SUMMARY NOTES OF THE JUNE 23, 2020 MEETING OF THE OAK CREEK WATERSHED RESTORATION PLAN ADVISORY GROUP

INTRODUCTION

Because of the recent COVID-19 safety protocols, the June 23, 2020 meeting of the Oak Creek Watershed Restoration Plan Advisory Group was held virtually via GoToMeeting. The meeting was called to order at 9:05 a.m. by Laura Herrick, Chief Environmental Engineer, Southeastern Wisconsin Regional Planning Commission (SEWRPC). Attendance was noted by SEWRPC staff via the GoToMeeting participant listing.

In attendance at the meeting were the following individuals:

Advisory Group Members Present

Robert Anderson ..... Professor of Biological Sciences, Wisconsin Lutheran College
Philip Beiermeister ..... Environmental Engineer, City of Oak Creek
Benjamin Benninghoff ..... Natural Resources Basin Supervisor, Wisconsin Department of Natural Resources
Greg Failey ..... Environmental Manager, Milwaukee Mitchell International Airport
Jacob Fincher ..... Executive Director, Southeastern Wisconsin Watersheds Trusts, Inc.
Craig Helker ..... Water Resources Management Specialist, Wisconsin Department of Natural Resources
Laura Herrick, Secretary ..... Chief Environmental Engineer, SEWRPC
Steve Keith ..... Principal Environmental Engineer, Milwaukee County Environmental Services
Julie Kinzelman ..... Director, Laboratory Division & Research Scientist, City of Racine Public Health Department
Janette Marsh ..... Nonpoint Source Technical Program Manager, U.S. Environmental Protection Agency, Region 5
Glen Morrow ..... City Engineer/Director of Public Works, City of Franklin
Cheryl Nenn ..... Riverkeeper, Milwaukee Riverkeeper
Brian Russart ..... Natural Areas Coordinator, Milwaukee County Parks
Tom Slawski ..... Chief Biologist, SEWRPC
Kyle Vandercar ..... City Engineer, City of South Milwaukee
Jennifer Wright ..... Watercourse Section Manager, Engineering Department Milwaukee Metropolitan Sewerage District

Guests and Staff Present

Megan Beauchaine ..... Planner, SEWRPC
Joseph Boxhorn ..... Principal Planner, SEWRPC
Tom Chapman ..... Senior Project Manager II, Milwaukee Metropolitan Sewerage District
Mark Mittag ..... Senior Project Manager, Milwaukee Metropolitan Sewerage District
Aaron Owens ..... Senior Planner, SEWRPC
Katlyn Pluer ..... Restoration Ecologist, Milwaukee County Parks
Justin Poinsatte ..... Senior Specialist Biologist, SEWRPC
Kristin Schoenecker ..... Watershed Coordination Manager, Southeastern Wisconsin Watersheds Trust, Inc.
Joy Wolf ..... Professor of Biogeography, University of Wisconsin-Parkside

Ms. Herrick welcomed all attendees to the fourth meeting of the Advisory Group for the Oak Creek Watershed Restoration Plan (Plan). Ms. Herrick began the meeting with a brief explanation of features

of the GoToMeeting platform and how to use the chat feature to submit questions or comments on the material being presented. Ms. Herrick briefly reviewed the agenda for the meeting, which included review of the summary notes from the October 2019 Advisory Group meeting, review of the remaining portion of draft Plan Chapter 4, discussion related to stakeholder outreach for input on the remaining portion of Chapter 4, and discussion of the next steps for the Plan development.

No edits or changes were offered by the attendees for the summary notes from the October 30, 2019 Advisory Group meeting.

REVIEW OF THE SECOND HALF OF DRAFT PLAN CHAPTER 4, "INVENTORY FINDINGS"

Ms. Herrick reviewed the draft text formatting for the remaining portion of draft Chapter 4 "Inventory Findings", noting that headings shown in green text indicate material that was presented at the previous Advisory Group meeting which reviewed the first portion of draft Chapter 4. She added that some previously reviewed text is also included for context for new information being discussed today.

Ms. Herrick asked Mr. Owens to begin review of Chapter 4. Mr. Owens reviewed Section 4.1 "Introduction." There were no comments or questions on this section from attendees.

Mr. Owens next discussed Section 4.2 "Physical Characteristics of Streams within the Oak Creek Watershed," beginning with the subsection titled "Drainage Network." No questions or comments were offered for that subsection.

Mr. Owens reviewed the subsection "Slope and Sinuosity." No comments or questions were offered on this subsection.

Mr. Owens reviewed the subsection, "Channel Modifications, Channelization, and Disconnected Floodplain." Mr. Keith asked for a description of the primary causes that disconnect streams from their floodplains. Mr. Owens replied that the main cause of floodplain disconnection in many of the streams in the Oak Creek watershed is stream modifications such as channel widening, deepening, and straightening. He added that in some instances the spoils from widening and deepening the channels were placed on top of the channel banks, further disconnecting the streams from their functional floodplains.

Mr. Owens reviewed the subsections "Streambank Erosion" and "Stormwater and Other Outfalls". He noted that these subsections present results of instream surveys conducted by Commission staff. During review of the subsection "Stormwater and Other Outfalls", Mr. Keith mentioned that InterFluve conducted a study that examined streambed and bank stability and streambank erosion for Milwaukee County in 2004. Mr. Owens noted that the Chapter references the InterFluve study and uses it as a baseline, but for this evaluation the 2004 study was not used specifically for comparing streambank erosion. Mr. Boxhorn also noted that SEWRPC Technical Report No. 39, "Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds" used the streambank erosion data from the InterFluve study for its assessment of erosion.

Mr. Owens continued to review section 4.2, including subsections discussing stream reach dynamics; instream habitat types; stream widths and water depths; streambed materials; bankfull conditions; riparian buffers; an assessment of stream crossings, dams, and drop structures; woody debris jams; and instream habitat conditions. During review of the fish passage assessments conducted for stream crossings, dams, and drop structures, Ms. Nenn asked if SEWRPC staff assessed other effects that the Mill Pond Dam might

have on the watershed. Ms. Herrick answered that there will be more discussion regarding the Mill Pond impacts on stream temperature in the Chapter 4 water quality section to be discussed today. She added that descriptions of the dam and the Mill Pond's history and characteristics were reviewed in the first half of Chapter 4 that was presented at the previous Advisory Group meeting. There were no additional questions or comments related to topics included in Section 4.2 "Physical Characteristics of Streams within the Oak Creek Watershed."

Ms. Herrick reviewed material added to Section 4.3, "Water Quantity Conditions." She reminded the attendees that green text indicates Plan material that was reviewed during the previous Advisory Group meeting. She indicated that the material added to Section 4.3 was related to flooding. She noted that two maps and a table were added to this section, which include Map 4.15 "Riverine Flooding Road Overtopping Locations," Map 4.16 "Areas of Flood Concern from Stakeholder Input," and Table 4.14 "Areas of Flood Concern from Stakeholder Input." Ms. Herrick requested that Advisory Group members and stakeholders provide Commission staff with any additional information that they may have regarding flooding concerns in the Oak Creek watershed. Mr. Keith commented that two culverts in the City of Cudahy have been modified to alleviate flooding at Site Number 6 on Map 4.16. He noted that he would provide that information to Ms. Herrick via email. There were no further comments or questions on Section 4.3 from the Advisory Group.

[Secretary's Note: After the meeting, Ms. Herrick added a note to Table 4.14 stating two new 48-inch diameter metal culverts were installed under the railroad to the west of the industrial park to remove stormwater flooding concerns for Site Number 6.]

At Ms. Herrick's request, Mr. Boxhorn reviewed the water temperature subsection of Section 4.4 "Surface Water Quality." He noted that a major conclusion of this subsection is that the pond is acting to warm downstream water. Mr. Boxhorn noted that continuous temperature records from some of the minor tributaries in the watershed suggest that they may be perennial streams. He explained that this is a preliminary finding and that more data are needed to confirm it. No questions or comments were offered regarding water temperature data analyzed in the Oak Creek watershed.

Mr. Boxhorn reviewed the subsection of Section 4.4 entitled "Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)." He gave a brief description of PFAS and noted that PFAS contamination has been found at two sites at Milwaukee Mitchell International Airport that are located within the Oak Creek watershed. Mr. Keith said that Milwaukee County recently received approval to do a site investigation of PFAS that were found near the airport grounds. Mr. Boxhorn asked Mr. Keith to provide Commission staff with material related to the planned study and Mr. Keith indicated that he would provide that information. No other comments or questions were offered regarding PFAS.

[Secretary's Note: Mr. Keith provided Commission staff with text regarding the PFAS investigations. The following paragraph was added after the last paragraph on page 75:

"Evidence of PFAS contamination of surface water has also been found at MMIA where the use of AFFF was historically required by the Federal Aviation Administration for emergency response and fire suppression. MMIA was required by the WDNR to conduct an initial survey of PFAS compounds in surface waters at MMIA a part of the WPDES permit process. This initial characterization was conducted by MMIA and the USGS. The findings of this investigation indicate

the presence of PFAS compounds at all sampling points and surface water discharge locations. As a result of this initial survey, the WDNR issued a Responsible Party Letter to MMIA and the two military installations requiring a site investigation to define the nature, degree, and extent of PFAS compound at MMIA. Milwaukee County submitted a workplan for this site investigation to the WDNR which was subsequently approved on June 12, 2020. The site investigation focuses on property owned by MMIA and will be completed in 2020."]

Mr. Boxhorn reviewed the subsection on toxicity conditions. He noted that the subsection included discussion of toxic substances in surface water, groundwater, sediment, and organism tissue. No questions or comments from the Advisory Group were presented related to this material.

At Ms. Herrick's request, Mr. Poinsatte reviewed the subsection "Biological Conditions." He noted that the fish communities at some sites in the mainstem of Oak Creek have improved due, in part, to the reemergence of certain fish species such as Iowa darter. He commented that no improvement has been observed in the North Branch of Oak Creek or the Mitchell Field Drainage Ditch. No questions or comments were provided regarding the discussion of the condition of the fisheries in the Oak Creek watershed.

Mr. Poinsatte reviewed the subsection on fish passage barriers such as dams and stream crossings, highlighting the barrier at the railroad crossing on the North Branch Oak Creek near the confluence of Oak Creek. No questions or comments were offered regarding the subsection.

Mr. Poinsatte described the United States Geological Survey (USGS) "FishVis" decision support tool. He explained that this tool displays model projections of changes in stream temperature, streamflow, and fish species occurrence through the end of the 21st century. He noted that the model correctly predicts the current distribution of brook stickleback, green sunfish, and white suckers within the Oak Creek watershed. Mr. Poinsatte added that the FishVis model predicts that stream temperatures and flow will increase over time throughout the watershed and that these changes would increase the suitability of the watershed as habitat for common carp, an invasive species, while decreasing the suitability of the watershed as habitat for native species such as brook stickleback and white sucker.

Mr. Poinsatte reviewed the subsection on macroinvertebrates. No questions or comments were offered by the Advisory Group regarding the USGS FishVis model results or macroinvertebrates analysis.

Mr. Poinsatte next reviewed the subsections on mussels, other wildlife, and invasive species observed in the Oak Creek watershed. Ms. Herrick noted that the wrong data had been inserted into Map 4.37 in the draft text and that this error will be corrected. No questions or comments were offered regarding these biological subsections.

At Ms. Herrick's request, Mr. Boxhorn reviewed the subsection "Water Use Objectives and Impairment Designation." He noted that the water use objectives are described in a portion of Chapter 4 that was previously reviewed by the Advisory Group. Mr. Boxhorn commented that certain stream reaches are not achieving their water use objectives. No questions or comments were offered on this subsection.

Mr. Boxhorn next reviewed the "Summary and Synthesis" subsection of Section 4.4. He noted that the summary portion lists several major conclusions of the analysis of water quality conditions in the Oak Creek watershed. There were no questions or comments related to the "Summary and Synthesis" subsection.

Mr. Boxhorn reviewed Section 4.5 "Sources of Water Pollution." No questions or comments were offered on this section.

At Ms. Herrick's request, Mr. Owens reviewed Section 4.6, "Current Management Practices." No questions or comments were offered on this section.

Mr. Owens reviewed Section 4.7 "Recreational Access and Use." He noted that this section includes data from recreational use field surveys conducted by Commission staff. No questions or comments were given on this section by the Advisory Group.

Ms. Herrick reviewed Section 4.8, "Archeological Inventory." She stated that this information came from the Wisconsin Historic Preservation Database under the condition that the sites not be mapped in the plan due to preservation concerns. Ms. Marsh indicated that archeological sites will need to be considered when recommending BMP projects because they may limit implementation. Ms. Herrick agreed and indicated the locations of sensitive archeological sites would be avoided when recommending projects. No other questions or comments were offered regarding this section.

UPCOMING STAKEHOLDER MEETING

Ms. Herrick explained that there will not be an in-person stakeholder meeting to present the material reviewed here due to the recent protocols and guidelines related to COVID-19. She noted that a summary presentation of the second portion of Chapter 4 was posted on the project page of the SEWRPC website along with the draft Chapter 4 text. She added that the availability of this presentation and request for public comments was announced through the SEWRPC Facebook and Twitter accounts and South Milwaukee Mayor Erik Brook's blog. Ms. Herrick encouraged all Advisory Group members to promote the draft text and summary presentation on their websites as appropriate. Ms. Marsh asked whether SEWRPC staff was planning to hold a virtual public meeting. Ms. Herrick responded that the presentation posted on the SEWRPC website was meant to be accessible to the most individuals and SEWRPC staff would not be hosting a virtual stakeholder meeting.

NEXT STEPS FOR PLAN DEVELOPMENT

Ms. Herrick discussed the next steps for plan development. She indicated that SEWRPC staff will work to complete the final two Chapters related to "goals" and "recommendations" with the intent to present new material for the Mill Pond and Dam at the next Advisory Group meeting, tentatively set for late fall 2020. No further questions or comments were offered by the Advisory Group for the next steps for the Plan.

ADJOURNMENT

There being no further business, the meeting was adjourned by unanimous consent at 10:56 a.m.

Respectfully submitted,

Megan Beauchaine
Recording Secretary

ELECTRONIC COMMENTS RECEIVED PRIOR TO OR FOLLOWING THE JUNE 23, 2020 MEETING

Comments for the second half of Chapter 4 from Mr. Anderson received via email on 6/18/20.

Mr. Anderson noted that in the "Fisheries Assemblages and Biotic Indices" section, the text incorrectly characterizes the pollution tolerance of blacknose dace.

[Secretary's Note: Commission staff reviewed the 1992 and 2006 papers by John Lyons of WDNR staff that describe the calculation of fish indices of biotic integrity and found that eastern blacknose dace are considered a tolerant species. The text and tables in Chapter 4 have been revised to reflect this.]

Mr. Anderson suggested that Section 4.1 include discussion of the many ways that a healthy stream can have a very positive effect on surrounding terrestrial ecosystems.

[Secretary's Note: A subsection titled "Beneficial Functions that Healthy Streams Provide for Terrestrial Landscapes" was added to Section 4.1.]

Comments for the second half of Chapter 4 from Ms. Kinzelman received via email on 6/16/20.

Ms. Kinzelman provided several editorial comments for the second half of Chapter 4. These were addressed as appropriate. She noted that Table M.2 of Appendix M is missing a description for tabulated information that appears in red text (she assumed it may designate something to be noted). Additionally, Ms. Kinzelman noted that Table M.1 on page 4 is missing the word "a" between "share" and "common" in the Note.

[Secretary's Note: SEWRPC staff note that the red text in Table M.2 was an error which has been corrected. In addition, the note in Table M.1 was corrected by adding the letter "a" in between the words "share" and "common".]

Ms. Kinzelman asked that the references to the City of Racine Health Department in Appendix O be changed to read City of Racine Public Health Department.

[Secretary's Note: The references in Appendix O were changed.]

Ms. Kinzelman commented that the note to Outfall 118 listed in Table O.1 on page 13 should read "Major Outfall."

[Secretary's Note: The note to Outfall 118 in Table O.1 has been edited to read "Major Outfall" in the last column.]

Ms. Kinzelman asked if "Appendix Pesticide" can be changed to "Appendix P" or "Q" to stay in-line with the other referenced Appendices.

[Secretary's Note: The appendices to the report will be renumbered during final production.]

Comments for the second half of Chapter 4 from Mr. Matt Magruder received via email on 6/10/20.

Mr. Magruder asked whether Chapter 6 will include recommendations for riparian features or enhancements as a component of fisheries habitat. Mr. Magruder asked whether the recommendations will discuss the use of channel modifications to address water quality impairments. SEWRPC staff response is that Chapter 6 will include recommendations that address both issues.

In reference to the discussion of water temperature on page 63, Mr. Magruder asked what the clarity is and if that could be a contributing factor.

[Secretary's Note: As a response to Mr. Magruder's question regarding clarity, SEWRPC staff noted that the following text will be added to page 63:

"Though highly variable, turbidity in the mainstem of Oak Creek at the two stations bracketing the confluence with the Mitchell Field Drainage Ditch is higher than average for the mainstem (medians of about 12.0 - 12.6 ntu versus 10.6 ntu). Absorption of heat by this turbid water may also be contributing to the in-channel warming between Drexel Avenue and Pennsylvania Avenue. Note that turbidity in the Mitchell Field Drainage Ditch is lower, with a median of about 9.0 ntu at Rawson Avenue."]

Mr. Magruder asked whether data from the MMSD Corridor Study Site Data was included in the analysis of macroinvertebrates. SEWRPC staff confirmed that these data were included in the analyses.

In reference to the Summary and Synthesis section, Mr. Magruder commented that waterfowl are a major source of pollution to the Mill Pond and to detention ponds in the watershed.

[Secretary's Note: Commission staff contacted Mr. Magruder through email and asked whether there were available data to support the idea that waterfowl are a major source of pollution to the Mill Pond and other detention ponds in the watershed. In his response, Mr. Magruder indicated that his comment was based on anecdotal observations.]

Comments for the second half of Chapter 4 from Mr. Keith received via email on 7/6/20.

Mr. Keith asked whether the report will include a table of acronyms.

[Secretary's Note: An appendix will be included in the final report documenting all acronyms referenced in the report.]

Mr. Keith asked whether the references to chloride concentrations and trends on pages 120 and 124 were based on the studies conducted by Steve Corsi and his colleagues at the U.S. Geological Survey or the more recent study by SEWRPC?

[Secretary's Note: The discussion regarding chloride was based on analyses of available data in the portion of the chapter that was previously reviewed by the Advisory Group.

Those analyses cited the work of the USGS. The chloride and conductance data that is part of SEWRPC's Regional Chloride Impact Study is still being collected and is not part of this analysis.]

Mr. Keith asked whether consideration was given to evaluating the flashiness of Oak Creek. He cited the Richards-Baker flashiness index as one metric that has been used recently to measure vulnerability to erosion from rain events.

[Secretary's Note: SEWRPC staff attempted to evaluate the flashiness of Oak Creek by calculating "Richards-Baker" flashiness indices as described in "A New Flashiness Index: Characteristics and Applications to Midwestern Rivers and Streams," Baker et al., 2004. It should be noted that the flashiness index described in the paper above does not set specific index values to indicate what should or should not be considered a "flashy" stream. Rather, the index can be used to evaluate changes in flashiness in a stream over time or compare the flashiness of multiple streams of similar drainage areas. Data from the USGS continuous flow gage for Oak Creek at 15th Avenue was used to calculate the Richards-Baker flashiness index for the each of the years 1964 through 2019. Staff were unable to detect significant trends in flashiness at that site over time. It should be noted that because this index is based upon discharge data, it can only be calculated at one location in the watershed. This site is likely heavily impacted by stormwater outfalls immediately upstream from the USGS gaging station. Due to these considerations and concerns over the data violating the assumptions of the statistical model used to examine the index for trends, Commission staff decided to not present these analyses in Chapter 4.]

Mr. Keith suggested adding discussion about recent efforts made by local governments to ban the use of coal tar sealants.

[Secretary's Note: Text was added to the discussion of PAHs that four municipalities in the watershed have recently banned the use of coal tar sealants within their jurisdictions. A recommendation will be added to Chapter 6 for the remaining municipalities in the watershed to also ban their use.]

Mr. Keith suggested adding discussion to the section on current management practices for efforts by some municipalities to review their codes and ordinances to remove restrictions on installation of green infrastructure.

[Secretary's Note: These efforts will be discussed in Chapter 6 as part of the recommendations on green infrastructure.]