



Board of Managers Meeting Agenda

Wednesday – January 8th, 2025 - 3:00 p.m.

Wellstone Center – Room 212, Anna Heilmaier Meeting Room
179 Robie Street, Saint Paul, MN 55107

Note: Please park in the parking garage attached to the Wellstone Center

1. Call Meeting to Order
 - 1.1 Identification of Voting Board Members
 - 1.2 Approval of Agenda* (Additions/Corrections/Deletions) Action
 - 1.3 Opportunity for Public Comment (Limited to 2 minutes per person)
2. Election of Officers (Chair, Vice-Chair, Secretary/Treasurer) * Action
3. Approve December 11th, 2024 Meeting Minutes - Chair * Action
4. Approve January 8th, 2025 Financial Summary & Invoice Payment - Treasurer* Action
5. Designation of 2025 Financial Depository (Gateway Bank) and Official Newspaper(s) (Star Tribune & St. Paul Legal Ledger) - SWCD Action
6. Discussion on Lake Augusta Next Steps and LMRWMO Role - SWCD * ** Information / Action
7. Grant Tracking Database - Barr ** Information
8. Member City Updates Information
9. Adjourn - Next Meeting held on February 12th, 2025 - West St. Paul, Location TBD

* Materials included in full packet

** Materials available separately on website

<https://LMRWMO.org/about-us/meeting-information/>

LMRWMO Board of Managers Typical Officer Elections Process

(Modified from Robert's Rules of Order)

General

It can be helpful for elections to follow the nomination for each individual office. For example, nominate and elect the Chair, then nominate and elect the Vice-Chair, then nominate and elect the Secretary/Treasurer. The main advantage here is that it allows members to consider the election results of one office before proceeding to the election of another office.

Nominations for an Office

Nominations can be made in a few ways:

- From the floor – any member can call out a person to be nominated
- By the chair – the chair can nominate any member or themselves for a position
- A member can nominate themselves

Nominees don't have to leave the room during nominations, when a vote is taken, or when the vote is counted. If there are multiple nominees and the Chair would like to use a roll call, they can ask the multiple nominees to step out of the room to keep the vote anonymous.

A person can serve in more than one office if elected.

Motions to close nominations are unnecessary. The Chair waits until no one wishes to make further nominations, then the chair declares nominations closed after asking 3 times for more nominations.

Election for an Office Options to Utilize at Board Chair Discretion

If only one candidate, they can easily be elected via a voice vote:

- Board Chair: "John Smith has been nominated for the office of Vice-Chair, do we have a motion for John Smith to serve as the LMRWMO Vice-Chair for 2018?" Motion is then seconded and passed.

If multiple nominations, can do a voice vote:

- Ask members to raise their hand for Candidate A, count hands. Then ask to raise hands for Candidate B, count hands. This can tend to favor the candidate listed first.

If multiple nominations, can do a roll call vote:

- Each member announces their vote when their name is called. The secretary repeats the vote after recording it, to ensure accuracy. Nominees could remain in room or be asked to leave room.

If multiple nominations, can do a ballot vote:

- Ask nominees to leave room and then ask members to raise their hand for Candidate A, count hands. Then ask to raise hands for Candidate B, count hands. Call nominees back into room. This could be a more fair way to vote with multiple candidates.



Board of Managers Meeting Minutes

Wednesday - December 11th, 2024 - 3:00 p.m.
Wellstone Center, Saint Paul

Managers and Alternates in Attendance:

Sharon Lencowski (Chair), Inver Grove Heights
Leslie Pilgrim, Mendota Heights
Analiese Miller, West St. Paul
Daniel Anderson, South St. Paul
Dan Halvorsen, Sunfish Lake

Steve Gebauer (Sec/Tres) , Mendota Heights
Tom Sutton, Lilydale
Michael Randle, South St. Paul
Brian Jastram, Saint Paul

Advisors and Others in Attendance:

Ryan Ruzek, Mendota Heights
Krista Spreiter, Mendota Heights
Brady Zeug, Saint Paul
Chris English, Inver Grove Heights
Greg Williams, Barr Engineering
Kitty Haight, Mendota Heights
Francie Cuthbert, UofM
Laura Zanmiller, Dakota County SWCD

Lucas Richie, Mendota Heights
Pat Murphy, Saint Paul
Kelsey Gelhar, South St. Paul
Greg Wilson, Barr Engineering
Jan Mortland, Mendota Heights
Kenneth Dodge, Mendota Heights
Greg Genz, Friends of Pool 2
Joe Barten, Dakota County SWCD

1. Call Meeting to Order

1.1 Public Comment / Introductions

Audience members may address the Board regarding items not on the agenda.

1.2 Approval of Agenda* (Additions/Corrections/Deletions)

Motion by Sutton to approve the agenda, second by Gebauer; motion passed.

2. Approve November 13th, 2024 Meeting Minutes

Motion by Gebauer to approve the previous meeting minutes, second by Miller; motion passed.

3. Approve December 11th, 2024 Financial Summary & Invoices

Ruzek provided a summary of the finances.

Motion by Sutton to approve the financial summary, second by Gebauer; motion passed.

4. Approve 2025 Meeting Schedule

Motion by Sutton to approve the 2025 meeting schedule as shown in the packet, second by Jastram; motion passed.

5. Salt Week Chloride Education Funding Request

Barten summarized the information in the packet related to funding for an educational display and supplies for a "Salt Week" chloride reduction effort at Dakota County Libraries within the LMRWMO. The Board requested that a Green Corps member present on the results of the effort to the LMRWMO and for results of the chloride test strips. If funding is to be requested in the future, the Board requested more input on audience and content related to chloride reduction.

Motion by Halvorsen to approve up to \$300 towards the Salt Week chloride reduction efforts as outlined in the packet materials, second by Sutton; motion passed.

6. Presentation on Cormorant Populations and Lake Augusta

Barten presented on the recent known history/background and photos on the cormorant population at Lake Augusta in Mendota Heights.

Francie Cuthbert, recently retired professor in the Fisheries, Wildlife, & Conservation Biology department at the University of Minnesota, presented on cormorants and their habits, habitat, migration patterns, population numbers, and management options. She noted that it is assumed that the birds at Lake Augusta are primarily migratory and not nesting. It is possible they are feeding during the day on the river and returning, or new groups of birds are regularly coming and going at the lake during migration. She discussed options, considerations, and unknown or unintended consequences with hazing/harassing and culling the bird population. She discussed options for further study of the birds via counts, studies, and tagging and tracking, which could be done by a consultant, or perhaps through the University of Minnesota as a research project.

7. Member City Updates: City Advisors and Members provided updates on relevant projects in their Cities.

8. Adjournment and Next Meeting

The meeting was adjourned at 5:00 with the next Board meeting scheduled for January 8th, 2025 at The Wellstone Center in Saint Paul.



FINANCIAL SUMMARY
 December 12, 2024 to January 8, 2025

Beginning Balance - Gateway Bank Checking Account: **\$18,763.26**

Deposit +

Payments

5021	1/8/2025 Barr Engineering	-	\$2,775.30
5022	1/8/2025 wsb	-	\$552.00
5023	1/8/2025 Metropolitan Council Environmental Services	-	\$2,660.00
5024	1/8/2025 Metro Watershed Partners	-	\$1,000.00

Checking Ending Balance **\$11,775.96**

Beginning Balance - Gateway Bank Savings Account:

\$147,489.81

Dep 12/31/2024 December 2024 Interest + \$326.70

-

Savings Ending Balance **\$147,816.51**

Available Balance at Gateway Bank **\$159,592.47**

LMRWMO 2024-2025 Budget & Financial Summary															
		2023 Carryover			2024 Monthly Revenue										
Revenue	Budget	Dec 14, 2023 - Jan 10 2024	Jan 11 - Feb 14 2024	Feb 15 - Mar 13 2024	Mar 14 - April 10 2024	April 11 - May 8 2024	May 9 - July 10 2024	July 11 - Aug 14 2024	Aug 15 - Oct 9 2024	Oct 10 - Nov 13 2024	Nov 14 - Dec 11 2024	Dec 12, 2024 - Jan 8 2025	2024 Total	Variance	Percent Received
Dues from Members	\$133,676.00		\$42,950.84	\$90,723.74									\$133,674.58	\$1.42	100%
Interest	\$2,000.00	\$364.62	\$1.02	\$365.97	\$189.01	\$186.60	\$192.36	\$1,000.16	\$969.03	\$436.09	\$341.40	\$326.70	\$4,372.96	(\$2,372.96)	219%
LMCIT Rebate	\$250.00												\$0.00	\$250.00	0%
Grant Revenue	\$117,200.00		\$30,000.00				\$70,192.78						\$100,192.78	\$17,007.22	85%
Subtotal Operating Revenue	\$135,926.00	\$364.62	\$72,951.86	\$91,089.71	\$189.01	\$186.60	\$70,385.14	\$1,000.16	\$969.03	\$436.09	\$341.40	\$326.70	\$238,240.32		
		2023 Carryover			2024 Monthly Expenses										
Expenses	Budget	Dec 14, 2023 - Jan 10 2024	Jan 11 - Feb 14 2024	Feb 15 - Mar 13 2024	Mar 14 - April 10 2024	April 11 - May 8 2024	May 9 - July 10 2024	July 11 - Aug 14 2024	Aug 15 - Oct 9 2024	Oct 10 - Nov 13 2024	Nov 14 - Dec 11 2024	Dec 12, 2024 - Jan 8 2025	2024 Total	Remaining Budget	Percent Expended
Engineering/Technical Assistance															
Technical Assistance	\$6,000.00	\$479.50		\$4,046.50			\$1,323.00	\$1,408.00	\$2,516.00	\$1,440.00	\$1,079.50	\$2,153.50	\$13,966.50	(\$7,966.50)	233%
Meetings	\$6,500.00	\$1,155.00		\$1,671.43			\$1,632.00	\$655.00	\$595.00		\$536.80	\$621.80	\$5,712.03	\$787.97	88%
Plan Implementation/Grant Applications	\$6,000.00					\$1,330.00		\$617.50		\$1,805.00			\$3,752.50	\$2,247.50	63%
Watershed Plan Amendment	\$0.00	\$1,369.50											\$0.00	\$0.00	
Project Study/Implementation															
Miss. River Direct Drainage - FY-21 WBIF Match	\$9,300.00									\$3,095.25		\$552.00	\$3,647.25	\$5,652.75	39%
Interstate Valley Creek Stabilization FY-24 CWF Match	\$10,000.00												\$0.00	\$10,000.00	0%
Priority Watershed Modeling - \$100,000 (FY-23 WBIF Match)	\$12,000.00												\$0.00	\$12,000.00	0%
Seidls Lake Improvements - \$356,000 (FY-22 CPL % Match)	\$2,500.00												\$0.00	\$2,500.00	0%
Landscaping for Clean Water Projects	\$13,600.00	\$750.00								\$6,110.00			\$6,110.00	\$7,490.00	45%
Monitoring															
Lake and Stream Water Monitoring (CAMP) and Reports	\$13,760.00	\$3,103.97				\$4,240.94		\$4,756.63		\$3,086.73		\$2,660.00	\$14,744.30	(\$984.30)	107%
Education															
WMO Biannual E-Newsletter	\$3,800.00					\$1,615.00		\$475.00					\$2,090.00	\$1,710.00	55%
Landscaping for Clean Water Classes	\$9,500.00							\$9,500.00					\$9,500.00	\$0.00	100%
MN Water Stewards Support	\$4,000.00	\$225.00				\$285.00		\$427.50					\$712.50	\$3,287.50	18%
Storm Drain Stenciling Program	\$3,000.00	\$180.00				\$190.00		\$2,434.96		\$291.07			\$2,916.03	\$83.97	97%
Engage Residents at Public Events / WMO Tabling	\$500.00							\$570.00					\$570.00	(\$70.00)	114%
General Education Requests	\$1,000.00	\$1,170.00				\$807.50							\$807.50	\$192.50	81%
Metro Watershed Partners Membership	\$1,000.00		\$1,000.00	\$231.00								\$1,000.00	\$2,231.00	(\$1,231.00)	223%
Website Maintenance and Updates	\$2,900.00					\$2,277.50		\$142.50		\$665.00			\$3,085.00	(\$185.00)	106%
Board Education	\$200.00	\$360.00											\$0.00	\$200.00	0%
Adopt A Drain Welcome Kits	\$1,500.00												\$0.00	\$1,500.00	0%
Administration															
General Administration	\$32,000.00	\$7,925.00				\$10,595.00		\$6,700.00		\$4,467.50			\$21,762.50	\$10,237.50	68%
Hold Annual TAC Meeting	\$1,000.00												\$0.00	\$1,000.00	0%
Insurance	\$2,500.00							\$2,772.00					\$2,772.00	(\$272.00)	111%
Attorney and Audit	\$5,500.00	\$34.00			\$897.72	\$136.00	\$4,300.00						\$5,333.72	\$166.28	97%
Subtotal Operating Expenses	\$148,060.00	\$16,751.97	\$1,000.00	\$5,948.93	\$897.72	\$21,476.94	\$7,255.00	\$30,459.09	\$3,111.00	\$20,960.55	\$1,616.30	\$6,987.30	\$99,712.83	\$48,347.17	67%
Grant Expenses	\$175,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,442.50	\$61,741.53	\$27,487.00	\$30,989.25	\$14,328.00	\$0.00	\$0.00	\$146,988.28	\$28,011.72	84%
Overall Fund Balance		\$168,417.88	\$240,369.74	\$325,510.52	\$324,801.81	\$291,068.97	\$292,457.58	\$235,511.65	\$202,380.43	\$167,527.97	\$166,253.07	\$159,592.47			
Total Grant Balance		\$38,158.59	\$68,158.59	\$86,652.50	\$86,652.50	\$74,210.00	\$82,661.25	\$55,174.25	\$51,672.00	\$40,846.25	\$40,846.25	\$40,846.25			
Operating Fund Balance		\$130,259.29	\$172,211.15	\$238,858.02	\$238,149.31	\$216,858.97	\$209,796.33	\$180,337.40	\$150,708.43	\$126,681.72	\$125,406.82	\$118,746.22			
Unencumbered Operating Fund Balance		\$115,259.29	\$152,211.15	\$218,858.02	\$218,149.31	\$196,858.97	\$189,796.33	\$160,337.40	\$130,708.43	\$106,681.72	\$105,406.82	\$98,746.22			

2024 Budget Notes:

- \$20,000 set aside for 2033 Watershed Plan Update, \$5,000 additional annually encumbered.
 - \$1,500 Added to Budget at 1-8-23 Meeting, carryover from 2023
 - Overage from FY-19 WBIF grant of \$18,493.91 (\$13,000 additional water monitoring Lake Augusta, \$5,493.91 in staff time) officially shown as absorbed into WMO general fund, to zero out/close out grant, on March 13, 2024.
 - Additional time authorized to Barr to develop Accelerated Implementation Grant Application at 7-10-24 Board Meeting.
 - Additional budget authorized by Board to fund welcome kits for participants.
- General: Budget is an estimate and will vary depending on changing priorities and grant project progress.

Balances Explained:

Overall Fund Balance	Balance of all bank accounts
Total Grant Balance	Grant funds in-hand
Operating Fund Balance	WMO funds without grants
Unencumbered Operating Fund Balance	WMO funds not already dedicated

LMRWMO 2024-2025 Grant Budget & Financial Summary																	
	Budget	Aggregate Prior to Jan 12, 2022	Jan 13, 2022 - Jan 11, 2023	Jan 12 2023 - Jan 10 2024	Jan 11 - Feb 14 2024	Feb 15 - Mar 13 2024	Mar 14 - April 10 2024	April 11 - May 8 2024	May 9 - July 10 2024	July 11 - Aug 14 2024	Aug 15 - Oct 9 2024	Oct 10 - Nov 13 2024	Nov 14 - Dec 11 2024	Dec 12, 2024 - Jan 8 2025	Total	Variance	Percent Received/ Expended
BWSR - FY 2021 Watershed Based Implementation Funding (Miss. River Direct Drainage Study)																	
Revenue																	
BWSR FY-2021 WBIF Payment	\$93,042.00	\$46,521.00													\$46,521.00	\$46,521.00	50%
WBIF Matching Funds	\$9,304.00														\$0.00	\$9,304.00	0%
Total Revenue	\$102,346.00	\$46,521.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46,521.00	\$55,825.00	45%
Expenses																	
Grant Administration	\$10,042.00			\$156.00				\$3,248.50		\$176.00					\$3,580.50	\$6,461.50	36%
Erosion & Direct Drainage Study	\$71,000.00								\$6,666.75	\$21,867.00	\$30,989.25	\$11,477.00			\$71,000.00	\$0.00	100%
Erosion & Direct Drainage Study Match (WMO)	\$9,304.00														\$0.00	\$9,304.00	0%
Project Development	\$12,000.00			\$2,733.50				\$4,539.00		\$528.00		\$957.00			\$8,757.50	\$3,242.50	73%
Total Expenses	\$102,346.00	\$0.00	\$0.00	\$2,889.50	\$0.00	\$0.00	\$0.00	\$7,787.50	\$6,666.75	\$22,571.00	\$30,989.25	\$12,434.00	\$0.00	\$0.00	\$83,338.00	\$19,008.00	81%
FY-21 WBIF Balance		\$46,521.00	\$46,521.00	\$43,631.50	\$43,631.50	\$43,631.50	\$43,631.50	\$35,844.00	\$29,177.25	\$6,606.25	-\$24,383.00	-\$36,817.00	-\$36,817.00	-\$36,817.00	-\$36,817.00		
BWSR - FY 2023 Watershed Based Implementation Funding (Priority Watershed Project ID & Model - Thompson, Rogers, Seids)																	
Revenue																	
BWSR FY-2021 WBIF Payment	\$118,385.00			\$59,193.00											\$59,193.00	\$59,193.00	50%
WBIF Matching Funds	\$12,000.00														\$0.00	\$12,000.00	0%
Total Revenue	\$130,385.00	\$0.00	\$0.00	\$59,193.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$59,193.00	\$71,192.00	45%
Expenses																	
Grant Administration	\$8,000.00							\$769.50							\$769.50	\$7,230.50	10%
Priority Watershed Project ID & Model	\$100,385.00														\$0.00	\$100,385.00	0%
Priority Watershed Project ID & Model Match (WMO)	\$10,000.00														\$0.00	\$10,000.00	0%
Project Development	\$12,000.00							\$534.00							\$534.00	\$11,466.00	4%
Total Expenses	\$130,385.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,303.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,303.50	\$129,081.50	1%
FY-21 WBIF Balance		\$0.00	\$0.00	\$59,193.00	\$59,193.00	\$59,193.00	\$59,193.00	\$57,889.50	\$57,889.50	\$57,889.50	\$57,889.50	\$57,889.50	\$57,889.50	\$57,889.50	\$57,889.50		
MN DNR - Conservation Partners Legacy Grant (Seidis Lake Shoreline Restoration)																	
Revenue																	
Grant Reimbursement Payments	\$382,000.00								\$70,192.78						\$70,192.78	\$311,807.22	18%
Matching funds	\$75,000.00														\$0.00	\$75,000.00	0%
Total Revenue	\$457,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$70,192.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$70,192.78	\$386,807.22	15%
Expenses																	
Grant Administration/Project Mgmt	\$26,000.00			\$15,118.00				\$3,351.50		\$926.00		\$1,894.00			\$21,289.50	\$4,710.50	82%
Construction	\$356,000.00								\$23,496.03	\$3,990.00					\$27,486.03	\$328,513.97	8%
Engineering - Construction Docs	\$37,500.00								\$31,578.75						\$31,578.75	\$5,921.25	84%
Engineering - Const. Mgmt, Permits, Bids	\$37,500.00																
Total Expenses	\$457,000.00	\$0.00	\$0.00	\$15,118.00	\$0.00	\$0.00	\$0.00	\$3,351.50	\$55,074.78	\$4,916.00	\$0.00	\$1,894.00	\$0.00	\$0.00	\$80,354.28	\$339,145.72	18%
Seidis Lake Shoreline Balance		\$0.00	\$0.00	-\$15,118.00	-\$15,118.00	-\$15,118.00	-\$15,118.00	-\$18,469.50	-\$3,351.50	-\$8,267.50	-\$8,267.50	-\$10,161.50	-\$10,161.50	-\$10,161.50	-\$10,161.50		
	Budget	Aggregate Prior to Jan 12, 2022	Jan 13, 2022 - Jan 11, 2023	Jan 12 2023 - Jan 10 2024	Jan 11 - Feb 14 2024	Feb 15 - Mar 13 2024	Mar 14 - April 10 2024	April 11 - May 8 2024	May 9 - July 10 2024	July 11 - Aug 14 2024	Aug 15 - Oct 9 2024	Oct 10 - Nov 13 2024	Nov 14 - Dec 11 2024	Dec 12, 2024 - Jan 8 2025	Total	Variance	Percent Received/ Expended
TOTAL GRANT FUNDS RECEIVED	\$763,656.00	\$118,856.00	\$0.00	\$156,528.00	\$30,000.00	\$18,493.91	\$0.00	\$0.00	\$70,192.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$394,070.69	\$428,778.31	52%
PASS THROUGH MATCH RECEIVED	\$130,000.00	\$0.00	\$0.00	\$25,000.00	\$30,000.00	\$18,493.91	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$73,493.91	\$70,450.09	57%
LMRWMO MATCH PROVIDED	\$13,944.00	\$0.00	\$3,040.00	\$546.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,586.00	\$428,778.31	26%
GRANT EXPENSES (MINUS WMO MATCH)	\$762,712.00	\$5,985.63	\$158,488.68	\$72,751.10	\$0.00	\$0.00	\$0.00	\$12,442.50	\$61,741.53	\$27,487.00	\$30,989.25	\$14,328.00	\$0.00	\$0.00	\$387,799.69	\$374,912.31	51%
PASS THROUGH MATCH EXPENSES	\$130,000.00	\$0.00	\$58,040.00	\$546.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31,578.75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$90,164.75	\$39,835.25	69%
NET FUND BALANCE (MINUS WMO MATCH)		\$112,870.37	-\$45,618.31	\$38,158.59	\$68,158.59	\$86,652.50	\$86,652.50	\$74,210.00	\$82,661.25	\$55,174.25	\$51,672.00	\$40,846.25	\$40,846.25	\$40,846.25	\$9,857.00		



MEMORANDUM

To: LMRWMO Board of Managers
From: Joe Barten, Dakota County SWCD
Subject: LMRWMO Role in Lake Augusta Project Implementation
Date: January 3, 2025

SUMMARY & BACKGROUND

Lake Augusta is identified as a Priority 1-b waterbody and is located within an urbanized watershed in Mendota Heights, is landlocked with no natural outlet, and has very poor water quality. Water levels have steadily increased over the last 40 years from what the DNR determined as the normal water level in the early 1980's and water quality has continued to decline. A Watershed Restoration and Protection Strategies study was completed on Lake Augusta and four other LMRWMO lakes in 2011. This was a high-level study of the 5 lakes and recommended an alum treatment to improve the water quality of Lake Augusta. In 2017, the LMRWMO and partners implemented an alum treatment. The alum treatment measurably lowered total phosphorus levels in the lake, but the impact was not significant enough to improve overall lake water quality.

The LMRWMO determined a feasibility study was needed to identify implementation activities to improve the water quality of Lake Augusta and investigate the effectiveness of a lake outlet in improving water quality. During initial scope creation of the feasibility study, Tom Kovarik, a Lake Augusta resident, informed LMRWMO staff of the potential impact of large populations of double crested cormorants on lake water quality. This population impact appears to have been steadily increasing in the last 20-25 years (based on anecdotal information) and was not considered in the 2011 lake study and subsequent alum treatment. Additionally, the high-water levels, increasing development, and the potential contributions of sediment and corresponding phosphorus from the eroding shoreline surrounding the lake, was not considered in past studies.

The LMRWMO engaged Barr Engineering to complete the Lake Augusta Water Quality Improvement and Outlet Feasibility Study in 2022, and the attached final study was completed in late 2023. The report includes relevant background information on Lake Augusta water quality, including high water level issues, and large double crested cormorant populations contributing feces and related phosphorus (potentially 40-70% of the total phosphorus load in any given year) to the lake.

The Lake is surrounded by privately owned land with multiple residential landowners on the west side and Resurrection Cemetery as the primary property owner on the east side of the lake. There is no public access to the lake.

RECENT RELEVANT DISCUSSION

At the November 2024 LMRWMO Board meeting, Greg Wilson from Barr Engineering provided a presentation to the LMRWMO Board on the feasibility study outcomes as well as a FAQ document to address resident concerns voiced since the study was finalized.

At the December 2024 LMRWMO Board meeting, Francie Cuthbert, a cormorant expert and recently retired professor in the Fisheries, Wildlife, & Conservation Biology department at the UofM, presented on cormorants and their habits, habitat, migration patterns, population numbers, and management options.

POTENTIAL NEXT STEPS

Below are potential implementation action items or projects as outlined in the Lake Augusta feasibility study, along with related considerations. The below potential projects could be considered (or not considered) for implementation in the current LMRWMO 10-year implementation cycle from 2025 to 2033 or beyond. They could be implemented by the LMRWMO, by the City, or by residents of Lake Augusta. They could be considered for implementation reliant on the ability to receive grant funding or assemble partnerships with State agencies or research agencies, such as the UofM. Potential actions can also be considered in the larger context of the LMRWMO, with its many other waterbodies, and their associated implementation items that also require LMRWMO resources.

Any actions should be measured carefully in relation to LMRWMO's organizational capacity, the LMRMO's role in managing bird populations, use of public funds already expended or to be expended, long term costs, benefit, and responsibility of any implementation items, and the potential to create unintended consequences to nearby waterbodies that are outside of our control when dealing with a natural population of birds.

The concept of adaptive management and long time-scales should also be considered. Adaptive management implies re-evaluation of next steps based on new information, often after evaluation of the effectiveness of an improvement strategy or project. Most implementation items will not have immediate effects and impacts should be measured on long time-scales, such as 5-20 years, to determine long term effectiveness and improvements on water quality. Long term and consistent water quality monitoring helps establish trends in water quality over time and, at a minimum, could be continued on Lake Augusta.

1. Implementation of a lake outlet.

- Grant funding for an outlet is unlikely to be obtained. A similar outlet project at Seidls Lake was funded with City obtained bonding funds.
- The desired future lake level would need careful consideration and input from residents.
- The exact benefit to lake water quality of a lake outlet on its own is unknown. There is an assumed flushing effect that an outlet provides long term, however the study assumed the outlet to be tied to reductions in cormorant populations, which may not be the case.

2. Implementation of two upstream stormwater BMPs to improve water quality of stormwater entering Lake Augusta.

- Grant funding is possible to pursue for the two stormwater BMPs.
- Private property permission would be needed for both BMPs to be possible to implement.
- The two BMPs provide future pollutant reductions, but do not address cormorants, the estimated larger contributor of phosphorus to the lake. Therefore, the efficacy of the stormwater BMPs to significantly improve water quality is unknown.

3. Removal of trees surrounding Lake Augusta to deter cormorants.
 - Grant funding is unlikely to be obtained for tree removal with private property surrounding lake.
 - The impact on the cormorant population due to dead tree removal around the lake is unknown, may be ineffective, and/or may have unintended consequences.

4. Further study of cormorants with the intent to either better understand, track, or manage the population.
 - Further study of the non-nesting cormorant population may provide useful information for management, such as hazing, harassing, or culling, however it may have more limited use if management is not intended.
 - Management of bird populations by a watershed management organization is uncommon, if not unprecedented, to improve water quality of a lake.

BOARD ACTION REQUESTED

The LMRWMO Board is requested to consider, discuss, and provide direction on the role of the LMRWMO in implementing various projects identified in the Lake Augusta Outlet and Water Quality Feasibility Study to improve water quality at Lake Augusta, including the potential to lead or support a lake outlet project, remove trees surrounding the lake, study or control the cormorant population, implement stormwater BMPs, take no further action at Lake Augusta, or implement other actions not outlined here.

ATTACHED

- Summary of Cormorant Research by LMRWMO Administrator *(attached to this document)*
- Lake Augusta FAQ Document created in December 2024 *(attached to this document)*

- 2023 Lake Augusta Outlet and Water Quality Feasibility Study *(posted separately on website)*
- Barr Engineering presentation slides on Lake Augusta Study *(posted separately on website)*
- Francie Cuthbert presentation slides on cormorants *(posted separately on website)*
- Cormorant Factsheet from USDA *(posted separately on website)*

Double Crested Cormorant Management Research Summary

The following is summarized from research as well as meetings, phone calls, and emails with the following cormorant experts:

Professor Francie Cuthbert, PH. D. – Retired UofM Professor: Extensive research on cormorants

Gary Noerenberg - MN State Director USDA, APHIS, Wildlife Services: Provides study and control of cormorant populations

Liz Harper - MN DNR Assistant Regional Manager, Region 3, Ecological and Water Resources: Handles DNR Role in Cormorants and Permits for control

Sue Hagberg - Wild Goose Chase: Private Bird Control company

General:

- Cormorants are migratory birds and the large fall population appears to peak during migratory timeframes.
- Cormorant management can include hazing, harassing, or killing of birds.
- MN DNR leads control of cormorants on a handful of MN lakes, but is not interested in assisting in this case and typically is involved in management when cormorants impact valuable fisheries (lake prized highly for fishing), such as Leach Lake.
- If further study was done, would want to know resident number of birds, nesting pairs. Want to know about other birds in area, contributing as well. Existing nests attract more birds. Surveys over time are best could train residents. Want multiple visits to assess population, April, summer, fall. Try to get maximum # of cormorants on lake, what are they doing?
- If further study was done, could be good idea to engage with consultant, have them train residents in on citizen scientist data collection.
- Knowing the numbers of the population is important, want to know seasonally, want to know if nesting. Using drones to get estimates of populations, could be very helpful. Could be done in tandem with an investigative study.
- Would want to know intent of further study if planning to do so.
- Are possibly non-breeding birds, can be very many, and are young birds, may be non-breeding birds at Augusta. Roosting sites can turn into nesting sites.
- Francie: Is known that cormorants contribute nutrients to aquatic and terrestrial systems and it can be a large amount depending on their numbers and how long they stay. Given that Augusta Lake appears to be a closed system, cormorant fecal material may be very important.
- Gary N. focuses more on control, not on studies of birds. Expertise in hazing, harassing, killing birds. Not able to present to WMO Board.
- Francie: I am familiar with Barr's work in several places in the Twin Cities and am impressed with their insight and quality of work as related to environmental and social issues. Your plan for a larger scale report on the lake is important. The situation is clearly complex and I am guessing that it involves more than cormorants. In other words, if you could remove or exclude cormorants, I don't think the water quality issue would be eliminated.
- Cormorants are Federally protected, not state protected.

Double Crested Cormorant Management Research Summary

Hazing and Harassing

- Hazing and harassing can be used to deter cormorants from residing on a waterbody.
- This can include noise making, inflatables, wacky wavy inflatable, propane tank noise makers, predators, need to mix it up. Haven't used lasers on cormorants in past and may not be effective if not staying on bird. Permits may not be required for hazing or harassing from USFWS.
- Hazing and harassing methods are not proven to be effective as cormorant management is very challenging, is a dynamic species and no two situations are the same.
- Birds imprint on a location, have imprinted on Augusta, can imprint for 20 years.
- Birds may be staying at Augusta for only 1 day or 2, and then a new group is coming to the lake.
- The nearby Airport is a concern and an unknown with its proximity to Lake Augusta. Permits from airport may be required for any activity with bird population and potential for bird strikes.
- Hazing or harassing may just shift them to other trees or other lakes nearby. Are adaptable, if we remove the trees, may move to ground nests.
- Any acts of interfering with population carries a high risk of pioneering, moving population to another lake nearby.
- One recommendation or action that has been taken to discourage cormorants from roosting in dead trees is to cut them down in the winter. This, however, can back-fire. For example, several locations where this has been done have left fallen trees along the shoreline and cormorants are just as happy perching there as well. Also, cutting trees sometimes opens up new habitat for other species to roost or nest (such as pelicans) and this can increase problems.

Killing/Culling

- Firearms and one day has big impact. Do pick up birds. Do at peak of nesting, shoot off nests, before eggs hatch. 1st or 2nd week of may.
- Culling is pointless to do once and requires indefinite management or population will rebound.
- Shooting may not be as effective if dealing with a migratory population.
- Shooting can scare birds to a nearby lake and they may take up residence there.
- Leech Lake, have removed 30k cormorants. S MN Lakes, some private landowners have hired the USDA. \$5-8k to shoot and remove birds by USDA
- Culling is usually the nesting population, via shooting, most often. Can be \$5-7k annually. Usually done in spring, can take 5-7 years to make population wane. Must continue to maintain population control.

Permits for Cormorant Management

- There are very specific criteria under which US Fish and Wildlife Services allows management of cormorants, since they are protected under the Migratory Bird Act.
- The DNR would not have a role in management or permits at Lake Augusta, as they have on other MN Lakes, because there is not a fisheries concern.
- DNR Fisheries has only undertaken cormorant control when they have been able to meet requirements set by US Fish and Wildlife Service that document population-level impacts on important recreational fisheries by cormorants. DNR staff not aware of how USFWS would view a proposal to control cormorants due to water quality concerns.
- US Fish and Wildlife Service would be starting point for management permits of cormorants.

LAKE AUGUSTA FAQ

Supplemental Questions and Answers for the Lake Augusta Water Quality Improvement & Outlet Feasibility Study

Why does Lake Augusta need an outlet? Lake Augusta is a closed-loop system that, given watershed and climate changes, has been accumulating increasingly higher amounts of inflow and associated phosphorus loading. Since Lake Augusta does not have a natural surface water outlet, the higher inflows have led to higher lake levels that have killed riparian vegetation, and the higher phosphorus loading has led to increased recycling of nutrients that cannot be assimilated by the lake, making it more difficult to meet State water quality standards. We do not believe water quality will improve without a lake outlet, although a lake outlet alone may not drastically improve water quality.

What specific benefits will be derived from a pumped outlet for Lake Augusta? The pumped outlet system proposed for Lake Augusta would provide enough flexibility to manage excess inflow and maintain lake levels that will sustain healthy lakeshore vegetation and habitat. A portion of the existing phosphorus budget will be discharged downstream to water bodies that will not be adversely affected by the phosphorus load. The added lake flushing will mitigate nutrient recycling.

Does the feasibility study recommend a specific elevation for the permanent lake level? No, it does not. The feasibility study recommended constructing the outlet structure and pump so that the water level can be drawn down to a lower level to facilitate shoreline tree removal, initially, and then subsequently managed at a higher level if tree removal can be completed. The intake for lake outlet structure may be constructed at a lower elevation to allow for maximum flexibility in managing lake levels and adapting to future conditions. It is unclear how funding for tree removal and shoreline vegetation management could be obtained. The land surrounding the lake is very steep and nearly entirely privately owned. State grant funds for vegetation management are only available for use on publicly owned lands.

Will the pumped outlet affect lake turnover, and exacerbate the impacts of internal phosphorus load?

No. Based on the limited data available from early spring and/or late fall, the lake does already (mostly) turnover. Additionally, the feasibility study did not suggest dropping the Lake Augusta depth should affect lake turnover. Since the proposed lake outlet is not expected to change the way that the lake turnover occurs each year, its operation will not exacerbate the impacts of internal phosphorus loading.

What mechanisms were assumed to result in reduced numbers of cormorants in the feasibility study?

The feasibility study primarily assumed that removal of dead trees and permanent changes to shoreline vegetation would result in fewer roosting and nesting sites that would ultimately discourage cormorants from residing at the lake, both permanently and seasonally. However, it is possible that the more we learn about the Augusta cormorant population, more extensive efforts aside from only tree removal (such as hazing, harassing, and/or culling) may be required to lower bird populations to a level that could meet the lake water quality goals. It is expected that lowering the lake level and removing the dead trees would increase the distance from feces deposition to the lake that may also provide benefits, but the benefits reported in the feasibility study were based solely on reducing the overall cormorant population on Lake Augusta.

Do the feasibility study assumptions about the amount of nutrients from cormorant feces entering the lake vary based on how the lake level is managed in the future? No, the modeling in the feasibility study assumes that all of the nutrients from cormorant feces will reach the lake. The resulting water quality benefit from reducing the phosphorus load from cormorant feces may be delayed due to remaining elevated nutrient levels in the shoreline soils, but it is expected that some of the nutrients will remain on the shoreline and be taken up by the plants. Additionally, the longer the distance between the feces and the water with a vegetated buffer, and the more robust the vegetation in the vegetated buffer around the lake, create more potential for slowing the feces entering the lake and the opportunity for uptake of nutrients by plants.