

**Office of the City Engineer**

**John C. Rooney, P.E.**  
Assistant Commissioner of Public Works/  
City Engineer



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January 24, 2018

Legistar Item: 0082-18

To: Alderman Terry McCarthy, Chairman  
Public Works and Services Committee

From: John Rooney *JCR*  
Assistant Commissioner of Public Works/City Engineer

Re: WI League of Municipalities Leaf Management Storm Water Study

The WI League of Municipalities has requested participation from various MS4 (Municipal Separate Storm Sewer Systems) communities. The MS4 municipalities are permitted by WisDNR for storm water discharge via WPDES permit. Thirty-seven MS4 communities have agreed to support the study conducted by USGS/WisDNR. The purpose of the study is to understand the storm water quality benefits from municipal leaf management programs of MS4 communities and how the USGS/WisDNR study can best represent those programs.

The study will be conducted over three years to sample and analyze data on leaf management programs and implementation strategies to reduce phosphorous loadings. This is a very important endeavor as the City of Racine may be subjected to TMDL load requirements if moved from TSS reduction as a condition of our WPDES permit.

The cost of the study to the City of Racine Storm Water Utility is \$2,000.00 annually for 3 years. The Storm Water Utility has funds available to participate, in Org-Object 60484-52299, Public Information and Outreach.

If the Committee agrees, the appropriate action would be to authorize the Assistant Commissioner of Public Works/City Engineer to fund and participate in the study.

Cc: Joy Hansche  
File

May 31, 2017

Peter Eggert  
City of Racine  
730 Washington Ave  
Racine, WI 53403

Dear Peter:

The WDNR has approached the League with a research request that could help reduce your stormwater management costs and other costs related to phosphorous reduction. I hope you will consider helping us to fund this request.

The DNR is exploring an approach to quantify and provide numeric phosphorus reduction (stormwater) "credit" to MS4s for improved fall leaf management programs. This will help MS4s meet TMDL phosphorus reduction requirements. Three years of DNR / USGS monitoring and research in the City of Madison has shown significant reductions in fall stormwater phosphorus loadings, if leaves are regularly removed from city streets with medium to heavy tree canopy. The DNR is now looking for feedback from MS4s on what types of municipal programs could be implemented to reach this goal. In order to provide specific credit, however, the WDNR needs data from more locations and is seeking funding to conduct additional stormwater monitoring similar to the Madison work. Additional monitoring is needed to understand and identify variables that may occur in other locations, and to build those variables into a Leaf Management Program usable by all Wisconsin MS4 communities.

**This approach could prove to be a very cost-effective way to meet TMDL/Phosphorus reduction requirements, compared to traditional stormwater management measures.**

The League's role in this endeavor is three-fold:

1. Represent the interests of the MS4 municipalities statewide – especially as related to stormwater programs and compliance with regulations.
2. Organize a subcommittee of municipal experts to advise the DNR in this research and the development of a Leaf Management Program.
3. Organize the funding effort for this research.

The proposed research parameters would be as follows:

- Create a three-year water quality monitoring process, beginning in the fall of 2018.
- Field monitoring will be done by the United States Geological Survey (USGS); their expertise has clout with policymakers.
- A total of four sites in two different cities will be identified with varying geography, tree canopy and other characteristics.
- The cost of purchasing/installing equipment, sampling, data analysis and reporting is \$425,000 over three years.
- If a majority of MS4 communities commit to \$2,000 per year for the three-year study, we can move ahead with this important work. If the research is successful, your community's return on investment, will far exceed this upfront cost.

The League will identify grant resources in hopes of reducing the actual cost to your community. However, the timing of all of these "moving parts" is such that we need to start with you and work on other resources once we have determined the level of interest.

If you are able to budget \$2,000/year, for three years beginning in 2018, please email me (jdeschane@lwm-info.org) by **June 16**. Time is critical.

Thank you for considering this request. Please call me or Curt Witynski with questions (608-267-2380).

Sincerely,



Jerry Deschane  
Executive Director