SUMMARY NOTES OF THE JUNE 24, 2026, MEETING OF THE TECHNICAL ADVISORY COMMITTEE FOR *A CHLORIDE IMPACT STUDY FOR THE SOUTHEASTERN WISCONSIN REGION*

INTRODUCTION

The June 24, 2026, meeting of the Technical Advisory Committee (TAC) for *A Chloride Impact Study for Southeastern Wisconsin* was convened online at 10:03 a.m. The meeting was called to order by Committee Secretary Ms. Laura Herrick, Chief Environmental Engineer with the Southeastern Wisconsin Regional Planning Commission. Attendance was taken using the online software.

Members Present

Laura K. Herrick, Secretary .... Chief Environmental Engineer, SEWRPC
Cody Churchill .... Winter Maintenance Engineer, Wisconsin Department of Transportation
Matt Diebel .... Hydrologist, USGS
Craig Helker .... Water Resources Biologist – Southern District, WDNR
Samantha Katt .... Urban Storm Water Specialist, WDNR
Kevin J. Kirsch .... Water Resource Engineer, Wisconsin Department of Natural Resources
Matthew T. Magruder .... Environmental Research Manager, Milwaukee Metropolitan Sewerage District
Max Marechal .... City Engineer, Engineering Department, City of West Bend
Cheryl Nenn .... Riverkeeper, Milwaukee Riverkeeper
Charles Paradis .... Assistant Professor, Department of Geosciences, University of Wisconsin Milwaukee
Kurt Sprangers .... Engineer in Charge, Environmental Engineering Section, Department of Public Works, City of Milwaukee
David Strifling .... Director, Water Law and Policy Initiative, Marquette University Law School

Staff Present

Thomas M. Slawski .... Chief Biologist, SEWRPC
Karin M. Hollister .... Principal Engineer, SEWRPC
Aaron W. Owens .... Principal Planner, SEWRPC
Justin Poinsatte .... Principal Specialist-Biologist, SEWRPC
James M. Mahoney .... Senior Engineer, SEWRPC
Emily E. Porter .... Planner, SEWRPC

Ms. Herrick welcomed the attendees to the 12th TAC meeting for the *Chloride Impact Study* (Study). Ms. Herrick introduced the agenda for the meeting to review the first six chapters of SEWRPC Planning Report No. 57, *A Chloride Impact Study for Southeastern Wisconsin* (PR-57) and provided an update on the progress of the Study thus far.

> [Secretary's Note: The agenda for this meeting is attached herein as Exhibit A.]

REVIEW OF THE SUMMARY NOTES FROM THE APRIL 8, 2026, TECHNICAL ADVISORY COMMITTEE MEETING

Ms. Herrick asked the TAC for any comments or edits for the Summary Notes from the April 8, 2026, TAC meeting. The previous meeting reviewed Chapter 2 (Winter Maintenance Practices) of SEWRPC Technical

Report No. 66, *State of the Art for Chloride Management.* TAC members offered no questions or comments on the Summary Notes.

REVIEW OF SEWRPC PLANNING REPORT NO. 57 CHAPTER 1, *INTRODUCTION AND BACKGROUND*

Ms. Herrick noted that the planning report for the Study will summarize the major findings from the seven completed technical reports and be in more public facing language. She briefly reviewed Chapter 1 of the report, which provides a summary of the work completed and how the technical reports are referenced in the planning report. No questions or comments were provided from the TAC on Chapter 1.

REVIEW OF SEWRPC PLANNING REPORT NO. 57 CHAPTER 2, *DESCRIPTION OF THE STUDY AREA*

Mr. Owens presented a brief overview of Chapter 2, *Description of the Study Area,* which summarizes characteristics that could potentially have an influence on chloride conditions in the environment. He noted that the Chapter summarized the detailed information provided in *SEWRPC Technical Reports Nos. 62, 63, and 65*.

Mr. Owens then summarized Section 2.2, "Study Area Characteristics." This Section profiled the 3,000-square-mile study area, detailing the water resources base, historical and current land use trends, and stormwater management and MS4s permit requirements. The Section also maps wastewater treatment plants (48 active and 28 abandoned WWTPs), describes municipal water service areas (identifying areas served by groundwater and areas served by Lake Michigan water), and points to areas vulnerable to chloride groundwater contamination.

Mr. Owens then introduced Ms. Hollister to summarize typical weather conditions and climate trends in the Region. She presented the 30-year climate normals for the southeastern Wisconsin Region, noting that the two wettest years since 1895 occurred during the study period: 2019 was the wettest followed closely by 2018 as the second wettest year on record.

Ms. Hollister concluded the review of Chapter 2 by discussing weather trends observed from 1950 through 2024. She presented figures that show southeastern Wisconsin has been getting warmer and wetter over time. She explained that the biggest impact from warming temperatures have been during what are typically colder periods, with the largest increases observed for winter and overnight temperatures. The Region has experienced significant precipitation increases along with more extreme events and greater rainfall intensities.

No questions or comments were provided from the TAC on Chapter 2.

REVIEW OF SEWRPC PLANNING REPORT NO. 57 CHAPTER 3, *SOURCES OF CHLORIDE TO THE ENVIRONMENT*

Ms. Hollister introduced Chapter 3, which covers the sources of chloride in southeastern Wisconsin and summarizes the results of the chloride loading calculations and mass balance analyses that were presented in *SEWRPC Technical Report No. 65*.

Ms. Hollister discussed the major sources of chloride in the Region, along with their relative contributions. The eight sources evaluated for the Study combined for more than 460,000 tons of chloride to the environment on average during the study period (2018-2020). The Regional chloride budget indicated that winter maintenance and deicing activities were the largest source of chloride to the Region during the study period, accounting for nearly 60 percent of the total chloride load. Wastewater sources were the second largest at approximately 36 percent.

In addition to the Regional Chloride Budget, Ms. Hollister explained that chloride source loads were computed for each of the 41 stream monitoring sites deployed for the Study. A mass balance analysis was performed for 14 monitoring sites located near USGS streamgage stations. Ms. Hollister presented the results, comparing the sum of chloride source loads with the in-stream chloride loads estimated from data collected at the monitoring sites. The results indicated a relatively good match between chloride source loads and the estimated in-stream chloride load over the 25-month study period at most of the stream monitoring sites. She discussed some of the factors that influenced the analysis results, including land use and seasonal trends. Ms. Hollister then presented detailed monthly chloride loading results for one of the stream monitoring sites. She highlighted a typically observed pattern of higher chloride source loads in the winter followed by higher in-stream chloride loads in the ensuing non-winter months. She explained that this pattern and the associated time lag suggests that chloride applied to the environment can be retained within a watershed, slowly moving through subsurface layers. Groundwater can release chloride into the surface water network or transport chloride to underlying aquifers.

During the presentation of the mass balance results, Mr. Paradis asked if some of the chloride could get hung up in the vadose zone and not make it to the stream. Ms. Hollister replied that chloride is a highly mobile pollutant in solution and tends to move with water. She acknowledged that not all of the chloride applied within a drainage area would make it back to the stream, but we would not expect chloride ions to bind with soil particles. She noted that travel times through soils can be slow and it may take a long time for chloride to reach the stream or another destination, such as groundwater. She also noted it appears that excess precipitation or wet weather periods can have a flushing effect and encourage the movement of chloride through soils.

At the end of the Chapter presentation, Ms. Nenn asked if the Study analyzed baseflow decreases, and mentioned she has observed lower baseflows in rivers and streams recently. She noted that even after the large storm events that occurred in the Region in August 2025 and April 2026, river baseflows returned to very low levels over a relatively short period of time. Ms. Hollister thanked Ms. Nenn for sharing her observations and agreed that extreme rainfall events often do not provide the opportunity for infiltration that would replenish baseflows. She explained that the Study did not explicitly analyze baseflow and noted that when baseflow is low, there is less water to dilute chloride and we would see higher chloride concentrations and greater impacts. Mr. Owens added that some of the rural streams had some of their highest chloride concentrations during summer when water levels in streams were low and dominated by baseflow.

No additional comments or questions about Chapter 3 were provided by the TAC.

REVIEW OF SEWRPC PLANNING REPORT NO. 57 CHAPTER 4, *IMPACTS OF CHLORIDE IN THE ENVIRONMENT*

Ms. Herrick introduced Chapter 4 of the report, which is a summary of the large literature review documented in *SEWRPC Technical Report No. 62*. This chapter includes a discussion of chloride properties, and the two major findings are that chloride ions move with water, and that there are no natural processes to remove chlorides once they are in the environment.

Ms. Herrick continued by summarizing the physical and chemical impacts of chloride on the natural environment. She highlighted the negative impact to soil structure, mostly due to large amounts of sodium replacing calcium and magnesium in the soil matrix. Ms. Herrick noted that chlorides also mobilize metals in soil, which is especially important in wetlands. Chlorides that move through the soil column to the groundwater will move in the direction of groundwater flow, as well as diffuse vertically over time. As groundwater movement is very slow, chlorides in groundwater will take a very long time to flush through. This has implications for reducing chloride levels, as groundwater contributions to streams and lakes will continue for a long time after chloride sources have been reduced. The final attribute of chloride discussed was that chloride laden water is heavier and will settle to the bottom of the water column in streams and lakes. This may inhibit lake mixing, which was not seen in the lakes monitored as part of the Study, but has been observed in shallower ponds nationally.

Ms. Porter next discussed the biological impacts of chloride. She explained that that *SEWRPC Technical Report No. 62* included an extensive literature review of the biological impacts of chloride on both terrestrial and aquatic organisms and that this review helped inform a new figure (Figure 4.9) added for the Planning Report. Figure 4.9 shows a sensitivity distribution curve displaying the chloride concentrations at which different organisms experienced acute toxicity effects. Ms. Porter explained that the curve shows the proportion of organisms from the literature review that experienced a 50% or higher mortality rate at various chloride concentrations. She noted that Figure 4.9 highlights how smaller organisms, like zooplankton, as well as younger life stages, such as fish eggs and larval stages of amphibians, insects, and mussels, frequently experienced lethal effects at lower concentrations than larger and adult organisms.

Ms. Porter next noted that the effects of chloride on organisms can also be sublethal and result in physical harm, behavioral changes, or impacts on reproduction. She explained that physical impacts include tissue death, deformities, and smaller body size, behavioral changes include effects such as reduced swimming speed or diminished fear response, and reproductive impacts include reduced breeding activity, fewer offspring being produced, and shifts in breeding times or strategies. Ms. Porter also emphasized that these effects may result in changes to the overall community composition, species richness and abundance, and food web dynamics, adding that the loss of certain species and shifts in trophic interactions can also have broader implications for entire ecosystems and the processes and services that they provide.

Ms. Porter showed a second new figure (Figure 4.10) to be included in PR-57 that builds off of the species sensitivity distribution curve in Figure 4.9. She explained that Figure 4.10 displays sublethal impact chloride concentrations along the species sensitivity distribution curve that occurred below the Wisconsin chronic toxicity threshold. She added that the primary purpose of the figure is to show that many sublethal impacts occur at concentrations below 395 mg/l, including some changes in the size, growth, reproduction, and populations of various organisms. Ms. Porter noted that these sublethal effects at lower chloride concentrations indicate that the chronic toxicity thresholds in place are not currently protective enough for organisms and aquatic ecosystems.

Ms. Herrick briefly reviewed the chloride impacts to infrastructure. These impacts were mainly due to metal corrosion as well as concrete and asphalt deterioration. Chlorides can also cause corrosion in pipes, leading to the leaching of lead and copper. Ms. Herrick noted that the benefits of chlorides to winter maintenance of roads and agricultural fertilizing were also discussed in the chapter.

Ms. Porter completed the chapter discussion with the impacts of chlorides to humans. She first briefly explained that chloride salts provide several benefits to humans, citing reduced risk of winter traffic accidents, slip and fall prevention, water softeners, and crop fertilizers as examples. Ms. Porter then added that several negative effects of chloride on humans have also been reported. She explained that some human health effects are directly linked to chloride salts through increased sodium, while others are more indirectly related through chemical reactions caused by chloride. She then provided examples of health impacts such as effects on blood pressure, hypertension, and cardiovascular health, conditions caused by the release of toxic heavy metals from water sources and drinking water infrastructure, and respiratory effects caused by deicing salt particles contributing to diminished air quality.

Ms. Porter then discussed how chloride salts and sodium can also cause damage to agricultural crops, harming plants directly, contaminating agricultural soils, and reducing overall crop yields. She also explained that chloride salts can have notable aesthetic impacts on terrestrial environments. She provided an example of damage to highly visible roadside plants and described how salt can cause visible damage to buildings and infrastructure. Ms. Porter then discussed the recreational impacts of chloride. She explained that the damage caused to aquatic ecosystems by chloride in the environment can also diminish fisheries and impact outdoor recreation activities such as fishing. Finally, she mentioned that walking pets on sidewalks or streets when salt is present can also result in injury to dog and cat paws.

No questions or comments were provided from the TAC on Chapter 4.

REVIEW OF SEWRPC PLANNING REPORT NO. 57 CHAPTER 5, *CHLORIDE STANDARDS AND GUIDELINES*

Mr. Poinsatte introduced Chapter 5 of the report, which presents the groundwater and surface water quality standards for chloride as well as the ecological impact thresholds used to evaluate waterbodies. This Chapter transitions between the impacts discussed in Chapter 4 and the presentation of chloride trends and conditions in groundwater, streams, and lakes presented in Chapter 6.

Wisconsin has a preventive action limit for chloride in groundwater at 125 mg/l and an enforcement limit of 250 mg/l. These standards are based on water aesthetics, as 250 mg/l is the concentration at which water begins to taste salty. As discussed in Chapter 6, there are areas in southeastern Wisconsin where shallow groundwaters are exceeding both of these standards. Although this Study focused on chloride, sodium concentrations are commonly associated with chloride concentrations due to the application of sodium chloride to the environment for deicing practices. High sodium concentrations can be a health risk, with the USEPA recommending that sodium concentrations should not exceed 20 mg/l for individuals with salt-restricted diets.

Mr. Poinsatte then presented the chronic, acute, and general chloride toxicity criterion for Wisconsin, Illinois, Michigan, Minnesota, and Canada. Of these entities, Wisconsin has the highest chronic toxicity criterion at 395 mg/l while Canada has the lowest at 120 mg/l. The Wisconsin chronic toxicity criterion exceeds many of the ecological impact thresholds discussed in Chapter 4, which are also presented in this Chapter at 10 mg/l (historical background), 35 mg/l (conservative lower impact), 120 mg/l (Canadian chronic toxicity), 230 mg/l (USEPA chronic toxicity), 395 mg/l (Wisconsin chronic toxicity), 757 mg/l (Wisconsin acute toxicity), and 1,400 mg/l (extreme impact). Many of the Region's waterbodies are already exceeding these impact thresholds but are not exceeding a chronic or acute standard and so are not designated as impaired. This Chapter argues that Wisconsin standards should be updated to better reflect recent research and be more protective of ecological impacts.

At the end of the Chapter presentation, Ms. Nenn asked Mr. Poinsatte if the Commission would be recommending more protective chronic and acute standards in this Report. Mr. Poinsatte replied that these standards are not presented in this Chapter but may be addressed in the recommendations Chapter of PR-57. No additional comments or questions about Chapter 5 were provided by the TAC.

REVIEW OF SEWRPC PLANNING REPORT NO. 57 CHAPTER 6, *CHLORIDE CONDITIONS IN SOUTHEASTERN WISCONSIN*

Mr. Owens introduced Chapter 6 of the Planning Report which evaluates historical and existing chloride conditions in the surface water and groundwater of southeastern Wisconsin. He stated that the analyses synthesized decades of chloride and specific conductance data going back to the 1960s. He noted that the Chapter summarizes the extensive technical data and analyses presented in *SEWRPC Technical Reports Nos. 61, 63, and 64*.

Mr. Owens then briefly summarized Section 6.2 "Chloride Impact Study Monitoring Effort," which describes the monitoring program initiated by SEWRPC staff to address significant gaps in existing water quality data, particularly during the critical winter months when chloride contributions are highest. He stated the ultimate goal of the monitoring effort was to establish a high-resolution baseline of current chloride conditions and to use the data collected to build regression models to estimate stream chloride concentrations using specific conductance measurements. He described the selection and design of the monitoring network, the continuous and discrete stream monitoring conducted at the 41 selected stream sites, the quarterly monitoring of six chosen lakes, and the quality control and data management efforts that were implemented.

Mr. Poinsatte presented an overview of Section 6.3, which is the evaluation of the monitoring data collected during the Study. This Section contains a brief overview of the chloride – specific conductance regression analysis, an evaluation of the chloride conditions at each of the 41 stream monitoring sites, a comparison of these conditions against the ecological impact thresholds presented in Chapter 5, a characterization of stream chloride response to weather patterns and larger influencing factors like land use, and a very brief summary of monitored lake data.

Mr. Poinsatte briefly discussed the chloride – specific conductance piecewise regression and presented a table showing the final piecewise regression equations. The development of these regressions, which is described in *SEWRPC Technical Report No. 64* and summarized in Section 6.3, enabled the Commission to estimate stream chloride concentrations from the specific conductance measurements collected at five minute intervals during the Study monitoring period.

Mr. Poinsatte then presented Figure 6.5 in Section 6.3, which illustrates the percent of measurements that exceed each impact threshold for each of the 41 stream monitoring sites. This figure is only included in PR-57 and was not presented in *SEWRPC Technical Report No. 63*. In describing the figure, Mr. Poinsatte explained that the more urban sites nearly always exceeded the historical background and lower impact thresholds and even exceeded the extreme impact thresholds, while the more rural sites rarely or never exceeded the higher thresholds.

This discussion was followed by a presentation of Figure 6.6, which shows the estimated chloride concentration for a two-day period at Site 12 Lincoln Creek during which the chloride concentrations rose from approximately 40 to 4,000 mg/l. This figure was presented to illustrate an example of the response to weather events that were able to be captured by the Study, as well as the rapid response exhibited in stream chloride concentrations following weather events.

Finally, Mr. Poinsatte presented parts of Figure 6.7 showing scatterplots between the percent of urban and road and parking lot land uses within each stream site's watershed against the mean chloride concentration for that monitoring site. Both the urban land use and the road and parking lot land use scatterplots have significant positive linear correlations, indicating that as these land uses increase within a watershed, so does the average chloride concentration.

Mr. Owens then moved the discussion to Section 6.4 "Chloride Conditions in Study Area Streams," which summarizes analyses that are detailed in *SEWRPC Technical Report No. 63*. He explained that the Section aims to assess the extent of chloride pollution and determine if stream conditions are improving, worsening, or stable. Mr. Owens walked through the Section's core questions, providing examples and results detailing:

- Methods used to evaluate streams and historical trends.
- General chloride conditions and how they have changed over time.
- Seasonal fluctuations in stream chloride levels.
- The relationship between land use and stream conditions.
- Recent conditions and trends within major watersheds.

Mr. Slawski continued with a summary of Section 6.5 for chloride conditions in the study area lakes. Similar to the stream Section 6.4 summarized by Mr. Owens, Commission staff pulled all available chloride data for lakes within the study area. He discussed Figure 6.20, which shows the annual average chloride concentrations among study area lakes compared to biological thresholds from 1960-2022. This figure demonstrates that all lakes emanate from less than 10 mg/l chloride concentration via direct samples or by extrapolation of each individual lake trend. This figure also shows chloride trends for 51 inland lakes and features three lakes that represent low, moderate, and high chloride concentration lake groups. Mr. Slawski noted that these lake groups not only varied in their chloride concentrations, but also in rate of rise and their contributing land use. In addition, compared to the full period of record, the most recent (2013–2022) time period contains the highest maximum and mean chloride concentrations in lakes over the entire time series. Although none of the lakes exceeded chronic or acute Wisconsin chloride standards, 91 percent of monitored lakes exceed natural background concentrations of >10 mg/l, and 77 percent of monitored lakes exceed chloride concentrations of >35 mg/l known to harm aquatic ecosystems.

Mr. Slawski commented that similar to the chloride concentrations in streams, percent urban land use and percent roads and parking lots, at both the watershed scale and 1000-ft from the shoreline, were the only predictive variables for inland lake chloride concentrations. He discussed Figure 6.25, which shows that lakes containing watersheds with the highest percent urban lands and/or percent roads and parking lots contained the highest levels of chloride concentrations. He noted that in general, the most contaminated lakes (exceeding the 120 mg/l chloride concentration threshold) were associated with greater than 40 percent urban land use and/or 7.5 percent roads and parking lots, which may serve as viable predictors of the low versus high mean chloride lakes for potential chloride contamination, sampling, or intervention.

Mr. Slawski concluded that although Lake Michigan is not technically within the study area, the Lake is adjacent to the eastern boundary of the study area and is impacted by chloride pollution generated within the study area. He indicated that data was compiled from several nearshore and offshore sampling sites to build a dataset representative of chloride concentrations for Lake Michigan. Figure 6.26 presents all the chloride data collected at these sampling sites between 1962 and 2024. Mr. Slawski noted that while overall the Lake chloride levels are low, the mid-lake levels have been rising at a fairly consistent rate of about 0.1 mg/l/yr since the 1960s.

Mr. Poinsatte presented the beginning of Section 6.6, which addresses chloride in shallow groundwater and municipal drinking water supply wells. This Section contains a brief overview of the data compilation efforts for chloride in shallow groundwater, evaluation of shallow groundwater chloride conditions and comparison against standards, an analysis of long-term chloride trends in shallow groundwater, limitations of the shallow groundwater dataset, and the municipal drinking water supply analysis.

In total, the Commission compiled nearly 74,000 shallow groundwater chloride observations across the study area, with shallow groundwater defined as less than 300 feet below the surface. These observations were addressed at three levels: individual observations, by well, and by Public Land Survey System (PLSS) Sections, which is the finest spatial resolution possible with much of the groundwater data, as precise well locations are obscured. Mr. Poinsatte presented a table indicating the number and percent of observations, wells, and PLSS Sections that exceed the natural background concentration (20 mg/l), preventive action limit (125 mg/l), and enforcement standard (250 mg/l).

Mr. Poinsatte then presented a map indicating the percent of statistically significant increasing chloride concentration wells in each PLSS Section within the Region for which data was sufficient for that long-term trend analysis. Approximately 46 percent of wells with sufficient data have significantly increasing chloride concentrations. Mr. Poinsatte also acknowledged that the shallow groundwater data is limited due to missing well information, such as depth and precise location, the few number of samples in most wells, and the lack of data in areas without private wells.

Ms. Herrick completed the discussion of Section 6.6, noting that the best long term groundwater datasets were found for the municipal drinking water wells in the Region. Of the six municipalities with good long term datasets documented in *SEWRPC Technical Report No. 63*, all indicated rising and high chloride concentrations for their shallow wells (<300 ft deep). Municipal mid-depth wells (300-700 ft deep) were showing smaller rises over time for chloride levels. Deep wells (>700 ft deep) indicated consistently low chloride levels (less than about 30 mg/l) and minimal to no rise in chloride concentrations over time.

No comments or questions about Chapter 6 were provided by the TAC.

COMMITTEE APPROVAL

Ms. Herrick asked the TAC for a motion to approve the first six chapters of PR-57. Mr. Sprangers moved for approval and Ms. Nenn seconded the motion. The motion was approved unanimously.

NEXT STEPS FOR THE PLAN

Ms. Herrick stated that comments will be taken on the draft PR-57 Chapters 1-6 text reviewed during this TAC meeting until July 17, 2026. She added that comments can be submitted to her directly via email (lherrick@sewrpc.org).

Ms. Herrick reviewed the next steps for the Study. She stated that the next TAC meeting will be in October 2026 and consist of a review of remaining draft chapters of SEWRPC Planning Report No. 57. She indicated that the meeting agendas, presentations, and summary notes along with completed reports and preliminary drafts are posted on the SEWRPC project website at www.sewrpc.org/chloride-study.

ADJOURNMENT

There being no further business, the meeting was adjourned by unanimous consent at 11:33 a.m.

Respectfully submitted,

Laura Herrick
Recording Secretary

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6/25/26, 6/30/26

Exhibit A

Southeastern Wisconsin Regional Planning Commission

Notice of Meeting and Agenda

TECHNICAL ADVISORY COMMITTEE FOR

A CHLORIDE IMPACT STUDY FOR THE SOUTHEASTERN WISCONSIN REGION

DATE: Wednesday, June 24, 2026

TIME: 10:00 am to 11:30 am

TEAMS LINK

Join: https://teams.microsoft.com/meet/216124562095210?p=9iPG2QyNZp7wOqk0ds
Meeting ID: 216 124 562 095 210
Passcode: B4Za7LG7

AGENDA:

1. Roll call
2. Review of summary notes from the April 8, 2026, TAC meeting
3. Summary of the first half of **SEWRPC Planning Report No. 57, A Chloride Impact Study for Southeastern Wisconsin**
    a. Chapter 1 – Introduction and Background
    b. Chapter 2 – Description of the Study Area
    c. Chapter 3 – Sources of Chloride to the Environment
    d. Chapter 4 – Impacts of Chloride in the Environment
    e. Chapter 5 – Chloride Standards and Guidelines
    f. Chapter 6 – Chloride Conditions in SE WI
4. Committee Approval
5. Next Steps
6. Adjourn

Laura K. Herrick
Chief Environmental Engineer