

## ACEI-152-14 Final Report

Woodland Dunes Nature Center and Preserve, Inc. along with Stantec Consulting and Aquatic Solutions, chemically controlled *Phragmites australis australis* along the East Twin River and West Twin River up to the first dam on each between the years of 2014 and 2018. Project RED (Riverine Early Detectors) volunteers were trained by Woodland Dunes staff and these volunteers conducted invasive species surveys. Woodland Dunes staff, interns and volunteers were also trained in and conducted watercraft inspections through the Clean Boats, Clean Waters program. Woodland Dunes staff, volunteers, and contractors broadcast native seeds along the shoreline of the East Twin River and West Twin River to vegetate areas where *Phragmites australis australis* had been treated and removed, leaving areas open for populating.

Through the Clean Boats, Clean Waters program as part of this project, Woodland Dunes staff, interns and volunteers inspected 608 boats, contacted 1,401 boaters, and spent 977 hours at boat landings along the East Twin River and West Twin River. Two Project RED (Riverine Early Detection) trainings were held in 2016, training eight volunteers for invasive species monitoring. Woodland Dunes staff also held an AIS Snapshot Day, and trained three volunteers who surveyed for invasive species at several access points along the East Twin River and West Twin River.

Woodland Dunes staff and contractors broadcast approximately 400 pounds of native seeds along the shoreline and near shore areas of the East Twin River and West Twin River in fall of 2017 and 2018, to re-populate areas where *Phragmites australis australis* had been removed. Species seeded included *Acorus calamus*, *Iris versicolor*, *Sparganium eurycarpum*, *Spartina pectinate*, *Glyceria grandis*, *Glyceria striata*, *Asclepias incarnate*, *Sagittaria latifolia*, *Caltha palustris*, *Scirpus cyperinus*, *Scirpus atrovirens*, *Scirpus validus*, *Elocharis acicularis*, *Juncus Effusus*, *Carex lanuginose*, *Elocharis palustris*, *Carex lacustrise*, *Alisma subcordatum*, *Polygonum pennsylvanicum*, *Calamagrostis canadensis*, *Carex stipata*, *Alisma subcordatum*, *Verbena hastate*, *Zizia aurea*, *Mimulus ringens*, *Acorus calamus*, *Monarda fistulosa*, *Spartina pectinata*, *Panicum virgatum*, *Elymus virginicus*, *Carex hystericina*, *Carex comosa*, *Schoenoplectus acutus*, and *Bolboschoenus fluviatilis*.

Woodland Dunes staff, Stantec Consulting and Aquatic Solutions chemically controlled several dozen acres of *Phragmites australis australis* along the East Twin River and West Twin River. Pre and post treatment surveys were conducted annually by staff, volunteers, interns, and consultants. This allowed us to track the success of each year's treatment and plan for the following year's treatment. We saw an overall decrease in the amount of *Phragmites australis australis*. Future control efforts on remaining smaller populations will be continued through other funding received by the Manitowoc County Lakes Association and other partners for the next few years as needed.

## Woodland Dunes Twin Rivers *Phragmites* Control Grant Annual Progress Report 2018

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### Spring/Summer 2014

April 2014 grant was awarded. Public notice and large scale worksheet for treatment permit were completed in June. In July, a public meeting was held, as was a Project RED training and CBCW inspection training. Clean Boats, Clean Water watercraft inspections began for the boating season. In August, prep work was done for the AIS Bridge Snapshot Day.

### Fall 2014

In September, *Phragmites* treatment occurred on the East Twin River and West Twin River. The first annual Aquatic Invasive Species Bridge Snapshot Day (Project RED training/monitoring) was held in September as well and Woodland Dunes hosted a rendezvous site with volunteers monitoring the West Twin River. In October, CBCW watercraft inspections wrapped up and data was entered into SWIMS (208 hours of inspections). Treatment records were submitted (Permitted for 30 acres, treated 10.11 acres). Some reasons for not being able to treat all the acres include density of the stands and inability to access the stands with our equipment.

### Winter 2014/2015

In February and March, Woodland Dunes staff and intern monitored and mapped *Phragmites* populations along the West Twin River and East Twin River up to the first dam on each river.

### Spring/Summer 2015

In April, planning began for the upcoming *Phragmites* treatment, including correspondence with contractors and permit applications. In June, planning and prep work began for the second annual AIS Bridge Snapshot Day. In July, CBCW inspection training was held. In August, more planning for the AIS Bridge Snapshot Day occurred, some CBCW hours were entered into SWIMS, landowners were contacted, coordination with contractors began, and treatment of *Phragmites* began.

### Fall 2015

In September, *Phragmites* treatment continued and was wrapped up mid-October. Treatment records were submitted, still waiting on treatment records from one contractor (permitted 60 acres, treated at least 25.27 acres). Some of the *Phragmites* was drowned by high water this year; other stands were still too dense to treat completely. CBCW hours are continuing, 160 hours complete with 40 hours to be completed yet. In the fall, the focus shifts to salmon fishermen and duck hunters.

### Winter 2015/2016

CBCW hours were completed and entered into SWIMS. A request for mapping interns was sent to UW-Green Bay.

#### Spring/Summer 2016

Planning began for the upcoming *Phragmites* treatment, including correspondence with contractors and landowners, and permit applications. *Phragmites* was mapped and surveyed on the West Twin River. Two Project RED trainings were held. Returning CBCW inspectors were trained. Planning and prep work for the third annual AIS Bridge Snapshot Day occurred. CBCW inspections began and data was entered into SWIMS.

#### Fall 2016

*Phragmites* treatment was completed. Treatment records are being submitted, with some still coming from our independent contractor. Woodland Dunes treated 7.5 acres of *Phragmites* on the West Twin River. Total permitted acreage was 30 acres for the West Twin River and East Twin River. Our contractor treated the East Twin River and we have not received treatment information on the East Twin River yet. A good percentage of the previously mapped *Phragmites* was dead this year. This is most likely a combination of previous years' treatment efforts and continuing high water levels. CBCW hours are continuing, with 8 hours remaining and focus shifting to waterfowl hunters. Planning for the next two years began.

#### Winter 2016/2017

CBCW hours were completed and entered into SWIMS. Followed up with contractors. Worked on, printed, and mailed out updated permission slips for landowners for upcoming treatments. Entered permissions into a spreadsheet as they came in.

#### Spring/Summer 2017

Planning and coordination began for the upcoming *Phragmites* treatments. Stantec submitted the permit application and UWGB and Woodland Dunes interns mapped the *Phragmites* populations on the rivers. CBCW inspectors were trained. CBCW inspections began and data was entered into SWIMS. Researched suppliers for native wetland (riparian) seed.

#### Fall 2017

*Phragmites* treatment was completed on the West Twin River. The contractor for East Twin River did not make it out for treatment this year. Treatment records will come from our contractor. CBCW hours are continuing, with 5 hours left to be completed for this year. Seeds were ordered and the West Twin River was seeded with native species to fill in the niches where *Phragmites* was removed. We continue to see a decrease in the *Phragmites* on the rivers.

#### Winter 2017/2018

CBCW hours were completed and entered into SWIMS. Followed up with contractors.

Spring/Summer 2018

Planning and coordination of *Phragmites* treatments. Stantec applied for permit and Stantec and Aquatic Solutions completed mapping. CBCW hours were conducted and entered into SWIMS. Native seed for the East Twin River was researched and ordered.

Fall 2018

Chemical control of *Phragmites* was completed by Aquatic Solutions and Stantec. Woodland Dunes staff and contractor seeded the East Twin River with native plant seed. Follow up with contractors. We continue to see a decrease in *Phragmites* populations. Stantec will continue to treat both rivers through other grants they have obtained.