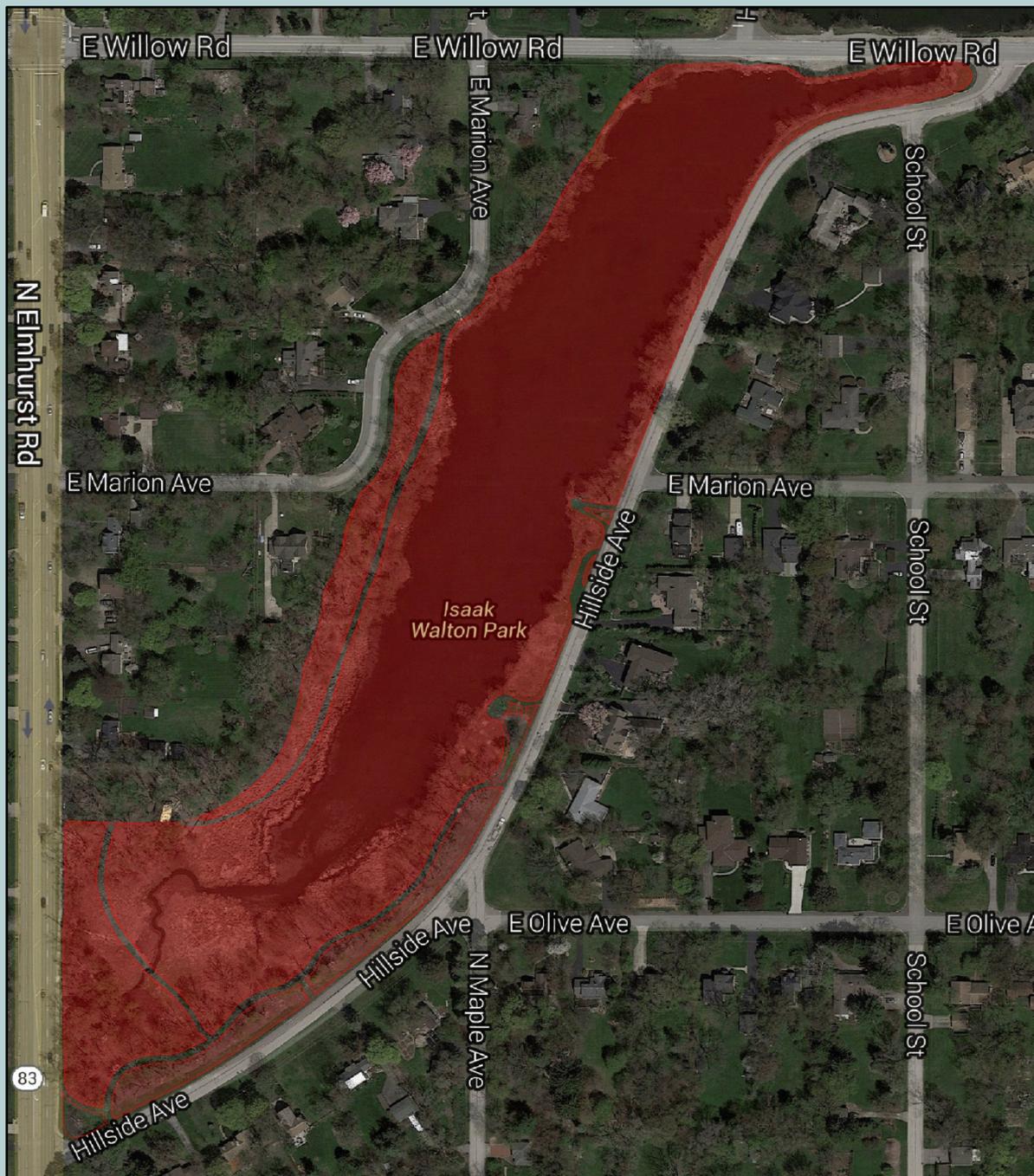
Other plants that don't pose such a threat simply need to be managed by removing flowers before they go to seed to prevent next years crop from coming in.

Using non-invasive plants as “place holders” allows us time to get the invasives controlled without giving them space for them to expand. Eventually, the natives will out compete the non-invasive species.

Land management is a complicated and involved process with many factors to consider.

1. Invasive plants all have their own time table when it comes to managing them.
2. As a result, we constantly need to prioritize our efforts due to the unique qualities of various plant species that need to be managed at the appropriate times.
3. When you factor in all of the projects under PHNRC management it is easy to see what a juggling act it can be to be in the right place at the right time.
4. It is a task that could not be accomplished without the love and dedication of our volunteer base.
5. Volunteers make this organization go. They are the reason we have accomplished so much in such a short time. Volunteers have become good friends, share a common dialogue and look forward to work days. Most have found it to be a very rewarding personal experience.

We encourage anyone with an interest in making a difference in Prospect Heights to come out and join a work day.



Slough Plan Overview

The goal is to strike a balance between restoration and preservation of the Slough with public access for the enjoyment of the residents.

Constructing mow paths and hiking trails are essential to providing neighborhood access to enjoy what is being created while protecting the the health and wellbeing of the wildlife.



The plantings at Marion and Hillside are now in their second year and are showing a great deal of maturity. The PHNRC rule of thumb is to keep plantings in the view paths of individual homes under 2-3 feet limiting taller plantings to the areas in-between the homes and blind spots.

Mow paths will be 6 feet in width with additional open areas for resident enjoyment.

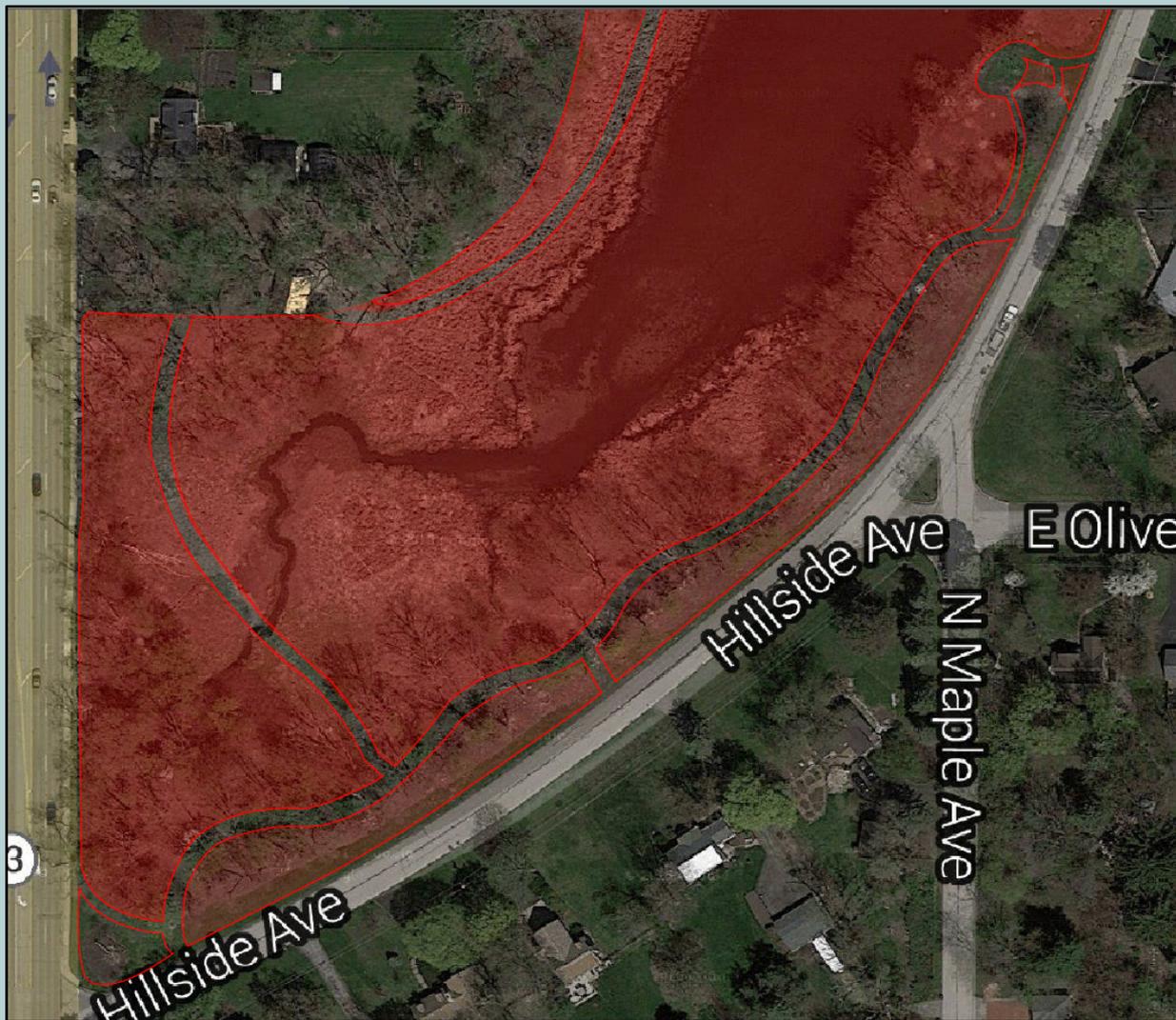


Eleocharis and path rush are shorter species of rushes that will serve to stabilize the shoreline while not changing the appearance of the open area.

While the root systems are not quite as deep as other natives, they make up for it with more biomass to the root systems. The short height still provides public access to the water and water fowl access out of the water.



Path rush is a native species that can tolerate foot traffic, allowing residents full access to the shoreline while providing stabilizing roots underground.



The intention is for every area of the Slough to be its own unique experience based on the conditions that are present within that given area.

One of the features we feel will be a big highlight is the woodland path that runs parallel to Hillside down to Elmhurst road with access points from the street and branches off of the main route to cross over to Isaac Walton Park.

The type of paths constructed will be based on the topography of the terrain. Mow paths will be the proffered standard.



The west woodland path will extend from Isaac Walton Park to Marion/Maple. That area contains a wide range of native species, very unique views of the slough and an abundance of wildlife because of the diversity.

Areas outside of the mow paths would be restored buffers with native plants specific to the soil and moisture conditions.

Monitoring

Monitoring and keeping records is essential to assessing the wellness of an ecosystem. Monitoring plant species, soil composition, water quality, wildlife, amphibians, bird migrations and insects are key indicators to the health of the habitat they exist in. Recording the results provides a historical record which can be compared so judgments can be made about the steps that have been taken, how effective they have been and if changes need to be made.

1. Establish baselines for all categories
2. Establish a monitoring schedule unique to each category based on predetermined criteria for that category
3. Keep the historical record, set guidelines for review and adjustments
4. Categories
 - a. Plants
 - b. Soil
 - c. Water quality
 - d. Wildlife
 - e. Amphibians
 - f. Birds
 - g. insects
 - h. Education and outreach

The background image shows a serene natural setting. In the foreground, there is a stream with water reflecting the sky and surrounding greenery. The banks are lined with tall grasses and various plants. In the middle ground, a road with a guardrail runs horizontally across the frame. The background is filled with a dense line of tall, mature trees with full green foliage, creating a canopy effect. The overall scene is bright and verdant, suggesting a healthy ecosystem.

Maintenance program

1. Make adjustments based on monitoring
2. Continue invasive removal
3. Continue seeding and replanting efforts
4. Prescribed burns
5. Scheduled mowing

Summary

It is critical to understand how important, fragile and essential this wetland is to the community, the state and the overall ecosystem. As guardians and advocates for this historically significant sliver of natural wetland, we have a moral obligation to ensure its health and wellbeing, not only for future generations, but for the reptiles, amphibians, macroinvertebrates, insects, fish, birds, mammals and all of the wildlife that call it home. These residents depend on the wetland for their existence yet they have no voice of their own so they can do nothing to preserve or protect it.

Habitat is the single most important and essential factor in determining what is attracted to it. A healthy environment equates directly to the right abundance of microbiotic and macrobiotic elements, the plants and all of the living things that make it a functional ecosystem. Everything is interdependent, so loss of any one of these components results in a change to the whole. As an entire community changes, so do the parts. It is a cyclical balance that has a tipping point. We have already witnessed changes in plant populations based on changes in the hydrology. As plants disappear, so do the things that depend on them.

The recommendations that we have made have been based on this understanding. They are conservative in action, which means that results will not be immediate. The nutrient overload will not be affected overnight. Lush native buffers and shorelines will not happen overnight. Progress and transformation will be a slow, but with a steady progression. It will take years to see significant impact, but it can happen naturally and in the right way.

It is our sincere hope that the community, local residents and the city council will support our recommendations and their implementation.

PHNRC February 2016