

Little Rock Creek Area Plan Update

Making progress on the Little Rock Creek Area Action Plan

The DNR action plan aims for the sweet spot that keeps pumps pumping while sustaining aquatic habitat in Little Rock Creek. With this goal in mind, the DNR is making progress on several studies as described below.

- With the help of eight local farmers, we have begun to understand any differences between reported water use and measured water use.
- Using state of the art tools, we have analyzed the variety of fish habitats in Little Rock Creek.
- Using additional long term data, we have improved the reliability of the model that describes the way groundwater flows underground in the Little Rock Creek Area.
- Using dye tracers, we studied the way surface water flows through the Sartell Wildlife Management Area.

All of these studies were called for in the Little Rock Creek Area Action Plan. The study results will help groundwater users, the DNR and other interested individuals ensure that groundwater resources remain available and useable for present and future generations.

Here is a table summarizing the four studies:

The study	Brief description	Status
Water Use Estimates Study	DNR compared two years of estimated water use data provided by eight farmers with flow meter data collected from their irrigation systems.	<ul style="list-style-type: none"> ·The study is complete. ·Information has been shared with the individual farmers. ·A DNR report on the study will be available in November 2020. ·See a preview of the study results below.
Stream Habitat Study	Over a three-year period, stream habitat specialists identified and measured the variety of fish and fish habitats present in a representative section of Little Rock Creek.	<ul style="list-style-type: none"> ·A DNR report on the stream habitat study will be available in November 2020.
Groundwater Flow Study	Data on the geology, surface and groundwater hydrology, weather patterns and water use are combined to describe how groundwater flows underground and into the streams and wetlands of the Little Rock Creek Area.	<ul style="list-style-type: none"> ·A DNR report will be available in November 2020 that describes the updated understanding of how groundwater flows in the area.

The study	Brief description	Status
Water Flow Study In Sartell WMA	Non-toxic dye was placed in the water and tracked as it traveled through the streams and wetlands of the Sartell Wildlife Management Area.	<ul style="list-style-type: none"> · The study is complete. · A DNR report on the study will be available in November 2020.

A Preview of the Water Use Estimates Study Results

Farmers in Minnesota that use groundwater for irrigation are required to report their annual water use to the DNR. Most farmers use estimating methods to calculate their water use, rather than directly measuring it using flow meters on their irrigation systems. For many years, not much was known about the potential differences between measured and estimated methods for calculating water use.

Eight farmers in the Little Rock Creek Area volunteered to participate in this Water Use Estimates Study. Their assistance is greatly appreciated. The study compared these eight farmers' estimates of water use with actual flow meter data from their irrigation systems.

Here are a few interesting results:

- Several of the farmers overestimated their water use, on average by 24% in 2019
- A couple of them underestimated their water use
- Several reported their water use very close to the measured use, and within 10%.

This study has helped DNR and farmers collectively understand differences between measured use and estimated use; it seems that the differences are primarily due to a well pump's actual capacity versus its rated capacity. The DNR is compiling the full results of this study and will make them available to the public in November.

Looking Ahead

The Little Rock Creek Area Action Plan team will be sponsoring a public discussion of these studies and the Action Plan's next steps in January 2021. This meeting will probably be an online event. Stay tuned for more information about that meeting.

Contact Information

Questions about this Action Plan can be addressed to Mark Hauck - DNR, 320-223-7846, mark.hauck@state.mn.us

For more information on the Little Rock Creek Area Action Plan, visit the DNR website at www.mndnr.gov/littlerock.

For more information on DNR's groundwater management programs, visit www.mndnr.gov/gwmp/index.html.