

Red River Park Vegetative Management Plan Summary Report October 20, 2009

Introduction

The goal of this document is to provide insight into the effective methods to control and manage the shoreline in Red River County Park located in the NE1/4, SE1/4, Section 6, T25N – R23E, Town of Red River, Kewaunee County. Invasive, non-native stands became so dense that diverse shoreline plant communities were in danger of being eliminated at the park. Nonnative plants did not provide valuable food and shelter for fish and wildlife that native plants would provide. In addition, tall stands of phragmites created visual impacts blocking the view of the Bay of Green Bay.

With that in mind, Kewaunee County prepared the Red River Vegetative Management Plan to guide the project that included permitting through the Wisconsin Department of Natural Resources. The plan was the beginning of a five year process designed to control the spread of invasive species within Red River County Park. The document detailed the extent of the problem, identify management strategies to deal with that problem, and provided restoration solutions to ensure all management goals and objectives are achieved and maintained.

History

Red River Park has been part of the Kewaunee County recreational system for many years. Located on the Bay of Green Bay, one of the most significant environmental features in the County, this vibrant park was once a place for boaters, site seers and the general public to enjoy the Bay. The shoreline and beach area had been neglected for years and invasive species had taken over the once clean sand beach. The pictures below illustrate the changes that have taken place during the past 15 plus years.

1992

2000

2005



In 1992 the lake level was much higher. At that time invasive species and aggressive native vegetation were not present at the park. Two boat landings were also located at the park, one on the Bay and the other on Red River. During this time many recreational opportunities existed, Invasive species were not prevalent at the park, and a quality view shed was enjoyed by all park users.

In the early 2000's, the lake levels began to recede exposing more of the once periodically inundated shoreline. During the same time period invasive species became prevalent at the park. Stands of phragmites, smooth brohm grass, and willow establish themselves and tons of decaying zebra mussels began to wash up on shore.

By 2008, the project area was completely over run with invasive species such as phragmites and aggressive native species such as willow. In addition, tons of decaying zebra mussels over a foot deep had washed up on the shoreline. The view shed and access to the Bay that was once enjoyed by the public was gone.

Project Results - Management Strategy

The existing site conditions were noted and a comprehensive plant inventory was completed in the fall of 2007. Because of the nature of the plants, well-established stands were thought to be difficult to control with only herbicide treatments. The following steps were used to accomplish the project

Willow & Poplar Removal – July 2008

The first step in the management strategy was to manually remove the small poplar and willow (under 6 inches in diameter) that were beginning to establish themselves. This served two purposes. The first was to allow for the chemical treatment of the site in the following strategy and also allowed the County to remove the massive accumulation of zebra mussels from the area.

Comments; This was hard manual labor and took two complete days to finish. It was absolutely necessary to prepare the sit for additional management strategies.

Chemical - Herbicide treatment – August 2008

After the willow and small poplar were removed the site it was chemically treated using a tractor and sprayer by a State Certified Applicator and in accordance with all Wisconsin rules and regulations. The chemical used was BASF Habitat and it was extremely effective. Special attention was given to the wind direction at the time of application.

Comments; The herbicide used (BASF Habitat) was extremely effective in treating the site. It was applied in August of 2008 and allowed to work the entire fall.

Mechanical Treatment – April 2009

Mechanical treatment of the site began in April 2009. This allowed the herbicide the appropriate time to work into the root system and effectively treat the phragmites. Mechanical treatment of the site during this time period also reduced potential disruption to the breeding and nesting seasons for most shore birds.

It was anticipated that the area would need to be mowed prior to removal (mechanical treatment) but due to the effectiveness of the herbicide it was unnecessary. The bio litter and decaying zebra mussels were loaded on to dump trucks and disposed of in the County landfill to prevent seed spread or allow sunlight to reach the soil surface. All equipment used during this process was cleaned properly of all debris before it was

removed from the treatment site to prevent the unintended spread of seeds or rhizomes to other areas.

Comments; This was by far the most expensive management tool used and the cost of which largely exceeded the budgeted resources dedicated to this item. The tonnage was under estimated and an error in land fill tipping rates (\$3 per ton compared to \$10 per ton) stressed the project budget. In addition, the material was loaded during wet spring conditions adding water weight to the material

Prescribed Fire – Spot Treatment – Bundle Cut 2009

Prescribed fire was identified in the original management plan as a tool available after the initial herbicide and mechanical treatments. Due to the effectiveness of the herbicide treatment, the implementation of this management tool was unnecessary. In addition, Spot Treatment and Bundle Cutting was another management tool that was unnecessary during the growing season in 2009 due to the effectiveness of the herbicide applied to the site.

Comments; It was envisioned that prescribed fire would add additional stress to the plants, but this was unnecessary due to the effectiveness of the herbicide. Fire could be effective in reducing the tonnage that needs to be hauled to the landfill.

Management and Monitoring – July 2008 - Present

Throughout the summer and fall of 2009 the County monitored the site for the reestablishment of invasives. Fortunately, the area displayed no such activity although numerous mussels did wash up on the shore area requiring a second removal effort.

Comments; Ongoing monitoring will be essential to the successful implementation of the management plan.

Management and Monitoring – Ongoing/Forward

Management of the site has not and will not end with the successful implementation of the control methods previously described above, but rather begins with these initial steps. Because of the pervasiveness of the species involved and their ability to aggressively re-colonize through seed or rhizomes, long-term management and monitoring will be continued into the future. The control methods described in the management plan are likely to be utilized to successfully control invasive species. Annual maintenance will be essential to the success of any habitat restoration plan and will focus on selectively removing invasives as they appear. The long-term management plans thereafter incorporate spot treatment with herbicide, mowing during the recommended time and/or use of prescribed fire.

Comments; Ongoing monitoring will be essential to the successful implementation of the management plan.

BEFORE TREATMENT



AFTER TREATMENT

