INVASIVE SPECIES COMMITTEE
ONEKAMA TOWNSHIP BOARD REPORT
JULY 5TH, 2011

Because of the cold spring and late summer, we do not have maps of the phragmites to be treated at this time. These should be available after the first week in July.

SPRING SURVEY. The 2011 survey was done on June 5th, 2011. Both Herb Lenon and Chuck Reed accompanied Jennifer Jone for most of the survey. There was very little ewm growing at the time and the pondweed seemed to have taken over in places where we previously had ewm. **Jennifer estimates we have less than 5 acres at this time. H**owever, based on last year's experience with the early survey, we will do another survey in 2 to 3 weeks to allow for a more accurate survey of the ewm. The Water Quality Monitoring was not done at this time. The phragmites will be surveyed and gps maps will be provided with the next survey.

June 3rd Report from Jennifer Jones: "Overall, I was amazed at what I observed, with nearly all of the treated areas showing abundant growth of pondweeds and little to no EWM! **There were just a few areas that may need treatment (now, less than 5 acres) but I want to survey again in a few weeks just to make sure we were not too early with this survey.** It is very encouraging that the pondweeds were already tall....usually, EWM grows well before them if it is going to occupy those areas. I received numerous compliments from fisherman that were at the launch regarding the lake status....it looks great out there and the fishing is still great..."

Week of June 13th, Jennifer Jones: "We were back on the lake briefly last week. The natives in Portage Lake and Bear Lake are **behind this year due to the cold temps and late spring.** We have decided to re-survey the lake the first week of July and will also check for more new Phragmites shoots. When I was out last week and then a few weeks prior with Chuck and Herb, the Phragmites growth was also behind. I just want to make sure our timing is perfect to allow for optimal results. I will be thrilled if the only EWM we find is the less than 5 acres we found during the last survey! **I was especially impressed with the east basin and the south shore areas which were problematic last year. We will also be sampling the channel for more EWM.**

PHRAGMITES TREATMENT.. Vickie Smith from Wetlands and Wildlife Solutions has been contacted to do the phragmites treatments. She will do a survey in the next few weeks and will provide us with a cost estimate for this year's treatment. The report that is required by the Phragmites Ordinance will be given at the Township Board July meeting and maps for the areas of proposed phragmites treatment will be submitted. (Unless the board decides that this is not necessary.....) Phragmites maps will again be done by Lakeshore Environmental 3 weeks prior to the September treatments. Wetland and Wildlife Solutions will also survey for phragmites in September in areas that cannot be seen from a boat. Notices will be sent to

property owners and a public hearing will be scheduled to allow people to show cause why their property should not be treated. The Lake Michigan shoreline in Pierport will also be treated in September if necessary.

There is an area on Crescent Beach with phragmites growth that I believe was missed last year.

LAKE MONITORING RESULTS:

We have not received any reports for this year. This is a copy of the contract for water monitoring.

3) Water Quality Monitoring: Monitoring of Portage Lake water quality over what are two distinct deep basins of the lake during spring and late summer of 2010 (recommended during an isothermic and stratified period for most comparable seasonal limnological data). In addition, if residue samples for aquatic herbicides are required for lifting of watering restrictions, Lakeshore Environmental, Inc. staff will collect the necessary samples and submit them for analysis to the appropriate laboratories. All water quality samples are taken to a laboratory certified by the MDEQ and United States EPA, unless otherwise specified by the limnologist.
803 Verhoeks | Grand Haven, MI 49417 | 616-844-5050 | 800-844-5050 | 844-5053 fax

A. Deep Basin 1: At a profile from depth = 0 feet to depth = 60 feet (n = 7 samples for each parameter), total phosphorus, total kjeldahl nitrogen, and total alkalinity will be collected. Also at 10 feet intervals, parameters such as water temperature, dissolved oxygen, pH, conductivity, secchi disk transparency, total dissolved solids, turbidity, and oxidative reduction potential will be assessed. Chlorophyll-*a* will be collected as composite sample over each deep basin.

B. Deep Basin 2: At a profile from depth = 0 feet to depth = 60 feet (n = 7 samples for each parameter), total phosphorus, total kjeldahl nitrogen, and total alkalinity will be collected. Also at 10 feet intervals, parameters such as water temperature, dissolved oxygen, pH, conductivity, secchi disk transparency, total dissolved solids, turbidity, and oxidative reduction potential will be assessed. Chlorophyll-*a* will be collected as composite sample over each deep basin.

C. Shoreline Sites: Six sites around the shoreline of Portage Lake will be selected and sampled for total phosphorus and algal species composition annually in early August. *E. coli* Bacteria samples will be collected at Red Park shoreline twice (in mid-July and in mid-August).

D. Tributaries: Including, McGowan's, McCormick's, Hansen, Glen, Dare, Schimke Creeks, and an unnamed tributary to Schimke Creek will all be monitored for parameters such as water temperature, dissolved oxygen, pH, conductivity, secchi disk transparency, total dissolved solids, turbidity, oxidative reduction potential, total phosphorus, and total kjeldahl nitrogen. A flow rate to estimate nutrient loading rates will also be calculated using a digital Swoffer® riverine velocity flow meter. *E. coli* bacteria samples will be collected twice per year in mid-July and mid- August at Schimke Creek Outlet and in Schimke Creek, Onekama Creek, and Stream #8 twice each in mid-July and mid-August..

E. Storm Drains: Storm Drains around Portage Lake will be sampled in spring of 2010 (preferably after snowmelt) chemical parameters such as water temperature, dissolved oxygen, pH, total dissolved solids, turbidity, oxidative reduction potential, chlorides, total suspended

solids, and if requested (at additional cost, volatile organic carbon analysis, metals panel, pesticides).