Three Lakes Association Internship

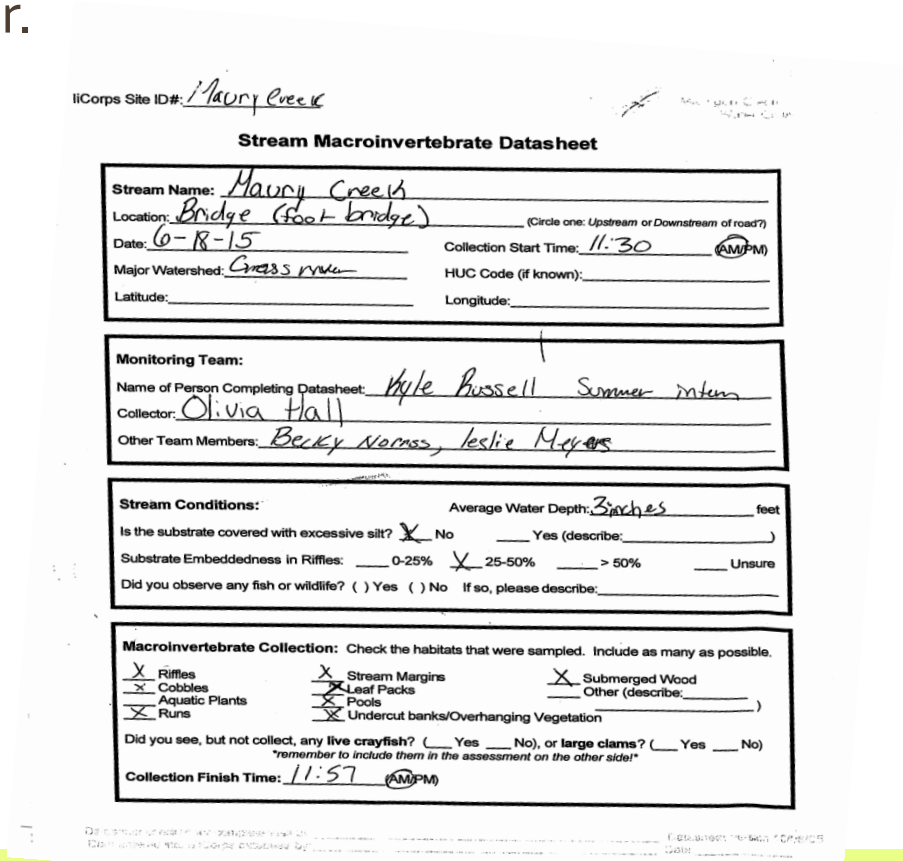
Summer 2015

Projects Over the Summer

- Macroinvertebres
- Eurasian Water Milfoil
- Benthic Barriers
- Hydrolab
- Fish Shocking
- County Fair

Macroinvertebres

On the first day, we went down to Maury Creek to net some water insects. These are the results of this year.



IiCorps Site ID#: Maury Creek

Stream Macroinvertebrate Datasheet

Stream Name: Maury Creek
Location: Bridge (foot bridge) (Circle one: *Upstream* or *Downstream* of road?)
Date: 6-18-15 **Collection Start Time:** 11:30 (AM/PM)
Major Watershed: Grass river **HUC Code (if known):**
Latitude: **Longitude:**

Monitoring Team:
Name of Person Completing Datasheet: Kyle Bussell Summer intern
Collector: Olivia Hall
Other Team Members: Becky Norcross, Leslie Myers

Stream Conditions: Average Water Depth: 3 inches feet
Is the substrate covered with excessive silt? X No ___ Yes (describe:)
Substrate Embeddedness in Riffles: ___ 0-25% X 25-50% ___ > 50% ___ Unsure
Did you observe any fish or wildlife? ( ) Yes ( ) No If so, please describe:

Macroinvertebrate Collection: Check the habitats that were sampled. Include as many as possible.
X Riffles, X Cobbles, ___ Aquatic Plants, X Runs
X Stream Margins, X Leaf Packs, X Pools, X Undercut banks/Overhanging Vegetation
X Submerged Wood, ___ Other (describe:)
Did you see, but not collect, any **live crayfish**? (___ Yes ___ No), or **large clams**? (___ Yes ___ No)
remember to include them in the assessment on the other side!
Collection Finish Time: 11:57 (AM/PM)

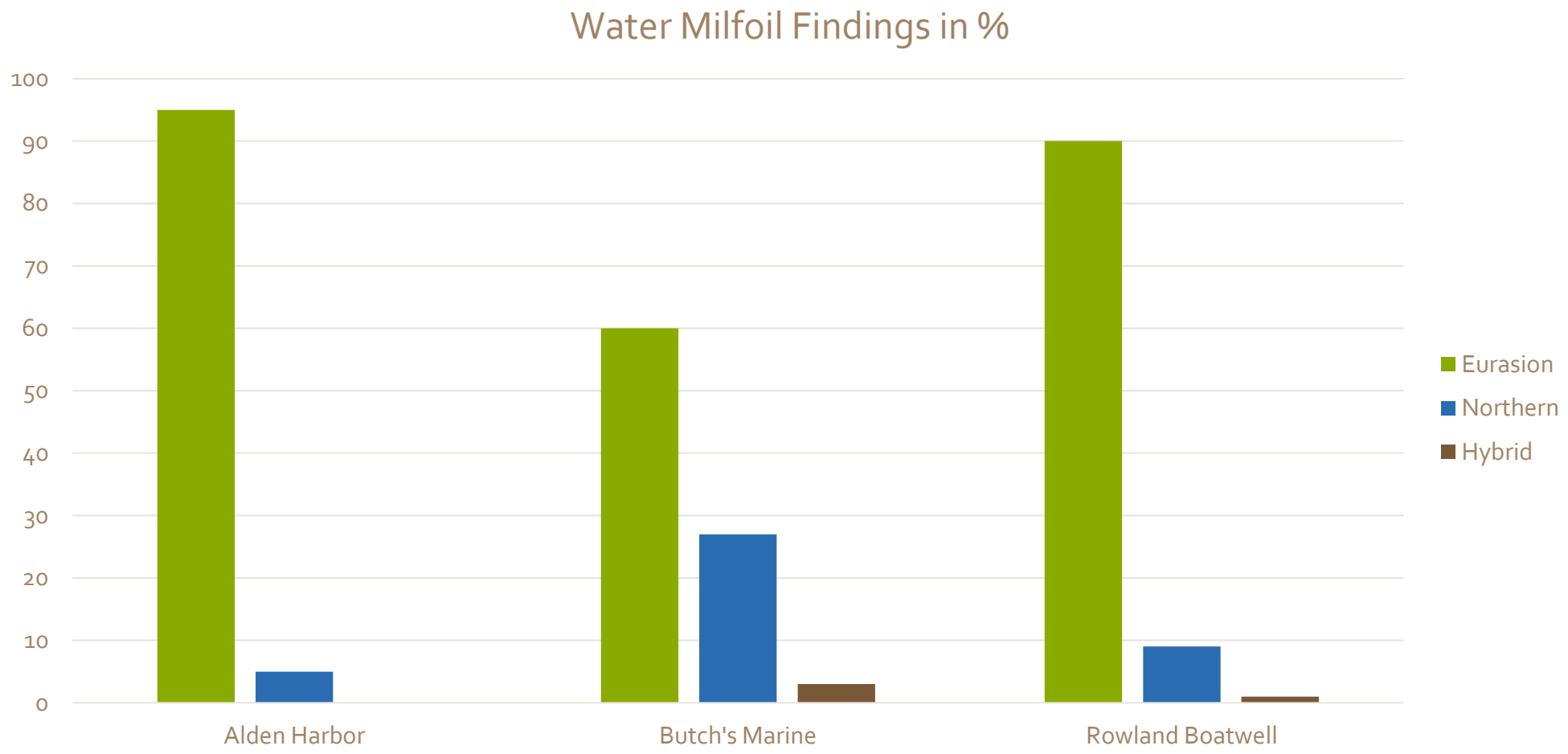
	Common	Rare
Sensitive	0	20
Somewhat Sensitive	2	5
Tolerant	0	2

Common and Interesting Macroinvertebres

Scud

Caddisfly Larvae

Eurasian Water Milfoil



Water Milfoil Distinction

EWM Tracking

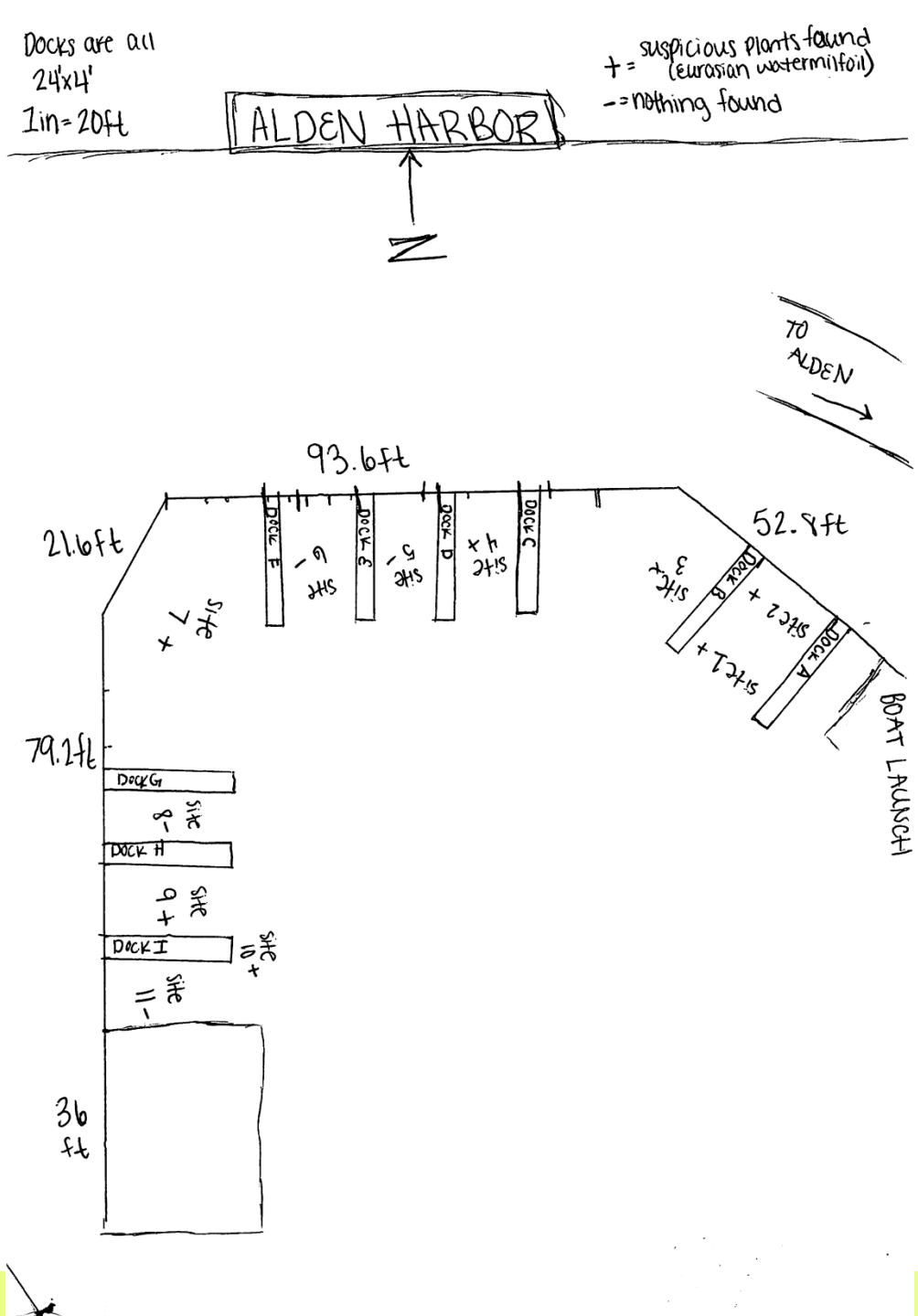
Common Location Name Butch's Mama

Date 6-25-15 Covered Slips

Coordinates	Plant Detected	Notes
1	Native	looks good
2		No Hartf
3		No Hartf
4	None	
5	Native	Floaters
6	Clean	
7	Clean	
8	Clean	
9	Clean	
10	Native	
11	Native	Closest to Canal
12	Native	
13	Clean	
14	Clean	
15		Cara, Jodeah
16	Native	
17	Native	
18	Native	
19		Cara
20	Native	Cara

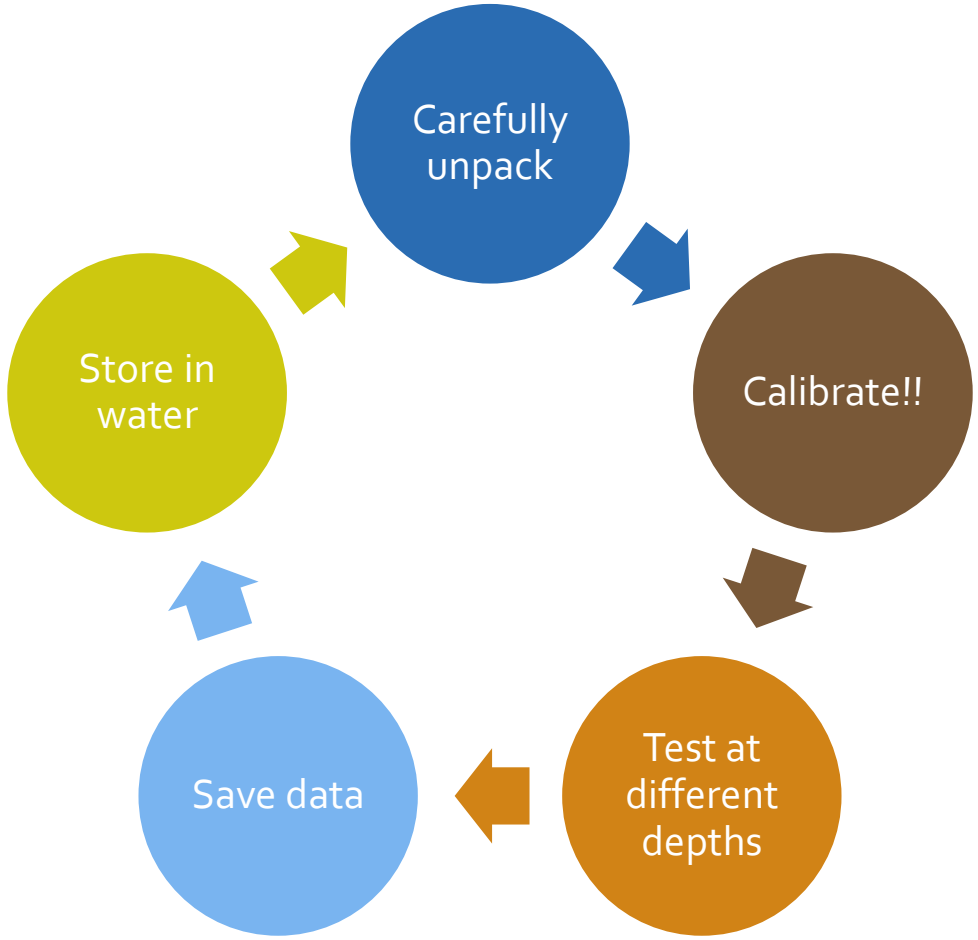

LitterClean
40

During the milfoil collection, we charted what we found and where. I learned how to do a scale drawing with an architects ruler. It was a very useful and interesting thing to do!


Docks are all
24'x4'
1in=20ft
ALDEN HARBOR
+ = suspicious plants found (eurasian watermilfoil)
- = nothing found
N
TO ALDEN
93.6ft
21.6ft
52.8ft
79.2ft
36 ft
Dock F
Dock E
Dock D
Dock C
Dock B
Dock A
Dock G
Dock H
Dock I
BOAT LAUNCH

Hydrolab

We also learned how to use the very useful Hydrolab. We tested in Torch Lake and along Torch River at the head of creeks. Our results were normal and as expected, but the main object of this project was figuring out this instrument.



Benthic Barriers

The benthic barrier was a key focus this year. Not only did we need to put them in and take them out, but we had to truly get up close and personal in order to find the best way for installation and removal as well. We also observed the before and after situations, and compared the two separate types of barrier used.


MC 8317 TK
MC 6755 RP

Results

Butch's

- Looks great, most traces of plant life are gone. Clear square of just sand, did its job.

Rowland Boatwell

- Most traces of watermilfoil are gone after 6 weeks. There was a clear square where the benthic barrier was placed; they obviously did their job.


BOAT DOCKS
6382

COMPARE & CONTRAST

Both of the benthic barriers did their job without a noticeable difference.

Black, plastic

- Easier to transport
- Easier to install/remove

Red, canvas

- Less air bubbles
- Strategically better shaped

What the Future Holds

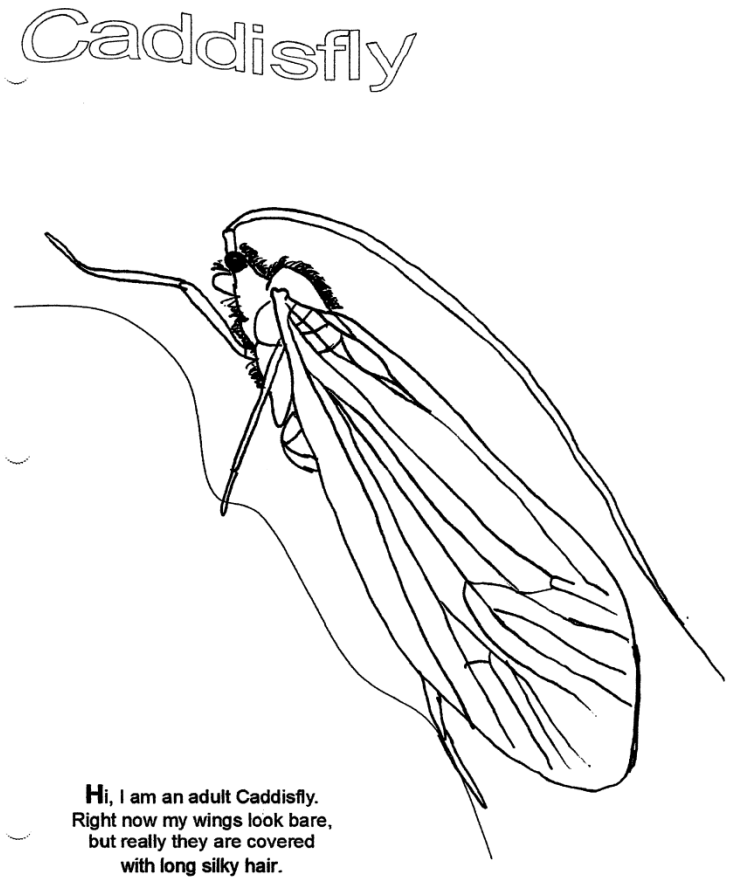
In 3 more weeks, members from Three Lakes will be going back to our testing areas to see if any of the milfoil grows back. If the benthic barriers did their jobs, only the native plants will have come back, & the invasive should stay away.

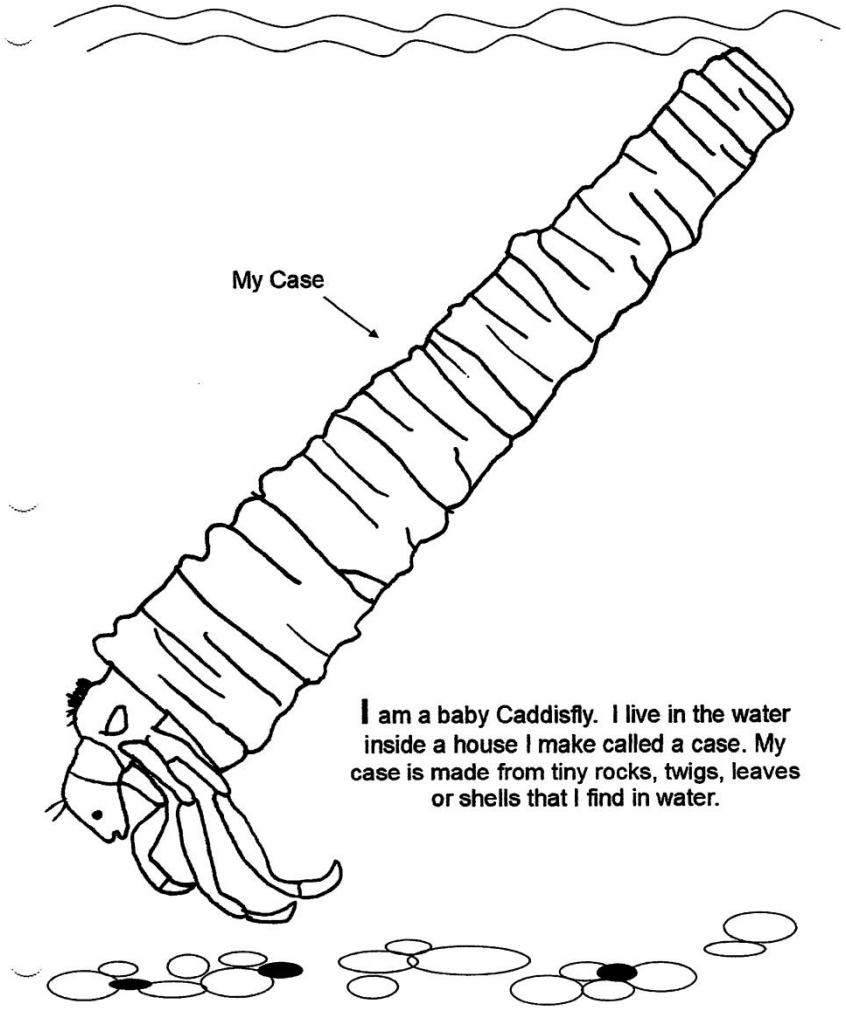
Members of TLA also put benthic barriers in Alden Harbor, with new ideas (such as adding lifejackets). They will take these out in 5 weeks and assess the situation from there.

Fish Shocking

Fish Shocking was one of the most enjoyable experiences through out the summer. Although we did not find anything most of the day, it was still interesting to see the equipment being used. At the end of the day, we went down to the Alden Harbor and shocked the river running through, and found many different species, such as brown trout and even a crayfish.

Coloring pages we gave children to teach them about some awesome insects, and to show them how fun science can be at the Antrim County Fair.





Aerial Watershed Tour

A special treat I was lucky to enjoy!