# **REGIONAL PLANNING NEWS**

A publication of the Southeastern Wisconsin Regional Planning Commission



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Regional Chloride Impact Study



Waukesha Area **Transit Plan** 

## FlexRide Milwaukee Pilot to Extend and Expand

As reported in previous newsletters, UW-Milwaukee, SEWRPC, and partners have been conducting an ondemand transportation service pilot called FlexRide Milwaukee. On June 29th, the State of Wisconsin awarded MobiliSE, a key partner in the pilot, a grant that will allow FlexRide to extend services through



2024 and expand to serve other Milwaukee area communities. MobiliSE is leading efforts to obtain additional public and private funding for the expansion, which is expected to occur in spring 2023.

Over the summer, FlexRide has seen increasing interest and growing ridership from Milwaukee residents needing to get to jobs at businesses in the Menomonee Falls/Butler area. As of mid-September, nearly 700 eligible applicants have been accepted into the pilot, with 9 out of 10 not having access to a car. For more information on FlexRide, visit **www.flexridemke.com**.









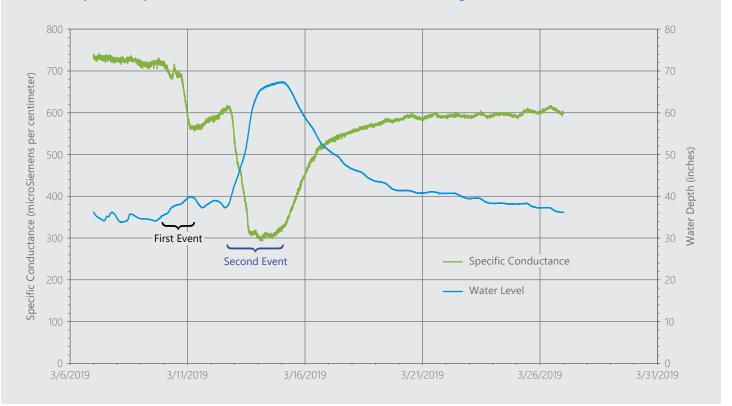


## **Regional Chloride Impact Study Update**

The Regional Chloride Impact Study is a comprehensive study to identify significant sources of chloride to the environment as well as the levels of chloride in surface water and groundwater in Southeastern Wisconsin. As part of this study, Commission staff installed automatic monitoring sensors and collected monthly water samples at 42 stream sampling stations in the Region. Staff also collected guarterly water samples from six lakes located in the Region. This dataset includes over 13 million measurements taken by the automatic sensors and over 1,300 water samples. The automatic sensors (see top image) measured the depth of water above the sensor, water temperature, and specific conductance. Specific conductance is a measure of how well water conducts electricity, which can be used as an indicator of chloride concentration. A higher specific conductance value indicates a higher concentration of chloride. The water quality samples were tested not only for chloride concentration, but also for concentrations of sodium, potassium, calcium, magnesium, and sulfate. These chemical concentrations will help Commission staff interpret the specific conductance and chloride data. Staff is currently completing proofing and quality assurance of this large dataset and has begun analyzing the data.

An example of the data collected by the automatic sensors is shown in the graph on the next page. This graph shows water level and specific conductance measured in the White River at a site just upstream from the City of Burlington between March 7 and March 27, 2019. It illustrates the effects of precipitation and snow melt on water levels and specific conductance in the river. Coupled with weather data from the National Weather Service, as discussed below, this example illustrates how a weather event may affect instream chloride concentrations.

In early March 2019, air temperatures in Burlington were below freezing until March 9 and 10, when daily high air temperatures rose above freezing. In addition, about onehalf inch of precipitation fell on March 10. Runoff from the precipitation and from melting snow entered the White River, raising the water level in the river by almost six inches (see first event in the graph). This water diluted the chloride in the river and specific conductance fell by about 25 percent. Water levels began to recede following this event, and specific conductance began to rise.



### Water Depth and Specific Conductance in the White River near Burlington: March 2019

A major spring thaw then began on March 13, 2019. High air temperatures in Burlington reached 59°F on March 15. The snow that was on the ground melted between March 9 and 14. In addition, about one-half inch of precipitation fell between March 13 and 15. Water levels in the White River increased by over 30 inches (see second event in the graph). At the same time, specific conductance fell by about 53 percent due to runoff from precipitation and melting snow. Following this event, water levels began to recede, initially decreasing rapidly, but becoming more gradual by March 20. As the water level decreased, specific conductance increased in the river. By March 20, specific conductance had reached about 95 percent of its peak value observed on March 12. For the rest of March 2019, water levels in the White River continued to gradually increase.

The March 2019 event in the White River illustrates several factors that can affect stream chloride concentrations. In this case, large inputs of water from precipitation and snow melt during the spring acted to lower specific conductance, which indicates that it diluted instream chloride concentrations. Whether spring precipitation and snow melt have this effect is strongly influenced by contributing land use. The watershed draining to the White River at Burlington is highly rural. About 21 percent of its area is devoted to urban development, and less than 4 percent of its area is devoted to roads and parking lots. In contrast, the response of specific conductance to spring precipitation and snow melt at a site in a highly urbanized watershed where residual salt may be present on roads, parking lots, and driveways, and in snow piles, might be quite different. If enough salt is present on the landscape, specific conductance could increase as a result of runoff from the spring thaw.

Commission staff have also begun developing three of the technical reports that will document findings of research conducted as part of the Regional Chloride Impact Study. One report documents the methods used to collect the data for the study. A second report presents a literature review of the physical, chemical, and biological impacts of chlorides on the environment, infrastructure, and human health. A third report that is being developed in partnership with the Marquette University Law School presents legal and policy options for managing chloride in the environment. For more information on the Regional Chloride Study, see **sewrpc.org/chloridestudy**.



## Waukesha Area Transit Plan Update

Work is continuing on the Waukesha Area Transit Development Plan. Stay tuned for upcoming public informational meetings (both in-person and virtual) and ways you could provide input. Information on the draft plan and upcoming meeting information can be found here: **www.sewrpc.org/WaukeshaTDP**.

## In the Community

SEWRPC staff joined the Root-Pike Watershed Initiative Network (WIN) delegation to attend the One Water Summit in Milwaukee on September 12-15, 2022. This national conference included dialogue about climate resilience, advancing racial equity in water management, and reinvesting in water infrastructure. The Root-Pike WIN delegation is now discussing opportunities with the Racine Habitat for Humanity and SEWRPC to work together on some of these issues.

## **Did You Know?**

The City of Kenosha is one of the smallest cities in the U.S. to operate a streetcar system. Opened on June 17, 2000, the Kenosha Electric Streetcar operates seven restored 1948 and 1951 vintage President's Conference Committee streetcars that operated in Philadelphia, Pennsylvania and Toronto, Canada. Each car is painted in the colors and lettering of a city in North America that operated these cars in the 1940s and 1950s.

Source: City of Kenosha

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