

## **Quick Monitoring Recap**

This last year we started Clean Water Legacy (CWL) monitoring on 11 sites in April and Total Maximum Daily Load (TMDL) monitoring on 6 sites starting in late July. We have one year left of CWL monitoring and 2 years left of TMDL monitoring. Lab samples are sent the Minnesota Valley Testing Labs for the CWL monitoring and Minnesota Department of Health for the TMDL monitoring. Data was also collected with a YSI handheld and transparency tube. Continuous stage monitoring equipment was installed on 14 sites and we also worked on obtaining flow data on these sites. The 3 other sites have stage and flow monitored by either the DNR or USGS.

### **Chloride:**

All samples stayed well below the 230 mg/L chronic standard and the 100 mg/L standard that is put on industrial outputs. Blooming Prairie Tributary had the highest average, 35.3 mg/L, over 10 mg/L higher than any other average.

### **Conductivity:**

Conductivity was a little high with 38 percent of sites being above .500 mS/cm, which is the high end for a good mixed fishery. Most high samples were fairly close to .500 mS/cm. Only 4 percent were below .150 mS/cm which is the low end for a good mixed fishery. The Blooming Prairie Tributary had the highest average at .632 mS/cm.

### **Dissolved Oxygen:**

Dissolved oxygen generally was good at the sampling sites. The general range for fish is from 7-11 mg/L with levels below 2 mg/L causing fish to suffocate. All samples were above the 2 mg/L level. The averages range from 6.9 mg/L (Dobbins Creek at Mower County 19) to 10.4 mg/L (Judicial Ditch #5).

### **E. Coli:**

Of the 44 samples, 36 were over 200 colonies per 100 mL which is the MPCA standard. The Average was 900 colonies per 100 mL. Wolf Creek had the lowest average with 136 colonies per 100 mL. Blooming Prairie had the highest average with 1410 colonies per 100 mL.

### **Nitrogen:**

The nitrate-nitrite totals were high in spring and lower in the fall and that pattern is typical with past results. 27 of the 174 samples are over the 10 mg/L drinking water standard. Iowa has set their goal for the Cedar River at 9.5 mg/L. Middle Fork of the Little Cedar River was the lowest with an average of 1.01 mg/L. Lansing tributary was the highest with an average of 8.4 mg/L.

Ammonia did not show anything of great significance. Only 4 of the 154 samples were above the .16 mg/L laboratory detection limit.

Roberts Creek had the lowest average Total Kjeldahl Nitrogen at .9 mg/L and Murphy Creek had the highest average TKN at 1.9 mg/L.

**pH:**

The normal range for this eco-region is from 8.0 to 8.2. Samples from this year were slightly on the high end. The overall average is 8.2. The outliers were Murphy Creek with an average of 8.0 and Cedar River at County 28 with an average of 8.32.

**Phosphorous:**

Just over 10 percent of the total samples exceeded the MPCA state standard (.2mg/L). Of the 17 samples that exceeded the MPCA state standard, 10 were collected at the Blooming Prairie Tributary site. The Blooming Prairie Tributary had the highest average with .334 mg/L. The four samples taken during the June 12<sup>th</sup> flood event were the highest.

The orthophosphate samples were also were the highest during the June 12<sup>th</sup> flood event. Blooming Prairie was also the highest with .277 mg/L.

**Sulfate:**

All samples were below the MPCA standard (1000 mg/L). The Blooming Prairie Tributary had the highest average of the sampling sites less the 2 sampling anomalies. Samples were only taken at the 11 Clean Water Legacy monitoring sites.

**Transparency Tube:**

During the June flood the transparency ranged from 1 to 4cm. Eighteen of the 229 total samples had a transparency below 20 cm, which is the estimated standard and 118 of the 229 total samples had a transparency of 60 cm or more. The Cedar River at Mower County Road 2 was the clearest with all 7 samples above 60 cm. Lack of rain events probably contributed to the higher transparency numbers.

**Total Suspended Solids:**

Six of the 164 samples exceeded the MPCA standard of 60mg/L. All 4 of the samples taken during the June 12<sup>th</sup> flood event exceeded the standard. Without the flood data Dobbins Creek at County 19 had the highest average with 18.3 mg/L.

**Turbidity:**

Flood and rain events showed the highest totals. The end of the sampling season showed the clearest results. 21 of the 229 samples were above the estimated 25 FNU standard. Murphy Creek had the highest average (16.6 FNU) without the flood data. Cedar River at County Road 2 had the lowest average (1.99 FNU). Lack of rain events probably contributed to the lower numbers in the TMDL samples.

The entire report is available on the web at [www.cedarriverwd.org](http://www.cedarriverwd.org) or at the Mower SWCD office.

Any questions please call or stop by the office.

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