Guys,

Met with Alana from Environmental Services yesterday. We went over the data that we have received form Clarke, BioBase maps and the treatment data. Alana said that the first thing that "jumped out" at them in regards to the treatment data was the water temperature at the time of treatment which was 71 degrees. They felt that based on water temps the treatment was later than it should have been. They said that Eurasian water milfoil is actively growing and should/can be treated when the water temp is 59-60 degrees. By treating when the water temps were warmer much more bio mass in terms of the EWM was growing which means that more plant mass is killed providing more decaying plant material that is contributing to the nutrient load in the lake which in turn translates more food for algae.

Another concern is treating at warmer water temps, the native or "non-target "species are much more active and are more likely to be impacted by the herbicide. My initial reaction to this information is that Clarke was basing their treatment "timing" more or less on the amount of biomass present in their BioBase survey and not giving enough "weight" to the water temps. There definitely seems a need to factor water temps into this equation. As John and I discussed this might also help schedule as all of the lakes are most likely to warm up at different times due to different environmental reasons/ variables.

We also discussed the BioBase technology. The County has adopted this technology this past year and is using it to map local lakes. They seem to be very optimistic about the potential of this software. We talked about better ways to link the map data to the plant sampling with GPS waypoints. This is something that John and I felt was really lacking from the report that we received from Clarke. This is definitely something that is doable but I feel that it is something that Clarke does not do because it takes extra time to do and adds to their labor cost, again my personal opinion. We both felt that this was necessary in order get an accurate representation of what the BioBase map is showing us – definitely room for improvement here. We also discussed the potential of using the bottom composition layer in order to predict what plants will most likely grow where based on what the lake bottom is composed of. Also discussed linking multiple years of data to weather conditions, heavy rainfall, drought, length of time ice is on the lake, time ice is covered by snow etc. After a few years you are going to see patterns emerge and this in turn will help us have a much better understanding of how and why things are happening in the lake- really cool stuff. The unit that the county uses is a unit that is available for under $500 before taxes. It is set up the same way you would set up for ice fishing, making it transportable to different boats. Having this data will be so important moving forward so that people undertaking any type of weight management have an understanding of the lake history based on data versus subjective information. I know I wish I'd had it.

The environmental services unit is looking to link water temperature to one certain species of plants start to grow. They will be using the bio base technology to do this. I spoke with them in regards to working with them setting up a new protocol that the lakes would use along with the BioBase technology. I suggested that if we did this would be possible for them to help us defray some of the costs of equipment and subscription to conduct BioBase surveys on our lake. Alana said she would look into it and had a couple of ideas or she might be able to get some

cash to help us out with this. She also stated that they were looking for group like us and this could work out really well. We're going to be meeting with them again in the near future because they would like to coordinate plant sampling that they would conduct in conjunction with Clark performing their final BioBase survey which should be done in the first few weeks of September. After that we will be working with them to develop a treatment plan for next year.

I spoke with Jennifer Biancalana after the meeting with environmental services in order to give her an update and keep her in the loop with the information that I received from environmental services. I told her that I would be sending her a copy of the notes and recommendations that environmental services would be sending me. I wanted to confirm when working in approximate date as to when they would be performing their last plant survey so I can coordinate that with environmental services in order to give them enough lead time.

Sincerely,
Mike