

Aquatic Plant Lake Mapping Project

August 23, 2015

The Invasive Species Committee of Ann Lake Property Owners Association (ALPOA) undertook a mapping of the aquatic plants within Ann Lake this on August 11th. This was a follow on to previous mappings of 2012 and 2013. The goal was to determine:

- Were there any new plants found?
- How did the densities compare to the results of previous years.

This year we again decided to change the format slightly from the MLSA guidelines due to the sharpness of our drop offs and the absence of flora at 1 foot depths around the lake. Since we did not find anything of significance at 1 foot, and it was hard to get the pontoon boat consistently at 1 foot, we have decided to forego this sampling. Since we only had 2 rakes, we decided to only sample to the left and right of the pontoon. This allowed us to form 2 identification teams. The team members consisted of Kathy Taylor and Sven Anderson (substituting for Maggie Sowers) on one side with Drew Peterson and Bethany Onthank on the other side. Kent Taylor provided and drove the pontoon boat. Dianne Minicucci served as scribe. The whole process took a little over 3 hours as we now do it.

Since we only did 2 samplings at the 4 foot and 8 foot levels, rather than the 4 required by the MLSA procedure, we again changed how the density was determined. In 2012, the density level of the weed was based on the number of rakes which retrieved that weed, rating of 1-4. If only that plant was found on all 4 rakes, the density level was increased to 5. This year as last year, we judged the density of weeds found on each of two rakes. We then used the density field to adjust for that rating. For example, if we thought native milfoil was moderate (a rating of 3), it was marked in the table as found in each of the 2 rakes plus a density of 1 to add up to the rating of 3. This process can be changed if statistically it makes sense to go back to the method recommended by MLSA. However we think this density measurement customized by our committee is more logical for this lake and should be maintained going into the future. Because of that, the trend (comparison) charts comparing 2013 to 2015 are the most relevant since they were created using identical protocols.

In 2012 we found 17 different plant species. In 2013 we found 12; those missing were clasping leaf pondweed, coontail, sago pondweed, water marigold, and white stem pondweed. In 2015 we once again found clasping leaf and sago pondweeds, but again, no coontail, water marigold and white stem pond weed.

This year we found 3 plants of question. The first we thought was curly-leaf pondweed but this turned out to be clasping leaf pondweed (good news!). The second plant we didn't initially identify but found later that this was Illinois Pondweed, again good news. The third plant we still have not identified. It looks like algae entangled with some leafy plants. This third plant is not reflected in any of the tables.





Charts have been completed for each transect, comparing plants found year to year for your information. These variants demonstrate the randomness of any sampling survey. That we once again found these two plants serves to support the process we've adopted and the need to do this regularly to minimize randomness. What follows in this report is a series of charts summarizing all of the work noted above. These tables show plant types and densities at all transects and all sampling depths. They are organized both by plant type and locations (the 17 transect points).

Conclusion

The Committee stands behind the work done in generating the data and creating this report. Based on the data found this year as well as two previous years, we feel this project should be viewed as having a very positive outcome. As a result of these activities we can now confidently state that our lake is in very good shape currently, with relatively stable plant populations. The committee has not yet made a final recommendation on how often this mapping should be done but based on what we're finding and not finding, the past two committee chairmen believe this task should be done at least every other year.

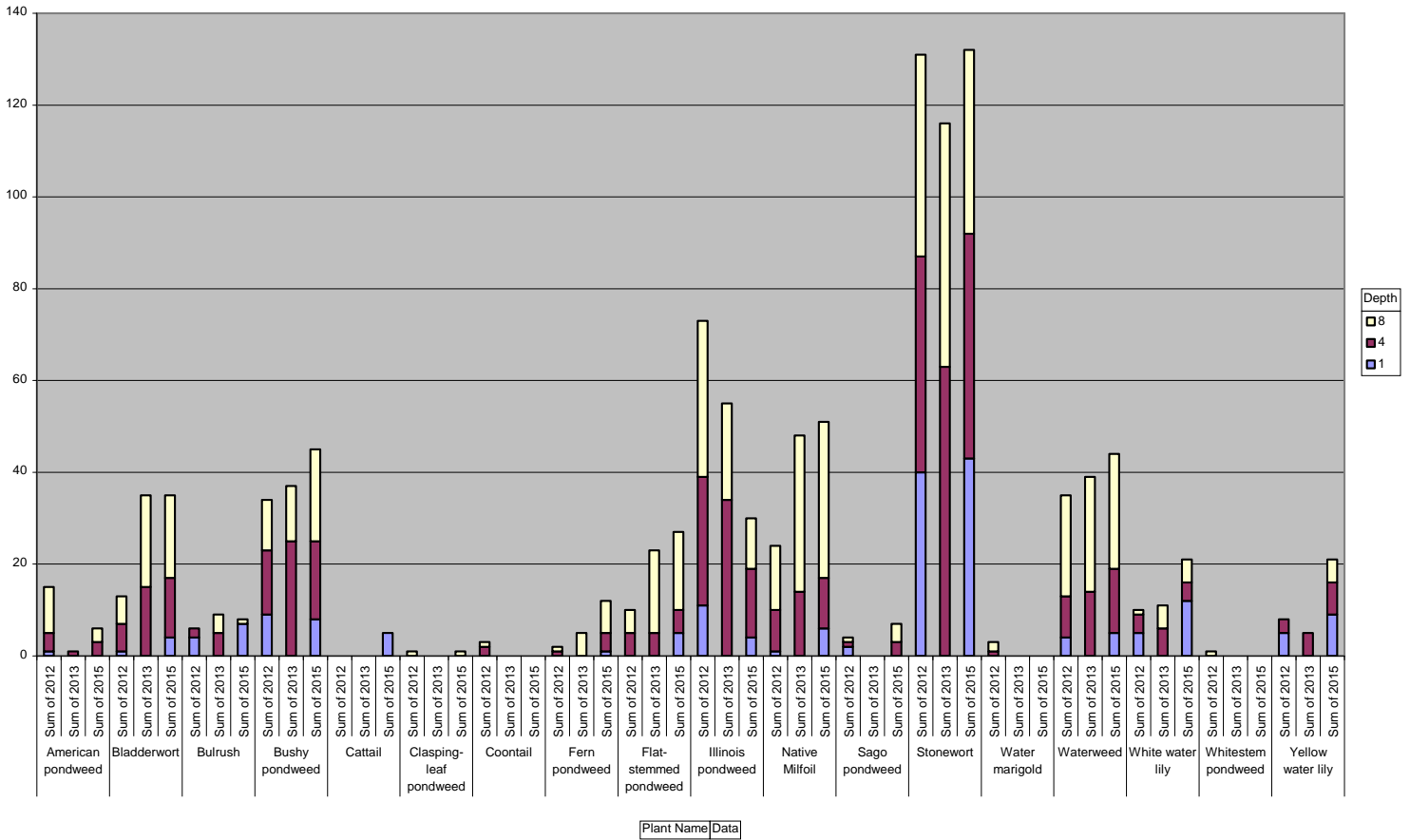
Committee members deserve thanks for the hard dirty work they do on the behalf of the Association. The committee would also like to thank Sven Anderson for filling in that day. In our opinion the most important chart is the first one, the year to year plant comparison chart. If you have any questions concerning this report or would like additional information on its findings, you can contact the chair of the committee, Kent Taylor kent@annlake.org.

- Dianne Minicucci
- Bethany Onthank
- Drew Peterson
- Kathy Taylor
- Maggie Sowers

Year to Year Plant Comparison Chart

Transect (All)

Year to Year Plant Comparison



The above table shows all plants found at all transects for each of the three samplings completed. Since the first sampling, no new plants have been found. One can see that stonewort is the most prominent plant found under 8 feet.

Individual transect charts are shown at the end of this report.

Transect Diversity Charts

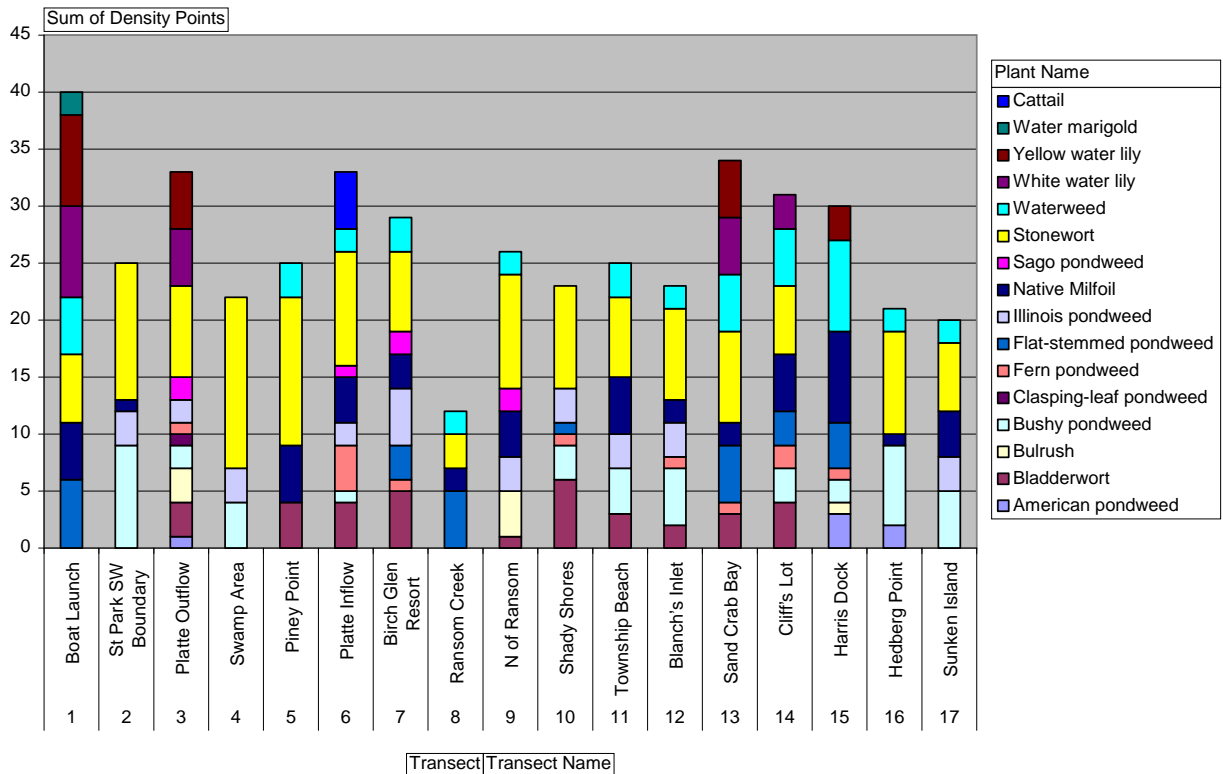
There are 3 charts which show the plants found at each transect location. The first chart shows all plants found. The following charts are for each of the specific depths: 1 foot, 4 feet and 8 feet.

To read the charts, the plants found are shown in the top to bottom order depicted in the key. For example, at the first transect, the Boat Launch, the plants found are: Bushy Pondweed, Flat-stemmed Pondweed, Illinois Pondweed, Native Milfoil, Stonewort, and Waterweed. Using these plants as reference points, it will help you determine the other plants found at each transect.

Lake-wide Plant Densities - All Depths

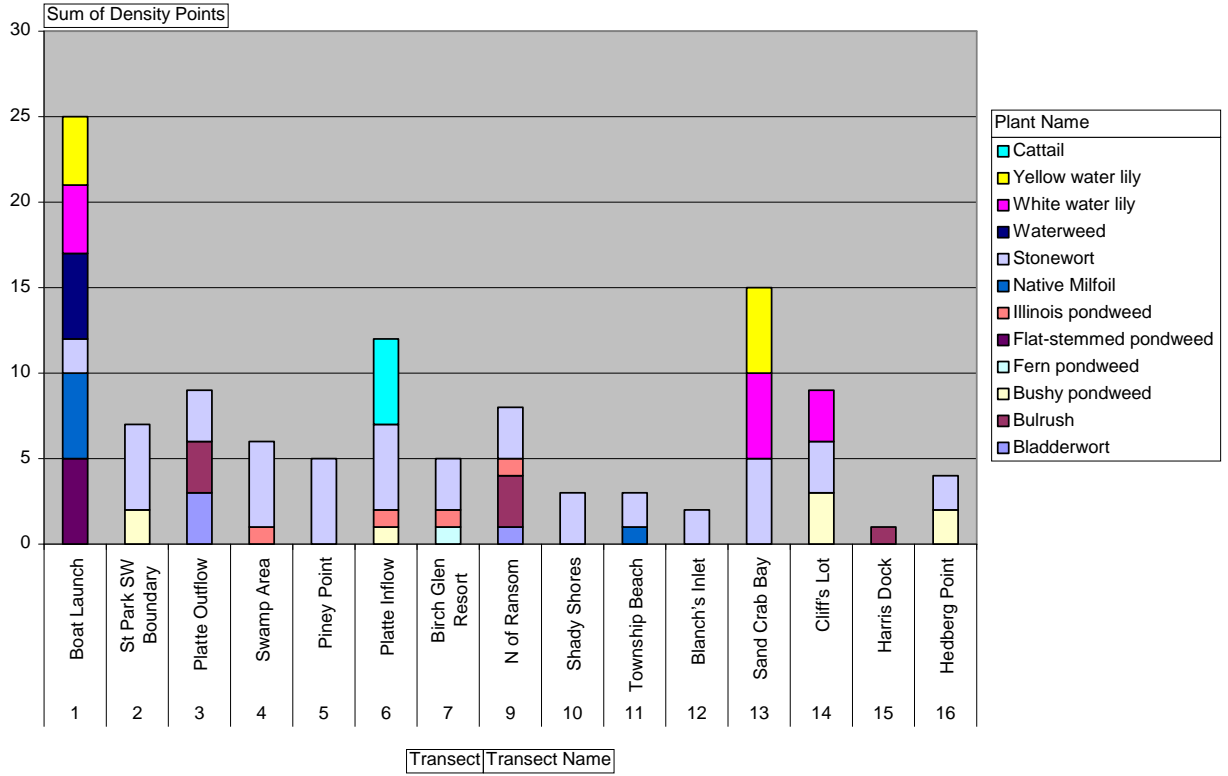
The most common plants found in the lake were Waterweed, Stonewort, Native Milfoil and Illinois Pondweed, all native.

Depth in Feet (All)



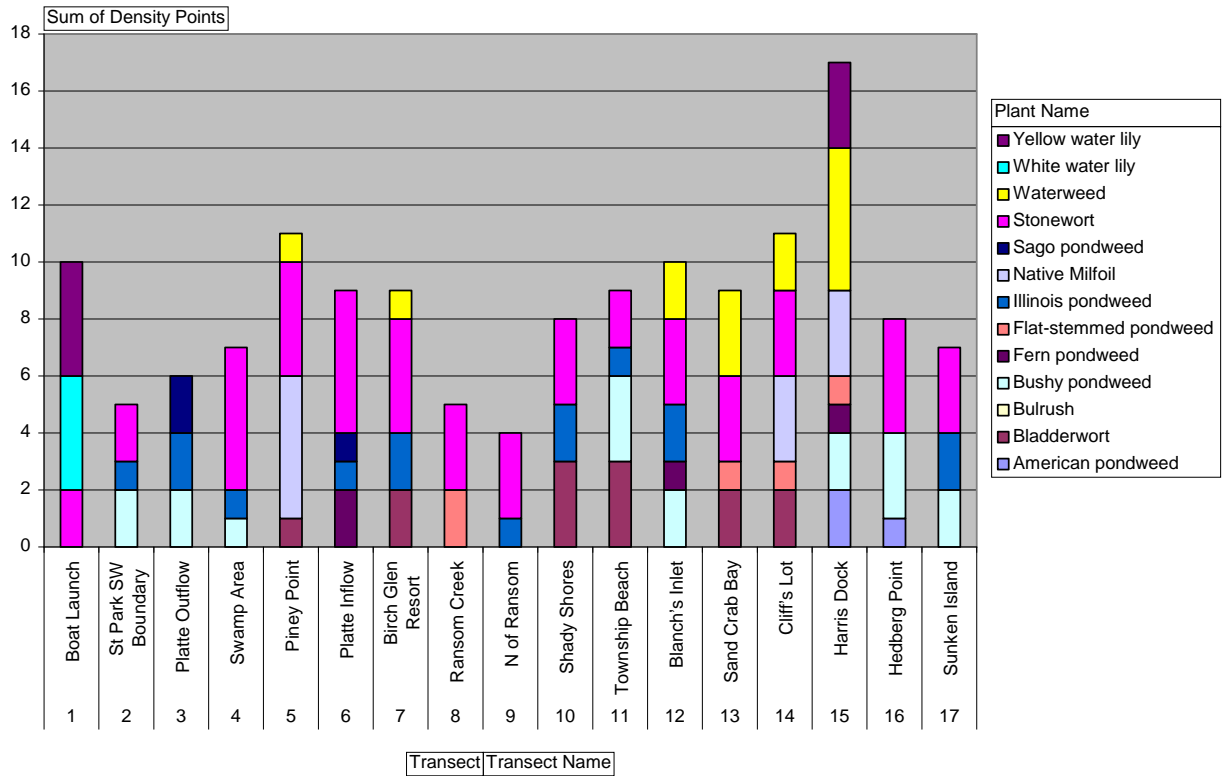
Plant Densities at 1 foot Sorted by Transect

Depth in Feet | 1

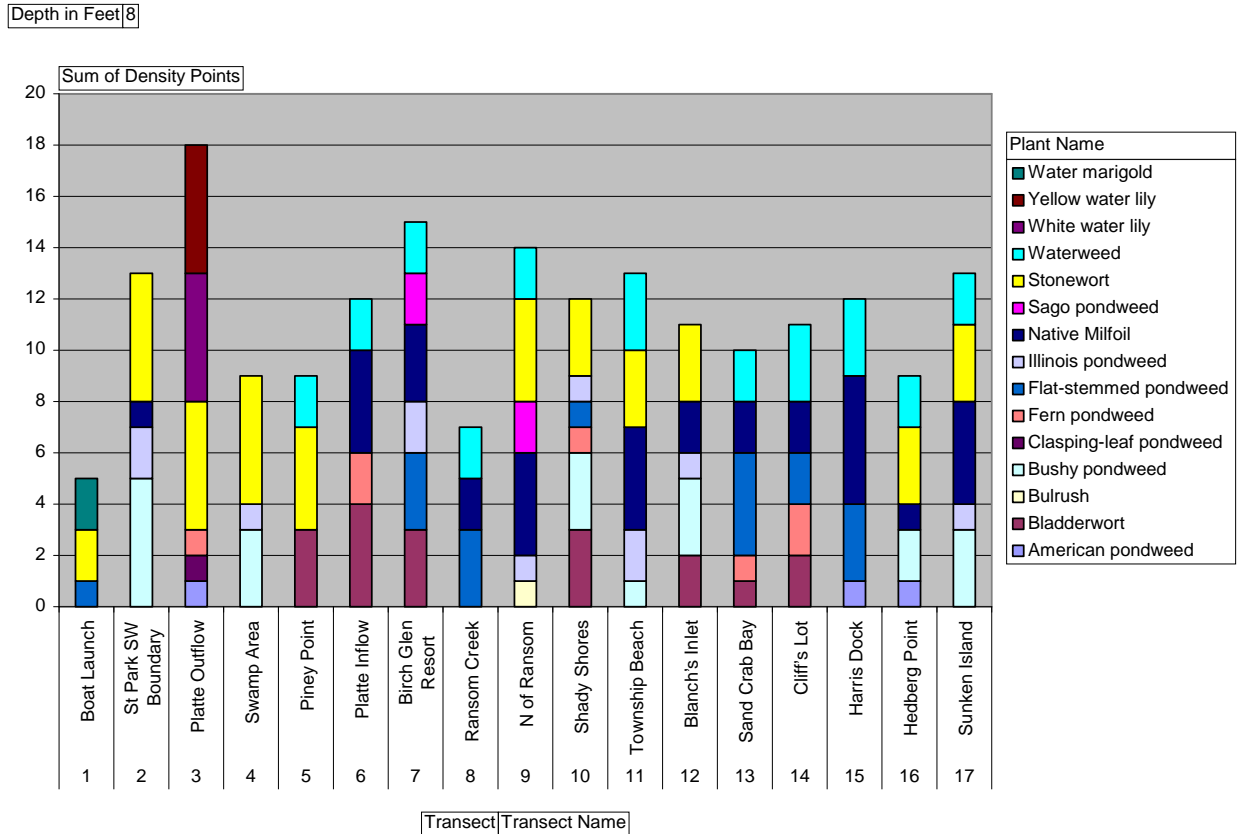


Plants Densities at 4 feet Sorted by Transect

Depth in Feet | 4



Plants Densities at 8 Feet Sorted by Transect



Plant Location Charts

There are 3 charts which show each transect at which a specific plant is found. The first chart shows all plants found. The following charts are for each of the specific depths: 1 foot, 4 feet and 8 feet.

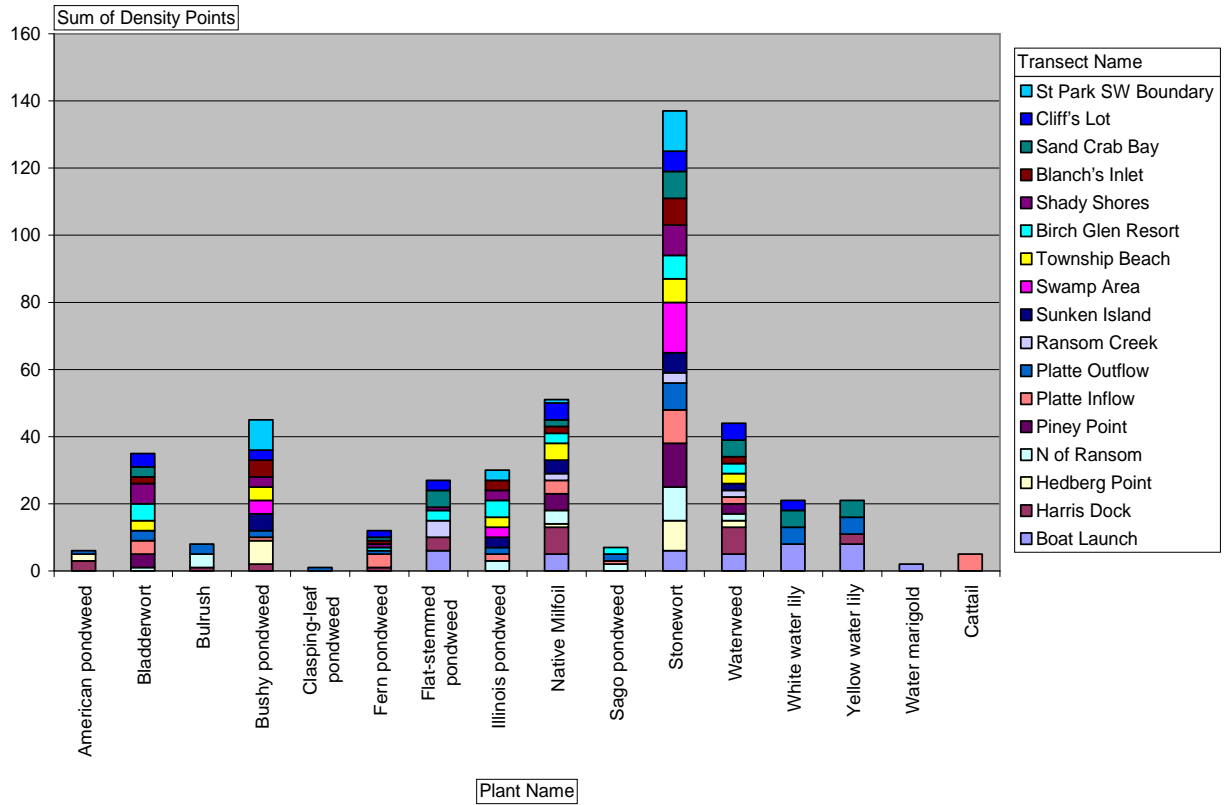
Not all plants are found at each depth. For instance, white and yellow water lilies are only found at 4 foot.

Native stonewort was found at almost every transect.

To read the charts, the transects found are shown in the order depicted in the key. Transects are NOT listed in the key in the order they were sampled.

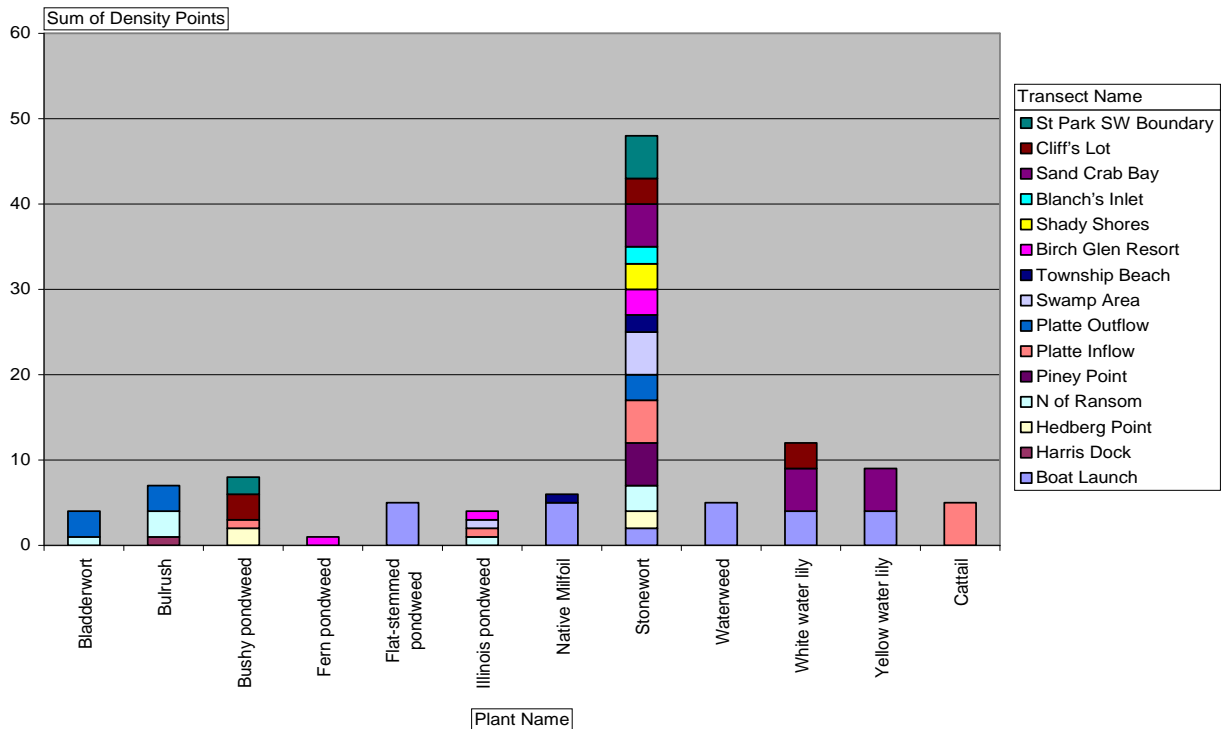
Lake-wide Plant Densities Sorted by Species

Depth in Feet (All)



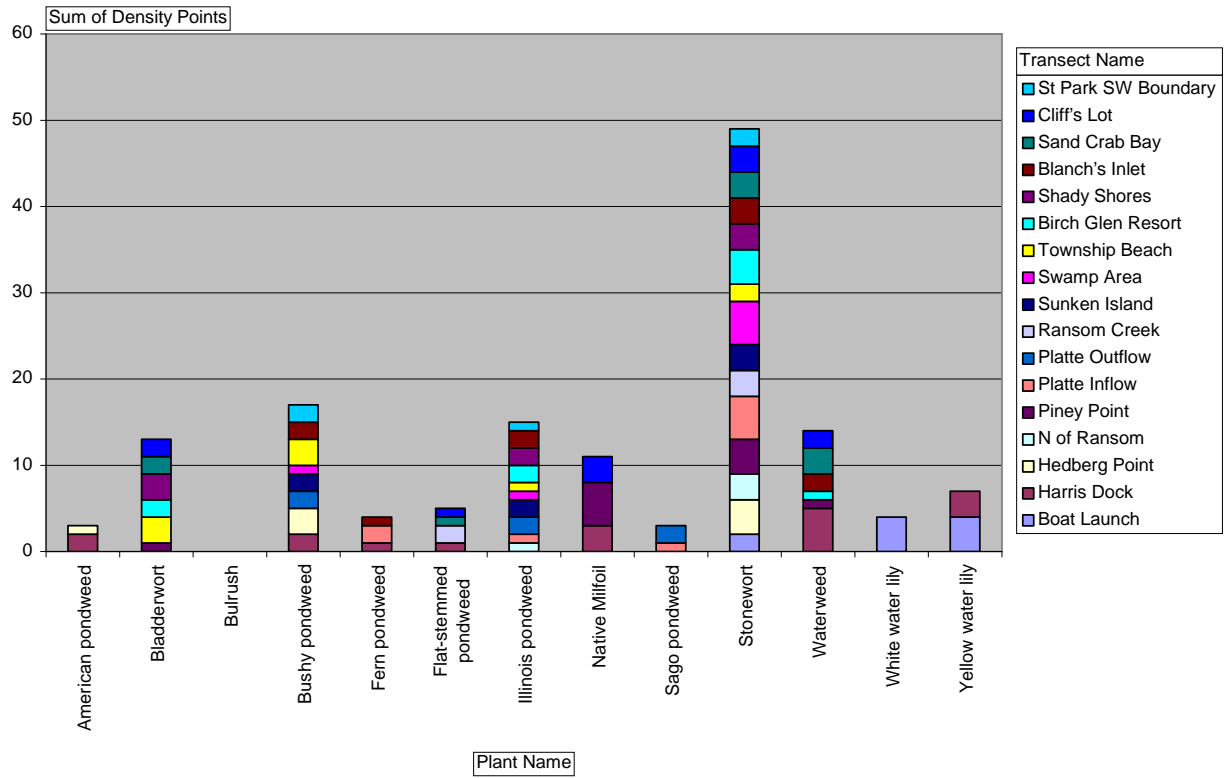
Plant Densities at 1 Foot Sorted by Species

Depth in Feet 1



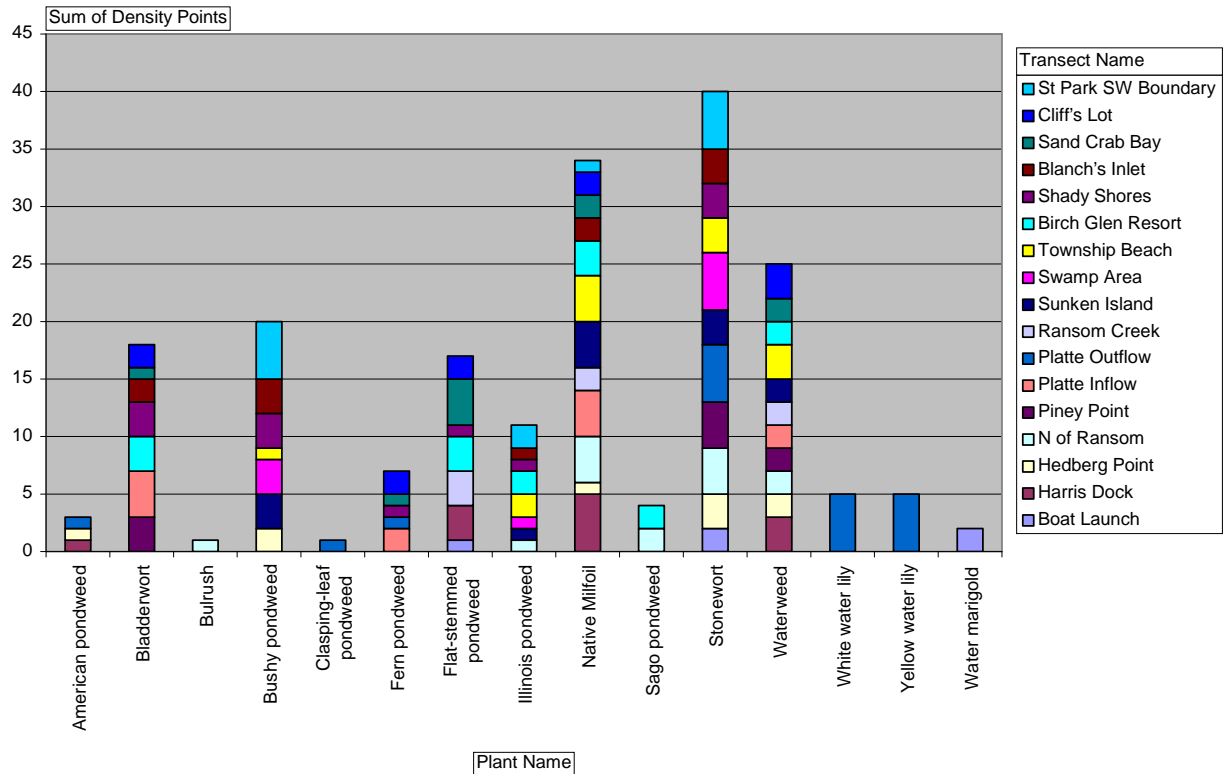
Plant Densities at 4 Feet Sorted by Species

Depth in Feet 4

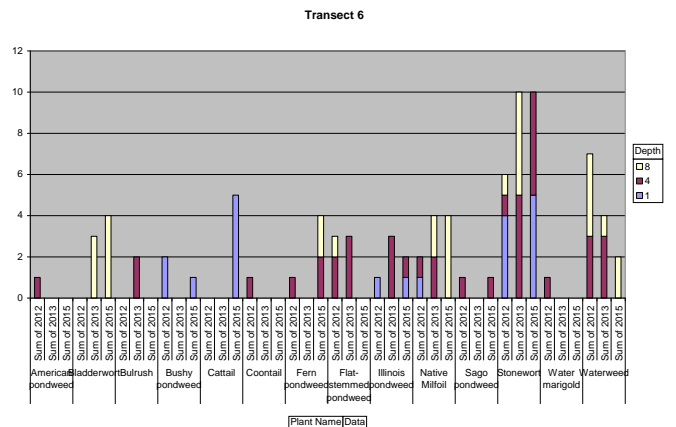
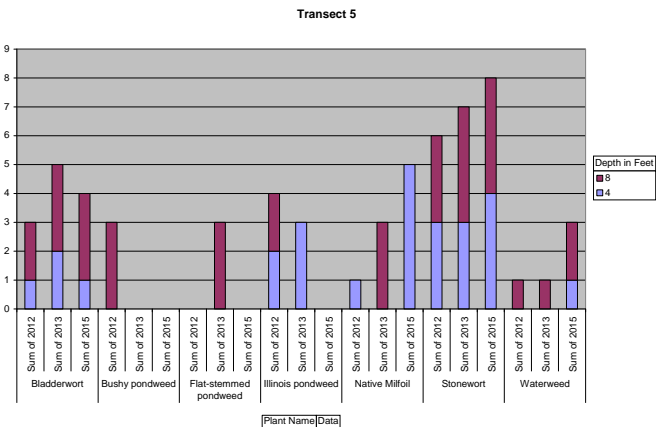
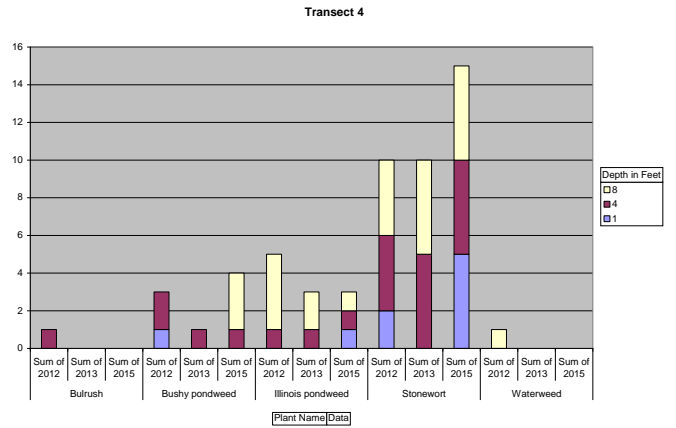
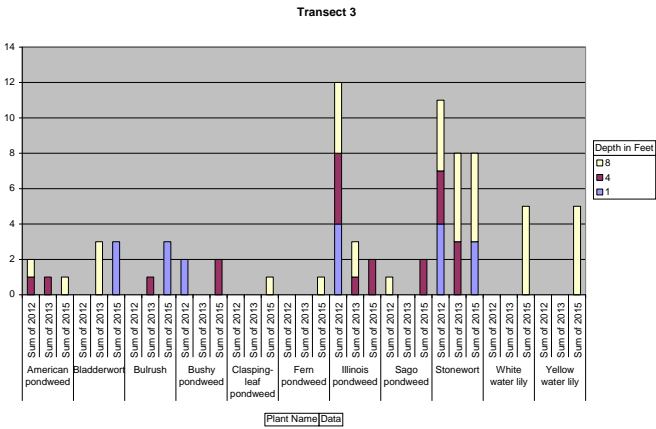
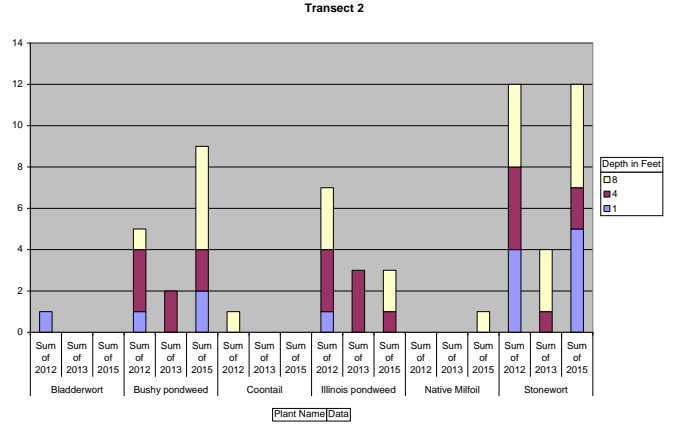
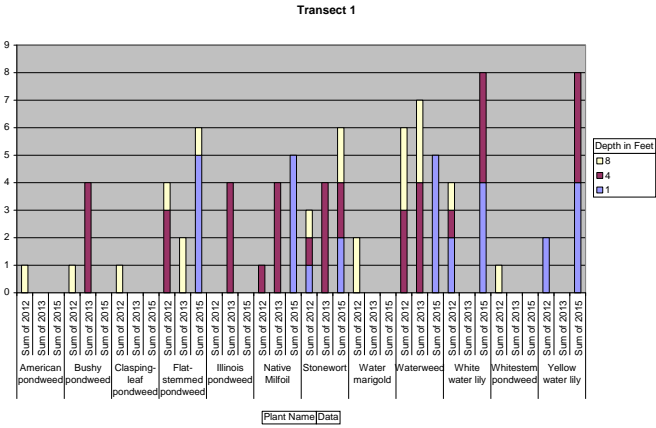


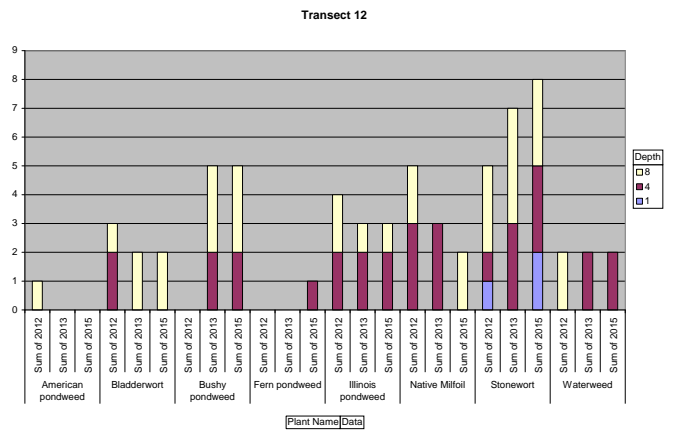
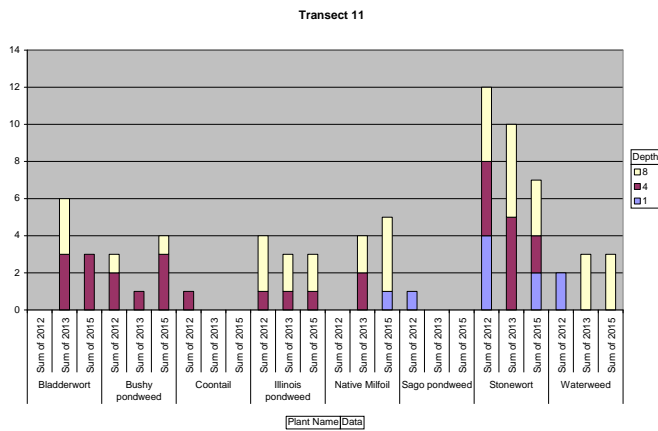
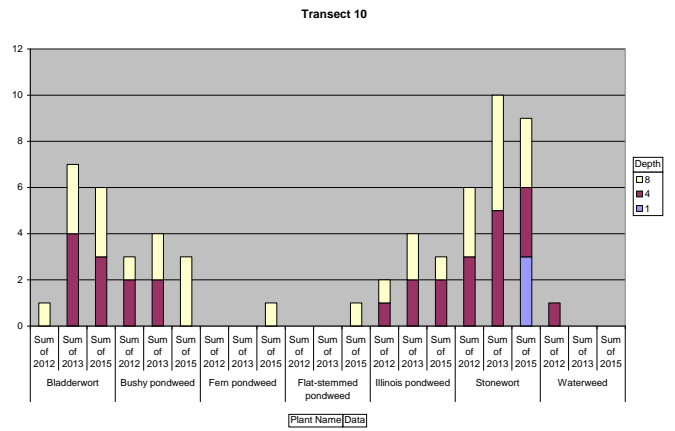
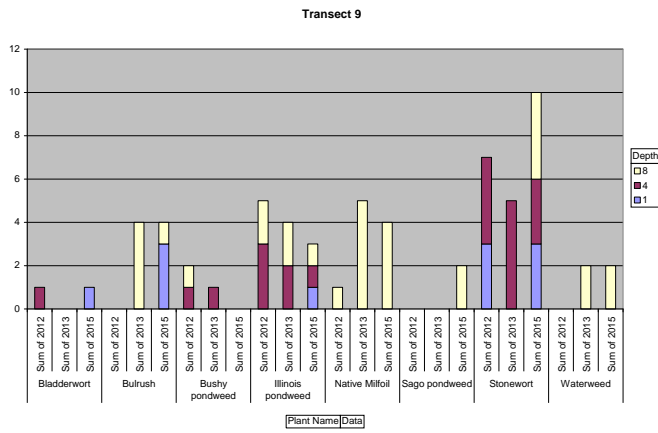
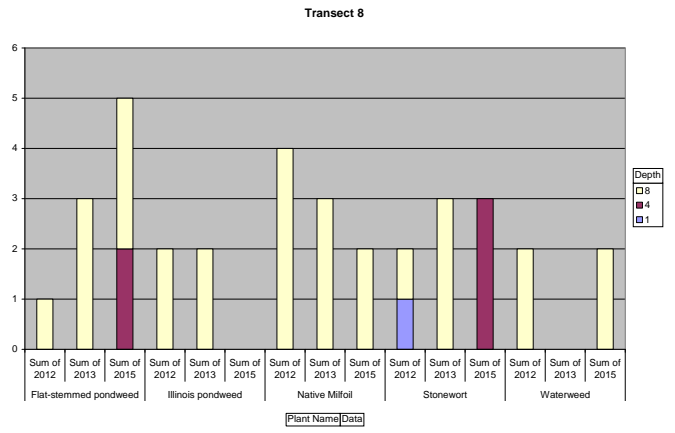
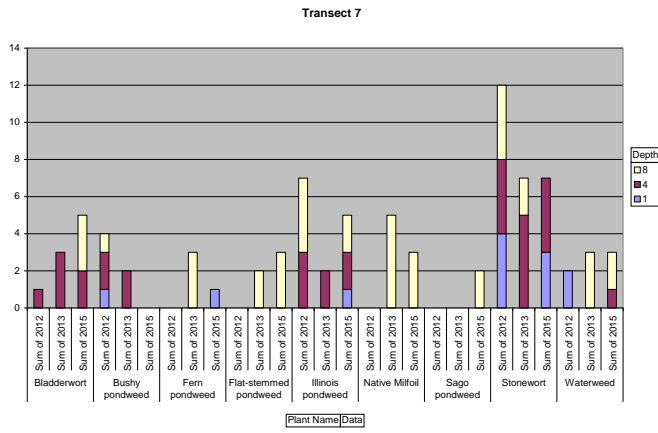
Plants Found at 8 feet Sorted by Species

Depth in Feet 8

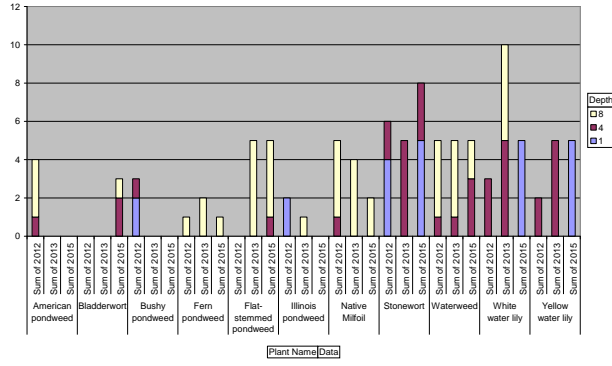


Year to Year Comparison of Weed Sampling by Transect

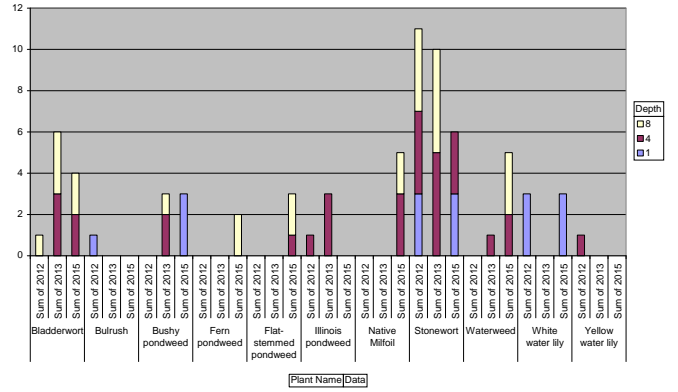




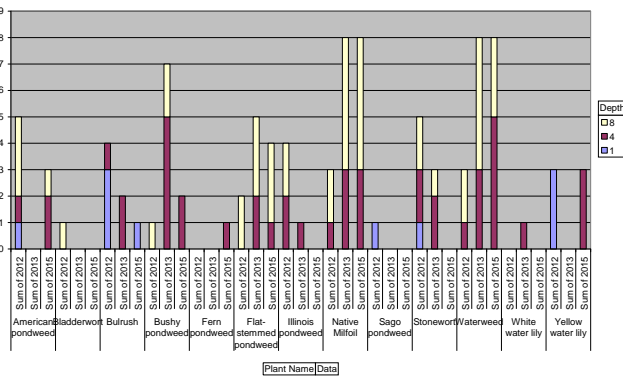
Transect 13



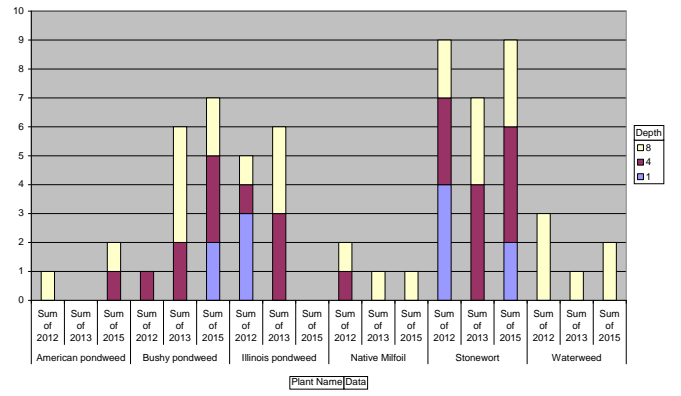
Transect 14



Transect 15



Transect 16



Transect 17

