

MEMORANDUM

Comfort Lake-Forest Lake Watershed District

To: Board of Managers
From: Mike Kinney
Subject: 2019 Draft Water Monitoring Report

Date: May 5, 2020

Background/Discussion

The draft 2019 Monitoring Report was distributed to the board in the March 26th regular meeting packet. Emmons & Olivier Resources (EOR) presented the findings at the April 9th regular meeting. The final report was brought back to April 23rd regular meeting where managers had some additional comments and requested revisions.

The following revisions were made by EOR since the April 23rd version (revisions are indicated by underline or ~~cross-out~~):

- Introduction
 - Added a figure illustrating the 2019 monthly precipitation compared to the historic 30-year average with corresponding text.
 - Added information from the State Climatology Office presented at MAWD 2019 regarding statewide trends in climate.
 - Added information about 2019 that may have impacted water quality (storm events, overall weather patterns, BMP construction, in-lake dynamics).
 - Added TSS loads to Figure 2 and changed monitoring site labels to numbers and added a number key.
- Lakes
 - Introductory information regarding why lakes are monitored by the District is included from page 41 of the 2018 Water Monitoring Report.
- Lakes: What lake data was collected in 2019?
 - Key for acronyms used in table added as a footnote.
- Streams
 - Introductory information regarding why streams are monitored by the District, including state standards, is included from pages 10-11 of the 2018 Water Monitoring Report.
- Streams: What is the purpose of collecting stream data?
 - Background information about each stream water quality parameter was added.
- Streams: What stream data was collected in 2019?
 - A section was added summarizing the differences between what stream data can tell us at lake inlets versus lake outlets.
 - The report text was revised to include a list of the stream water chemistry parameters analyzed.
 - A table was added summarizing the flow monitoring period and monitoring technique for each site.
- Streams: 2019 Stream Water Quality Summary
 - A summary of the stream chemistry results was added for each stream site as reported in Appendix B.
 - Conclusions from the 2019 stream loads added to the text.
 - Days of flow and number of grab samples used to calculate the FLUX loads included in the summary table.

MEMORANDUM

Comfort Lake-Forest Lake Watershed District

- FLUX predictions for Little Comfort Inlet added back to the table but noted to have very high uncertainty and to use with caution.
- Appendix B – 2019 Individual Stream Site Summaries
 - All stream water chemistry results are now presented for each stream site below the TP/TSS/flow individual stream summary figures. Water quality standards for applicable parameters are included at the top of each table.
- Appendix D – 2019 Stream Water Quality Data by Sample Date
 - Will be removed.
- Appendix E – Stream Monitoring Metadata
 - 2019 Stream Rating Curves from WCD included.
 - Historical monitoring technique text (written by WCD for the District) moved to ‘Historic Stream Monitoring Methods’ section with the following revisions by EOR:
 - Clarified the impacts of composite versus grab sampling to the end of the first paragraph
 - Added a graphic illustrating the rising and falling limb of a storm event
 - Removed some erroneous conclusions regarding monitoring techniques impacts on stream loads
- Appendix F – Historic Stream Annual Monitoring Data
 - A table was added of the historical stream monitoring techniques by site before ‘Stream Flow’.

The final draft report can be found on the District website at www.clflwd.org/data.php under the “District-Wide Information” dropdown tab. Below is a direct link to the PDF.

Link: https://www.clflwd.org/documents/2019WaterMonitoringReport_20200506_revised.pdf