

Management Needs in the St. Clair-Detroit River System

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- ◆ SCDRS (aka HEC) Education & Outreach
 - Societal
- ◆ Fish Spawning Reefs
 - Fish/Biological
 - Environmental/Water Quality/Habitat
 - Societal
 - AOCs


Education & Outreach Project

2013 – 2015


- ◆ Outreach Tools (e.g., maps, fact sheets, exhibits, websites)
- ◆ Fisheries Workshops
- ◆ Presentations (IAGLR, etc.)
- ◆ Technical Publication
- ◆ Scientist Webinar
- ◆ Media Outreach

RESTORING THE MARSH

PHRAGMITES REMOVAL AND MONITORING



The marsh restoration project area includes Lake St. Clair Metropark, areas of Harrison Township and St. John's Marsh in Algonac.



Great Lakes marshes are valuable wetland habitats, full of nutrients that help support diverse plant and animal life. They also provide ecological services such as water filtration and flood protection along the coast. However, many marsh habitats are threatened by pollution, development and non-native aquatic invasive species, like Phragmites.

RESTORING THE MARSHES

Phragmites australis, an invasive plant, quickly spreads through marsh and wetland areas, robbing the fish, plants and wildlife of nutrients and space; blocking access to the water; and spoiling shoreline views. Once it has become established, removal by hand is nearly impossible.

As Phragmites overtook the Lake St. Clair marshes, for example, removing the invader and restoring the natural balance of the marshes required strong measures. Natural resource managers devised a plan to eradicate and manage invasive Phragmites that included herbicide applications and controlled burns.

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WHAT WAS DONE?


- The Michigan Department of Natural Resources approved a control plan and the Michigan Department of Environmental Quality approved the required permits.
- Trained professionals followed the plan.
- First, an herbicide was applied by helicopter and on the ground.
- Then, controlled burns were used to remove dead Phragmites. Burning the stalks allowed sunlight to penetrate the ground and native plant seeds to germinate.

TECHNOLOGY

Natural resource managers used Geographical Information System (GIS) technology to determine how and where to reduce and remove Phragmites to allow native plants to regenerate.

MANAGEMENT

- Managers will continue to monitor the project area and will encourage the re-establishment of native species in the marshes.



YEAR 1 FALL

Herbicide, a chemical used to kill plants, was applied by helicopters and on the ground with sprayers. Trained professionals used Glyphosate, an EPA-approved aquatic herbicide to spray the plants. People were not allowed into the treatment area.

YEAR 2 SPRING

Controlled burns (in combination with the herbicide) were used to remove dead Phragmites, allowing sunlight to penetrate the ground.

YEAR 2 FALL

Herbicide application on the ground continued. The only herbicides that are effective in controlling Phragmites are broad spectrum, meaning they affect other plant species. However, native plants recover within a few years after initial herbicide treatment.

ONGOING

Managers will continue to study the project area while maintaining and protecting the recovering wetlands. There are many tools they use, including:

- Flooding, changing water levels, diking.
- Removing plants by mowing, dredging or burning.
- Applying herbicides or other chemicals to help prevent the growth and spread of invasive species, and
- Adding nest structures, plants and other habitat improvements to make it hospitable for native species to return.

Education & Outreach Needs

- ◆ Help develop content for public outreach -- review technical publications and other materials
- ◆ Speak and/or participate in webinar(s)
- ◆ Serve or AOC technical committees
- ◆ Help plan and participate in public event(s)
- ◆ Photos of scientists and students in the field and lab



◆ Fish Spawning Reefs

HURON-ERIE CORRIDOR

STURGEON SPAWNING SITES AND REEF CONSTRUCTION PROJECTS



Fish Spawning Reef Needs

- ◆ Identify project sites
- ◆ Document activities through photos and written summaries
- ◆ Pre and post construction monitoring & assessment
- ◆ Communicate research timeline/activities/findings to MSG





Contacts & Questions

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