

## **Nutrient Monitoring Council (NMC) 14<sup>th</sup> Meeting**

**October 22, 2019**

Champaign Public Library, Friends Conference Room

200 W Green St, Champaign, IL 61820

*In attendance:* Trevor Sample, Illinois EPA; Laura Keefer, Illinois State Water Survey; Paul Terrio, U.S. Geological Survey; Eliana Brown, Illinois Extension; and Kate Gardiner, Illinois Extension

### ***Welcome/Housekeeping – Trevor Sample and Eliana Brown***

Trevor welcomed NMC members. Paul Terrio was present on behalf of Kelly Warner. Hold the date for the December 3<sup>rd</sup> and 4<sup>th</sup> NLRs Partnership Conference at the Crowne Plaza in Springfield.

### ***NMC September 10, 2019, Meeting Review and Minutes – Trevor Sample***

Meeting minutes were reviewed and accepted without changes. Additional time may be given for review by other NMC members unable to attend this meeting.

### ***Discuss Method for Calculating Statewide Annual Nutrient Loads – Trevor Sample***

At the last meeting, it was brought to the NMC's attention that current nutrient monitoring efforts do not cover the entire state. The U.S. Geological Survey (USGS) Super Gages capture approximately 75% of Illinois' drainage area and reports do not subtract loads contributed by other states. While a large portion of the state is monitored, that still leaves 25% of the state's drainage area unmonitored. Criticism of current Illinois nutrient monitoring is twofold: unmonitored areas exist within the state and some of the gages include nutrients contributed by Wisconsin and Indiana.

Dr. Greg McIsaac's update to the NLRs Science Assessment calculated loads and yields on a HUC 8 basis, using data from the Illinois EPA Ambient Monitoring Network. He estimated loads where there are no monitoring stations and based the statewide load estimates on the state's eight major river systems. Using HUC 8 watersheds poses its own challenges, though. For example, drainage areas of the monitoring locations do not match HUC boundaries and extrapolating from monitored area to HUC area introduces uncertainty and probability of inaccurate estimates.

Questions to consider include whether the Illinois EPA Ambient data provide a good enough estimate for nutrient loads on an annual basis, how to estimate the remaining areas, and how to subtract Wisconsin and Indiana nutrient load contributions.

Discussion on how to resolve this issue resulted in several ideas, including using watersheds with similar ecoregions to estimate unmonitored watershed loads. Using a GIS map overlaying unmonitored areas in Illinois over the Illinois Level III and IV Ecoregions map, unmonitored watersheds would be matched with monitored watersheds with comparable ecoregions elsewhere in the state. Nutrient loads for unmonitored HUC 8 watersheds would then be estimated based on those with comparable ecoregions rather than geographic neighbors. However, land-use varies across the state and similar ecoregion make-up between watersheds doesn't guarantee similar nutrient loads. Another option would be to monitor a stream in each HUC 8 watershed and use those data to estimate loads. However, resources are limited and it would be difficult to choose a single stream that would be representative of each watershed as a whole.

Discussion also included that funding for the U.S. Geological Survey Super Gages ends in March 2021, with the contract for monitoring ending in September 2020 with six months allotted to compile a final report. It is in the best interest of the NMC to further fund the USGS Super Gage network.

***Next Steps – Eliana Brown and Trevor Sample***

Laura Keefer will meet with Dr. Greg McIsaac to discuss options for most accurately capturing all of Illinois' nutrients. NMC members are encouraged to attend the NLRs Partnership Conference in December. The next NMC meeting will be in March 2020.

***Adjourn***