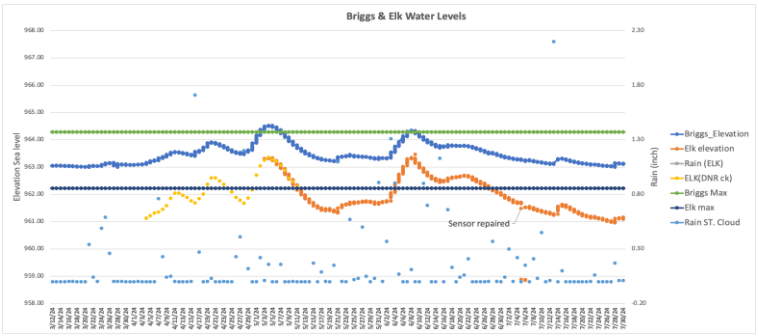
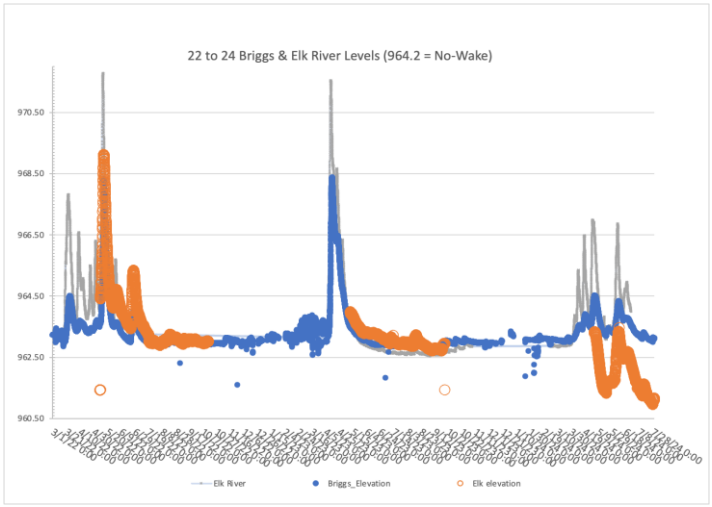
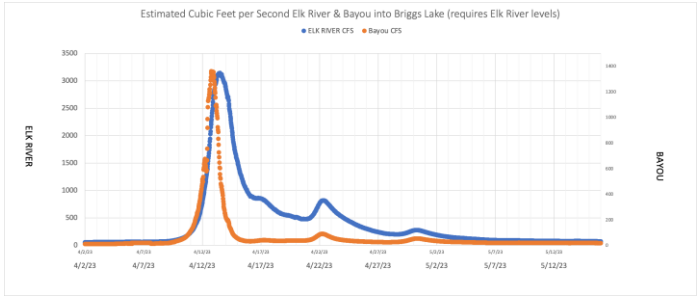


Why do the lakes look improved this year..
Rain to water levels are less corrolated this year due to the spotty nature in terms of area.
In general less rain fell north of the county and we never saw the usual 10 foot rise in the river near the airport..
Briggs Levels just barely reached the high water marks twice this year.
Which is a major factor in this year having lower phophours coming from the Elk River.
The river P content ranges from 2 to 3 times that of the lakes.
In the last 2 years the amount of water from the river flowing into the upper lakes exceeded the total volume of the lakes (estimated about 1.5 times)
This year looks like we had less than 10% of the volume.. (rough estimate due to waiting for data from MPCA before calculating)
Curley leaf dies off around the 4th of July resulting in mats of dead plants floating where treatment did not kill it in the spring.
The result is a less alge blooms than most years.

When river levels exceed 1.5 to 2.0 feet compared to the lake levels the river starts flowing into the upper lakes through the bayou.
This brings mud, curley leaf and other forms of phosphours into the lakes -
Below is a chart comparing river levels to lake levels in recent years.



Below - Manning flow calculation for above Bayou input shows an estimate of cubic feet per second common last year and almost non-existant this year..



The Alum study started last year uses 2015 data and assumes zero input from the bayou.

The temperature vs water data is interesting as well...