Ramsey-Washington Metro Watershed District

May 2018 Board Packet

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Agenda

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RAMSEY-WASHINGTON
METRO WATERSHED DISTRICT

Regular Board Meeting Agenda

Wednesday, May 2, 2018
6:30 P.M.
District Office Board Room
2665 Noel Drive, Little Canada, MN

1. Call to Order – 6:30 PM
2. **Approval of Agenda**
3. **Consent Agenda**
    A. Approval of Minutes April 4, 2018
4. **Treasurer's Report and Bill List**
5. Visitor Presentations
6. Permit Program
    A. Applications
        i. **18-08 Shoreview 2018 Street Improvement Plan, Shoreview**
        ii. **18-09 Keller Golf Course Practice Range Improvements, Maplewood**
        iii. **18-03 WCA Nature Path Extension, Woodbury**
    B. Enforcement Action Report
7. Stewardship Grant Program
    A. Applications
        i. **18-06 CS Margaret Street Project, rain gardens**
        ii. **18-07 CS Willowbrook Reserve, native habitat restoration**
        iii. **18-08 CS Wakefield Park Improvements, rain garden**
    B. Budget Status Update
8. Action Items
    A. Grass Lake and Snail Lake Optimization Study
    B. Review and Accept the 2017 District Annual Financial Audit
    C. Floodplain Modeling and Mapping Grant Agreement, Resolution 18-01

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9. Administrator's Report
    A. Meetings Attended
    B. Upcoming Meetings and Dates
    C. Washington County Meeting – May 21, 2018
    D. MAWD Summer Tour
10. Project and Program Status Reports
    A. Ongoing Project and Program Updates
        i. Beltline Resiliency Study
        ii. At Risk Subwatershed Feasibility Studies
        iii. Snail Lake and Grass Lake Study and Berm Raise Project
        iv. Snail, Grass and West Vadnais Lakes Outlet Permitting
        v. District Wide Atlas 14 Modeling
        vi. Wakefield Park/Frost Avenue Project
        vii. Targeted Retrofit Projects
        viii. Owasso Basin Improvements
        ix. Beltline/Battle Creek Tunnel
        x. CIP Maintenance/Repair 2018
        xi. Frost/Kennard Project
        xii. Willow Pond CMAC Project
        xiii. New Technology Report
        xiv. Natural Resources Program
        xv. Education Program
11. Informational Items
12. Report of Managers
13. **Adjourn**

Items in **bold signify that an action needs to be taken by the Board.*

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Consent Agenda

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Ramsey-Washington Metro Watershed District
Minutes of Regular Board Meeting
April 4, 2018

The Regular Meeting of April 4, 2018, was held at the District Office Board Room, 2665 Noel Drive, Little Canada, Minnesota, at 6:30 p.m.

PRESENT:
Marj Ebensteiner, President
Cliff Aichinger, Vice President (arrived at 6:36 p.m.)
Dianne Ward, Treasurer
Dr. Pam Skinner, Secretary
Lawrence Swope, Manager

ABSENT:

ALSO PRESENT:
Staff and Consultants:
Tina Carstens, District Administrator
Amanda Staple, Recording Secretary
Brad Lindaman, Barr Engineering
Simba Blood, Natural Resources Specialist
Evan Christensen, Barr Engineering
Paige Ahlborg, Project Manager
Tracey Galowitz, Attorney for District
Nicole Soderholm, Permit Inspector
Dave Vlasin, Water Quality Technician
Chris O'Brien, Communications Coordinator

Visitors:
Carol Stadler, Snail Lake Resident
Bruce Copley, Crestview Resident
Lauren Clavens, Kimley Horn
Amy Thomas, Snail Lake Resident
Brendan Elegert, Kimley Horn

1. CALL TO ORDER
The meeting was called to order by President Ebensteiner at 6:30 p.m.

2. APPROVAL OF AGENDA
Motion: Dianne Ward moved, Lawrence Swope seconded, to approve the agenda as presented. Motion carried unanimously. (Cliff Aichinger absent)

3. CONSENT AGENDA
A. Approval of Minutes from March 7, 2018
Tina Carstens noted that under Managers Present, the roles for Manager Skinner and Manager Ward should be reversed. She noted that under the Project and Program Status Report, the comments from Brad Lindaman should be moved from the CIP Maintenance/Repairs 2018 to the Beltline/Battle Creek Tunnel item.

Motion: Dianne Ward moved, Lawrence Swope seconded, to approve the consent agenda as amended. Motion carried unanimously. (Cliff Aichinger absent)

4. TREASURER'S REPORT AND BILL LIST

Motion: Dianne Ward moved, Dr. Pam Skinner seconded, to approve the April 4, 2018, bill list as submitted. Motion carried unanimously. (Cliff Aichinger absent)

5. VISITOR PRESENTATIONS

There were none.

6. PERMIT PROGRAM

A. Applications

Permit #18-06: Phalen Retail Development – St. Paul

Nicole Soderholm noted that the applicant is requesting to bank the additional credits for future use.

Motion: Dianne Ward moved, Lawrence Swope seconded, to approve Permit #18-06. Motion carried unanimously. (Cliff Aichinger absent)

Permit #18-07: Wakefield Park Improvements – Maplewood

Nicole Soderholm stated that this is a rehabilitation of buildings and trails. Tina Carstens noted that this is the first phase of the park project. She advised that the District is working with the City of Maplewood for larger improvements. She noted that there is a public open house meeting this week. President Ebensteiner asked if there is space for an urban garden. Tina noted that there are still ongoing discussions and advised that she could bring up that idea.

Manager Aichinger arrived.

Motion: Dr. Pam Skinner moved, Dianne Ward seconded, to approve Permit #18-07. Motion carried unanimously.

B. Monthly Enforcement Report

During March zero notices were sent.

7. STEWARDSHIP GRANT PROGRAM

A. Applications

Permit #18-04 CS: Vesterholt – Shoreline Restoration

Paige Ahlborg stated that this is a large shoreline restoration project and noted that the resident has already signed up with the District for maintenance. Manager Ward noted that perhaps the homeowner could advertise in their association newsletter to alert other homeowners to the project and advertise the District program.

Motion: Cliff Aichinger moved, Dianne Ward seconded, to approve Permit #18-04 CS. Motion carried unanimously.

Permit #18-05 CS: Lionsgate – Rain Garden and Native Habitat Restoration

Paige Ahlborg stated that this is a new school in Shoreview, explaining that the applicant is renovating an old industrial property and turning it into a charter school. She provided additional details on the rain garden and native plantings. President Ebensteiner asked if there is a chance for an urban garden. Paige replied that would not be applicable in this location because the area is all asphalt, exception for this space.

Motion: Dr. Pam Skinner moved, Lawrence Swope seconded, to approve Permit #18-05 CS. Motion carried unanimously.

B. Budget Status Update

No comments.

DRAFT

8. ACTION ITEMS

A. Change Order No. 6 – Beltline and Battle Creek Tunnel Repair Project

Brad Lindaman stated that the deadline had previously been extended to March 15. Since then through yesterday, the contract administration, the time that being in the tunnel that Barr and others have used, is at $15,600. He stated that there are still some items remaining for the next few days. He stated that if the change order is approved, the substantial completion date would then be changed to this Friday, April 6. He stated that there were additional quantities than included on the original bid form, noting that equates to extra work but does not require a change order. He stated that the contractor has as many people in the tunnel as they can safely have in order to get this work completed. He stated that the work began two years ago, and the contractor was aware of the scope of the job, noting that additional time was allotted last spring and summer as well. He stated that because of the work that has occurred in the past few weeks, he believes the date could be extended to the end of this week. He estimated that the cost would range about $20,000 by the end of the week.

Manager Skinner asked and received confirmation that the contractor could have had the additional workers before the past few weeks. She received confirmation that the additional costs incurred are for the Barr Engineering staff that must be on site and the equipment. She recognized that there were additional quantities which equated to additional work. Brad noted that the Board can accept the extension and not accept the liquidated damages. He stated that the contractor has done about 11 percent more than the bid document.

Manager Aichinger stated that because there was additional work, he would be okay with the two weeks that it required to finish the work. Dave Vlasin noted that the contractor was allowed to work an additional 1.5 months the previous spring and summer.

President Ebensteiner asked for legal opinion. Tracey Galowitz stated that it is the decision of the Board to allow for the overage in return for the additional work. She believed it to be reasonable. Tina Carstens also noted that staff believes it reasonable to approve the extension.

Motion: Dr. Pam Skinner moved, Cliff Aichinger seconded, to approve Change Order No. 6 for the Beltline and Battle Creek Tunnel Repair Project. Motion carried unanimously.

9. BOARD EDUCATION PRESENTATION: GROUNDWATER 101

Evan Christensen, Barr Engineering, stated that based on the input of the Board, he has developed presentations on specific requested topics. He noted that tonight he will focus on groundwater. He stated that most of the core twin cities area is covered by two deep water aquifers. He stated that in almost all cases, groundwater and surface water are connected. He provided information on local and regional flow systems and provided additional details on the water interaction between groundwater and surface water and the different categories.

Evan provided the applicable categories. He noted that there are multiple elements that impact the volume of a lake, rather than just the groundwater interaction. He confirmed that all the lakes in the District are categorized and provided a map which highlights the different water bodies and their category. He stated that along with that categorization report, there was also a vulnerability report included that identifies if a water body would be vulnerable to a change in the groundwater system. He provided a map identifying groundwater flow directions, noting that in the District groundwater tends to flow towards the Mississippi River. He stated that groundwater recharge can come from infiltration of precipitation or leakage from a lake or stream. He provided figures on groundwater recharge in the District throughout the past five years. He noted that the past five years have been wet and therefore the groundwater is higher overall throughout the District. He used the Grass Lake subwatershed as an example and provided groundwater recharge information from 1988 through 2016. He noted that the last five years have been very high groundwater recharge years, which results in high groundwater levels. He stated that a big storm water event can raise the groundwater for a small amount of time, but these high recharge years can raise the groundwater regionally which takes longer to dissipate. He stated that historically the groundwater

levels near Snail Lake are further away from the lake stage and explained that the potential is there for more water to leave the lake into the groundwater system. He stated that in wet years that potential is lost and there is not as much water leaving the lake. He provided details on the White Bear Lake lawsuit. He reviewed data on simulated effect of pumping for scenarios involving and regional reductions, irrigation, and individual permits. He reviewed potential impacts to the District because of the lawsuit. He provided information on per and polyfluoroalkyl substances (PFAS) and stated that every landfill contains those materials. He stated that PFAS were designed to resist degradation and travel more quickly through groundwater. He identified the locations of the 3M disposal sites and noted that although the sites are outside of the District, the groundwater contamination is going to move through the District towards the Mississippi River. He reviewed details of the 3M lawsuit and stated that it may be helpful for a representative from the District to be a part of the discussions for the groundwater treatment that will result from the lawsuit.

Tina Carstens noted that the District staff has begun discussions. Chris O'Brien stated that there is fairly wide discretion as to how the funds will be used. He stated that the funds should first be used for drinking water related projects, but after that, projects that the District does would be eligible. He stated that the projects do not need to be geared to remove the PFAS, but rather stop runoff and improve wildlife habitat. Evan stated that there is one group that will focus on drinking water and how to ensure that will be safe. He stated that there are things that the District could do and should be aware of. He agreed that it could be a pool of money for the District to draw from.

Manager Skinner noted that every person has accumulated PFAS in their body. Evan agreed that every person in the world has PFAS in their blood, noting that even polar bears in the arctic has PFAS. Manager Skinner referenced the plant harvesting projects that the District is doing and stated that it would be helpful to know if that harvested material contains PFAS. She asked if there is a way to get rid of PFAS. Evan stated that there has been a lot of investigation, but thus far there is nothing natural that removes PFAS. He stated that there are ways to treat drinking water to remove PFAS.

Manager Skinner asked what else was in the barrels that leaked from the 3M barrels. She stated that she has asked at the 3M level and government level and has been told that they do not have to release that information. She noted that she is concerned with the unknown elements.

President Ebensteiner commented that this was a very well-done presentation and thanked Evan for sharing the information. Manager Aichinger stated that this is a great explanation of why Snail Lake is high and has been high and that it will take longer for the water level to decrease because of the increased groundwater.

President Ebensteiner noted that the 3M lawsuit could be an opportunity for the District to gain funds for projects. Chris stated that staff has reached out to the PCA and will attend a meeting on April 10th to gain additional information. Manager Skinner suggested that staff look for opportunities to collaborate with other entities, such as the DNR.

10. ADMINISTRATOR'S REPORT

A. Meetings Attended

No comments.

B. Upcoming Meetings and Dates

No comments.

C. Watershed-Based Clean Water Funding

Tina Carstens stated that staff continues to meet with the counties noting that staff is looking at targeted retrofit projects and the Wakefield Park project.

D. Legislative Update

Chris O'Brien stated that there is a House and Senate bill that would provide limited liability to private applicators of salt in exchange for those applicators taking MPCA training. He noted that there has been bipartisan support for the bills. He stated that staff continues to follow this closely. He stated that St. Paul is looking to possibly pass a resolution of support. He stated that there is a collation of several watershed districts and the Freshwater Society that support this and have asked the District if they would like to join. He stated that this seems to be a good step forward as the cities that have taken the training have reduced the amount of salt they use.

Tina Carstens stated that staff has talked to the MAWD representatives on a number of the issues at the capital. He stated that MAWD has not been heavily involved but they are following this in support. She stated that if the Board is supportive, staff could alert the coalition and the District could be added in support. The consensus of the Board was to join the coalition.

Tina stated that there were some emails from the west metro watersheds on using funds from the watershed based clean water funds for chloride education. Tina noted that if the Board agrees staff would also send a letter in support to local representatives. It was the consensus of the Board to direct staff to send the letter.

Motion: Cliff Aichinger moved, Dianne Ward seconded, to support the Stop Over-Salting coalition. Motion carried unanimously.

11. PROJECT AND PROGRAM STATUS REPORTS

A. Ongoing Project and Program Updates

i. Flood Control/Beltline Resiliency Study

ii. Snail Lake/Grass Lake Study

Manager Swope asked for details on the March 28th meeting with the DNR. Brad Lindaman stated that the topic of lowering the outlet elevation was discussed and the response was that the DNR would like District staff and Barr Engineering to meet with a larger group of DNR staff. He stated that there seems to be a path to that discussion. He noted that today staff met with representatives from St. Paul Regional Water Supply and that it seemed that operating at a lower level had some promise as an option. He stated that there was quite a bit of discussion on the water quality piece, noting that phosphorus was a concern as well as other chemicals. He noted that staff has that list and will determine the cost to test for those elements. He stated that both meetings were good, and staff is optimistic. He stated that they are making headway hauling clay near Gramsie Road to begin the berm work at Grass Lake.

iii. Snail, Grass and West Vadnais Lakes Outlet Permitting

iv. District Wide Atlas 14 Modeling

v. Wakefield Park/Frost Avenue Project

vi. BMP Design Assistance

vii. Owasso Basin Improvements

viii. Beltline/Battle Creek Tunnel

ix. CIP Maintenance/Repair 2018

x. Frost/Kennard Project

xi. Willow Pond CMAC Project

xii. Natural Resources Program

Manager Aichinger was wondering if it is getting more difficult to catch the carp and stated that perhaps an educational video could be made on how to fish for carp that could be played at WaterFest or YouTube. Simba Blood stated that the problem that they had with carp this past year was the infrastructure and not the fish themselves. She agreed that an educational video could be

a component. She agreed that the staff could gain input from the consultant assisting on the shallow lakes video.

xiii. Education Program

12. INFORMATIONAL ITEMS

No comments.

13. REPORTS OF MANAGERS

Manager Swope stated that he had the opportunity to tour sites around the District with staff to see some of the projects that have been completed. He noted that it was very helpful to see projects that have been completed and not just see them on paper.

Tina Carstens asked the Board to respond if they are able to attend the award presentation from the Freshwater Society.

14. ADJOURN

Motion: Dr. Pam Skinner moved, Lawrence Swope seconded, to adjourn the meeting at 8:12 p.m. Motion carried unanimously.

Respectfully submitted,

Dr. Pam Skinner, Secretary

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Bill List

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RWMWD BUDGET STATUS REPORT
Administrative & Program Budget
Fiscal Year 2018
4/30/2018

Budget Category	Budget Item	Account Number	Original Budget	Budget Transfers	Current Month Expenses	Year-to-Date Expenses	Current Budget Balance	Percent of Budget
Manager	Per diems	4355	$6,500.00	-	-	1,630.00	$4,870.00	25.08%
	Manager expenses	4360	3,500.00	-	-	552.52	2,947.48	15.79%
Committees	Committee/Bd Mtg. Exp.	4365	3,500.00	-	218.48	1,009.80	2,490.20	28.85%
Employees	Staff salary/taxes/benefits	4010	1,300,000.00	-	86,753.91	360,778.61	939,221.39	27.75%
	Employee expenses	4020	10,000.00	-	349.79	754.01	9,245.99	7.54%
	District training & education	4350	25,000.00	-	1,174.95	2,554.61	22,445.39	10.22%
Administration/	GIS system maint. & equip.	4170	15,000.00	-	-	987.02	14,012.98	6.58%
Office	Data Base/GIS Maintenance	4171	15,000.00	-	-	-	15,000.00	0.00%
	Equipment maintenance	4305	3,000.00	-	-	-	3,000.00	0.00%
	Telephone	4310	8,000.00	-	358.22	827.24	7,172.76	10.34%
	Office supplies	4320	5,000.00	-	792.32	1,162.75	3,837.25	23.26%
	IT/Internet/Web Site/Software Lic.	4325	42,000.00	-	2,396.25	11,231.98	30,768.02	26.74%
	Postage	4330	10,000.00	-	-	142.47	9,857.53	1.42%
	Printing/copying	4335	8,000.00	-	285.67	1,653.59	6,346.41	20.67%
	Dues & publications	4338	11,000.00	-	-	7,620.00	3,380.00	69.27%
	Janitorial/Trash Service	4341	17,000.00	-	962.16	4,286.44	12,713.56	25.21%
	Utilities/Bldg.Contracts	4342	18,000.00	-	1,567.10	7,457.79	10,542.21	41.43%
	Bldg/Site Maintenance	4343	70,000.00	-	874.60	3,864.68	66,135.32	5.52%
	Miscellaneous	4390	5,000.00	-	-	305.19	4,694.81	6.10%
	Insurance	4480	35,000.00	-	-	-	35,000.00	0.00%
	Office equipment	4703	40,000.00	-	-	5,410.27	34,589.73	13.53%
	Vehicle lease, maintenance	4810-40	43,000.00	-	183.43	1,637.10	41,362.90	3.81%
Consultants/	Auditor/Accounting	4110	50,000.00	-	2,303.36	9,541.84	40,458.16	19.08%
Outside Services	Engineering-administration	4121	93,000.00	-	5,507.50	21,693.00	71,307.00	23.33%
	Engineering-permit I&E	4122	15,000.00	-	-	1,175.00	13,825.00	7.83%
	Engineering-eng. review	4123	55,000.00	-	6,687.44	19,184.94	35,815.06	34.88%
	Engineering-permit review	4124	50,000.00	-	4,932.50	9,160.50	40,839.50	18.32%
	Project Feasibility Studies	4129	735,000.00	-	31,484.89	79,680.07	655,319.93	10.84%
	Attorney-permits	4130	10,000.00	-	-	603.60	9,396.40	6.04%
	Attorney-general	4131	40,000.00	-	-	1,800.00	38,200.00	4.50%
	Outside Consulting Services	4160	40,000.00	-	4,725.00	7,832.00	32,168.00	19.58%
Programs	Educational programming	4370	60,000.00	-	1,979.24	8,431.41	51,568.59	14.05%
	Communications & Marketing	4371	25,000.00		825.94	1,115.94	23,884.06	4.46%
	Events	4372	50,000.00	-	3,640.00	6,695.00	43,305.00	13.39%
	Water QM-Engineering	4520-30	513,000.00	-	4,801.36	24,918.32	488,081.68	4.86%
	Project operations	4650	140,000.00	-	40,635.82	43,332.11	96,667.89	30.95%
	SLMP/TMDL Studies	4661	115,000.00	-	718.00	1,408.00	113,592.00	1.22%
	Natural Resources/Keller Creek	4670-72	100,000.00	-	2,111.77	8,055.77	91,944.23	8.06%
	Outside Prog.Support/Weed Mgmt.	4683-84	70,000.00	-	4,198.77	17,920.38	52,079.62	25.60%
	Research Projects	4695	100,000.00	-	448.50	1,426.50	98,573.50	1.43%
	Health and Safety Program	4697	2,000.00	-	52.15	52.15	1,947.85	2.61%
	NPDES Phase II	4698	20,000.00	-	387.50	787.50	19,212.50	3.94%
	Atlas 14 Watershed Modeling	4732	-	-	-	-	-	0.00%
GENERAL FUND TOTAL			**$3,976,500.00**	**$0.00**	**$211,356.62**	**$678,680.10**	**$3,297,819.90**	17.07%
CIP's	CIP Project Repair & Maintenance	516	1,000,000.00	-	8,299.30	178,471.20	821,528.80	17.85%
	Targeted Retrofit Projects	518	800,000.00	-	2,297.00	4,622.00	795,378.00	0.58%
	District Office Building Solar Energy Retrofit	519	150,000.00	-	36,118.00	37,838.00	112,162.00	25.23%
	Flood Damage Reduction Fund	520	2,000,000.00	-	7,868.50	39,364.86	1,960,635.14	1.97%
	Debt Services-96-97 Beltline/MM/Battle Creek	526	448,951.00	-	-	277,525.09	171,425.91	61.82%
	Stewardship Grant Program Fund	528-529	800,000.00	-	21,694.00	38,300.07	761,699.93	4.79%
	Impervious Surface Volume Reduction Opportunity	531	1,500,000.00	-	-	-	1,500,000.00	0.00%
	Beltline & Battle Creek Tunnel Repair	549	-	-	214,166.73	1,345,020.86	(1,345,020.86)	---
	Frost/Kennard Enhanced WQ BMP	550	400,000.00	-	5,677.00	13,862.69	386,137.31	3.47%
	Markham Pond Dredging & Aeration	551	25,000.00	-	-	-	25,000.00	0.00%
	Wakefield Park Project	553	1,100,000.00	-	3,536.00	7,655.00	1,092,345.00	0.70%
	Willow Pond CMAC	554	400,000.00		5,908.00	23,324.50	376,675.50	5.83%
	District Office Bond Payment	585	194,885.00	-	-	195,173.81	(288.81)	100.15%
CIP BUDGET TOTAL			**$8,818,836.00**	**-**	**$305,564.53**	**$2,161,158.08**	**$6,657,677.92**	24.51%
TOTAL BUDGET			**$12,795,336.00**	**$0.00**	**$516,921.15**	**$2,839,838.18**	**$9,955,497.82**	**22.19%**

Current Fund Balances:

Fund:	Unaudited Beginning Fund Balance @ 12/31/17	Fund Transfers	Year to date Revenue	Current Month Expenses	Year to Date Expense	Unaudited Fund Balance @ 04/30/18
101 - General Fund	$4,332,486.99	-	101,459.48	211,356.62	678,680.10	3,755,266.37
516 - CIP Project Repair & Maintenance	565,132.25	-	54,412.00	8,299.30	178,471.20	441,073.05
518 - Targeted Retrofit Projects	813,825.81	-	15,000.00	2,297.00	4,622.00	824,203.81
519 - District Office Building Solar Energy Retrofit	129,623.50	-	-	36,118.00	37,838.00	91,785.50
520 - Flood Damage Reduction Fund	1,146,068.88	-	7,858.98	7,868.50	39,364.86	1,114,563.00
526 - Debt Services-96-97 Beltline/MM/Beltline-Battle Creek Tunnel Repair	359,578.26	-	-	-	277,525.09	82,053.17
528/529 - Stewardship Grant Program Fund	596,359.71	-	15,000.00	21,694.00	38,300.07	573,059.64
531 - Impervious Surface Volume Reduction Opportunity	1,484,215.00	-	-	-	-	1,484,215.00
549 - Beltline & Battle Creek Tunnel Repair	2,456,490.80	-	-	214,166.73	1,345,020.86	1,111,469.94
550 - Frost/Kennard Enhanced WQ BMP	108,640.25	-	-	5,677.00	13,862.69	94,777.56
551 - Markham Pond Dredging & Aeration	106,429.71	-	-	-	-	106,429.71
553 - Wakefield Park Project	351,873.96	-	-	3,536.00	7,655.00	344,218.96
554 - Willow Pond CMAC	-	-	-	5,908.00	23,324.50	(23,324.50)
580 - Contingency Fund	448,781.00	-	-	-	-	448,781.00
585 - Certificates of Participation	133,637.38	-	-	-	195,173.81	(61,536.43)
Total District Fund Balance	**$13,033,143.50**	**-**	**$ 193,730.46**	**$ 516,921.15**	**$2,839,838.18**	**$10,387,035.78**

Ramsey Washington Metro Watershed Dist.
Check Register
For the Period From Apr 1, 2018 to Apr 30, 2018

Check #	Date	Payee ID	Payee	Description	Amount
EFT	04/01/18	met008	MetLife-Group Benefits	Employee Benefits	$830.56
EFT	04/13/18	hea002	HealthPartners	Employee Benefits	9,203.67
69861	04/11/18	ada002	Adam's Pest Control, Inc.	Utilities/Bldg. Contracts	79.00
69862	04/11/18	aws001	AWS Service Center	Janitoral/Trash Service	357.16
69863	04/11/18	hen002	Henriksen Ace Hardware	Natural Resources Proj.	1.95
69864	04/11/18	hom001	Home Depot Credit Services	Natural Res./WQ Staff	817.61
69865	04/11/18	inn002	Innovative Office Solutions LLC	Office Supplies	406.23
69866	04/11/18	ncp001	NCPERS Minnesota	Employee Benefits	16.00
69867	04/11/18	noa001	Noah & Associates, Inc.	Outside Consulting Services	4,725.00
69868	04/11/18	pac001	Pace Analytical Services, Inc.	Water QM Staff	1,160.00
69869	04/11/18	pre003	Premium Waters, Inc.	Utilities/Bldg. Contracts	19.00
69870	04/11/18	red003	Red Wing Business Advantage Account	Employee Benefits	161.49
69871	04/24/18	all004	allstream	Project Operations	64.75
69872	04/24/18	all005	All Energy Solar, Inc.	District Office Solar Energy	35,964.00
69873	04/24/18	att002	AT & T Mobility - ROC	IT/Website/Software	74.03
69874	04/24/18	bar001	Barr Engineering	March/April Engineering	114,227.17
69875	04/24/18	bar004	Deborah Barnes	Employee Reimbursement	100.52
69876	04/24/18	ben002	Benefit Extras, Inc.	Employee Benefits	129.00
69877	04/24/18	cad003	Cady Building Maintenance, Inc.	Janitoral/Trash Service	605.00
69878	04/24/18	cit001	City of Little Canada	Utilities/Bldg. Contracts	109.88
69879	04/24/18	cit011	City of Roseville	IT/Website/Software/Phone	2,513.82
69880	04/24/18	ger003	Carole Gernes	Employee Reimbursement	89.50
69881	04/24/18	gil001	Gilbert Mechanical Contractors, Inc.	Bldg/Site Maintenance	568.62
69882	04/24/18	gou001	Ryan J. Guld	Employee Reimbursement	41.05
69883	04/24/18	han007	Ben Hanson	Natural Resources Proj.	1,500.00
69884	04/24/18	ing002	INGCO International, Inc.	Communications Marketing	500.00
69885	04/24/18	inn002	Innovative Office Solutions LLC	Office Supplies	338.80
69886	04/24/18	inn003	Innovational Concepts, Inc.	Utilities/Bldg. Contracts	206.75
69887	04/24/18	int001	Office of MN, IT Services	Telephone Expense	55.40
69888	04/24/18	kor001	Eric Korte	Employee Reimbursement	127.85
69889	04/24/18	lea003	L. Tracy Leavenworth	Educational Program	1,979.24
69890	04/24/18	mel001	Michelle L. Melser	Employee Reimbursement	181.59
69891	04/24/18	met006	Metropolitan Council	Project Operations	39,555.48
69892	04/24/18	mmc001	MMC Associates, Inc.	Events	3,640.00
69893	04/24/18	nsp001	Xcel Energy	Utilities/Project Operations	1,599.65
69894	04/24/18	obr001	Christopher O'Brien	Employee Reimbursement	271.87
69895	04/24/18	pac001	Pace Analytical Services, Inc.	Water QM Staff	189.00
69896	04/24/18	pci001	PCi Roads, LLC	Construction-Beltline/Battle	191,589.75
69897	04/24/18	pro003	Lyndsey R. Provos	Employee Reimbursement	246.54
69898	04/24/18	qwe001	CenturyLink	Project Operations	230.91
69899	04/24/18	ram005	Ramsey Conservation District	Stewardship Grant Program	16,416.00
69900	04/24/18	red002	Redpath & Company, Ltd	March Accounting Services	2,303.36
69901	04/24/18	sod001	Nicole Soderholm	Employee Reimbursement	40.00
69902	04/24/18	tim002	Timesaver Off-Site Secretarial, Inc.	Committee/Board Meeting Exp.	211.00
69903	04/24/18	usb002	U.S. Bank	Monthly Credit Card Expense	2,492.47
69904	04/24/18	usb005	US Bank Equipment Finance	Printing Expense	285.67
69905	04/24/18	vik001	Viking Industrial Center	Water QM/Health & Safety	156.55
69906	04/24/18	was007	Washington Conservation District	Water QM/Outside Support	3,443.50
69907	04/24/18	whe001	Wheeler Hardware Company	Bldg/Site Maintenance	188.50
Total					**$440,014.89**

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From April 1, 2018 - April 30, 2018

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
04/01/18	EFT	met008	MetLife-Group Benefits			$830.56	
				4040-101-000	Employee Benefits-General		622.49
				2015-101-000	Employee Health-General		208.07
04/13/18	EFT	hea002	HealthPartners			9,203.67	
				4040-101-000	Employee Benefits-General		7,486.10
				2015-101-000	Employee Health-General		1,717.57
04/11/18	69861	ada002	Adam's Pest Control, Inc.	4342-101-000	Utilities/Bldg. Contracts	79.00	
04/11/18	69862	aws001	AWS Service Center	4341-101-000	Janitorial/Trash Service	357.16	
04/11/18	69863	hen002	Henriksen Ace Hardware	4670-101-000	Natural Resources Project-General	1.95	
04/11/18	69864	hom001	Home Depot			817.61	
				4670-101-000	Natural Resources Project-General		68.34
				4670-101-000	Natural Resources Project-General		46.90
				4670-101-000	Natural Resources Project-General		181.30
				4670-101-000	Natural Resources Project-General		143.38
				4670-101-000	Natural Resources Project-General		94.12
				4530-101-000	Water QM Staff-General		249.00
				4670-101-000	Natural Resources Project-General		9.91
				4670-101-000	Natural Resources Project-General		20.96
				4530-101-000	Water QM Staff-General		3.70
04/11/18	69865	inn002	Innovative Office Solutions, LLC			406.23	
				4320-101-000	Office Supplies-General		227.67
				4320-101-000	Office Supplies-General		113.19
				4320-101-000	Office Supplies-General		65.37
04/11/18	69866	ncp001	NCPERS Minnesota	2015-101-000	Employee Health-General	16.00	
04/11/18	69867	noa001	Noah & Associates, Inc.	4160-101-000	Outside Consulting Services	4,725.00	
04/11/18	69868	pac001	Pace Analytical Services, Inc.			1,160.00	
				4530-101-000	Water QM Staff-General		228.00
				4530-101-000	Water QM Staff-General		432.00
				4530-101-000	Water QM Staff-General		300.00
				4530-101-000	Water QM Staff-General		200.00
04/11/18	69869	pre003	Premium Waters, Inc.	4342-101-000	Utilities/Bldg. Contracts	19.00	
04/11/18	69870	red003	Red Wing Business Advantage Account	4040-101-000	Employee Benefits-General	161.49	
04/24/18	69871	all004	allstream	4650-101-000	Project Operations-General	64.75	
04/24/18	69872	all005	All Energy Solar, Inc.	4128-519-000	Engineering-Dist.Office Solar Energy	35,964.00	
04/24/18	69873	att002	AT & T Mobility - ROC	4325-101-000	IT/Website/Software	74.03	
04/24/18	69874	bar001	Barr Engineering			114,227.17	
				4121-101-000	Engineering Admin-General Fund		5,507.50
				4698-101-000	Engineering-NPDES Phase II		387.50
				4123-101-000	Engineering-Review		6,687.44
				4129-101-000	Project Feasability-General		601.00

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From April 1, 2018 - April 30, 2018

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
				4129-101-000	Project Feasability-General		952.00
				4129-101-000	Project Feasability-General		2,389.00
				4129-101-000	Project Feasability-General		1,331.50
				4129-101-000	Project Feasability-General		3,586.50
				4129-101-000	Project Feasability-General		6,775.89
				4129-101-000	Project Feasability-General		5,772.00
				4129-101-000	Project Feasability-General		10,077.00
				4520-101-000	Water QM-Engineering		2,439.36
				4124-101-000	Engineering-Permit Review		4,932.50
				4661-101-000	SLMP/TMDL Studies		718.00
				4695-101-000	Research Projects-General		448.50
				4650-101-000	Project Operations-General		337.50
				4128-553-000	Engineering-Wakefield		3,536.00
				4128-550-000	Engineering-Frost/Kennard		5,677.00
				4128-518-000	Engineering-School/Commer Retrofit		1,463.00
				4128-518-000	Engineering-School/Commer Retrofit		262.00
				4128-518-000	Engineering-School/Commer Retrofit		572.00
				4682-529-000	Stewardship Grant Program		5,278.00
				4128-554-000	Engineering-Willow Pond		5,908.00
				4128-520-000	Engineering-Flood Damage		6,328.00
				4128-520-000	Engineering-Flood Damage		1,540.50
				4128-519-000	Engineering-Office Solar Energy		154.00
				4128-549-000	Engineering-Beltline/Battle Creek		22,576.98
				4128-516-000	Engineering-Projects Maint. & Repair		2,029.00
				4128-516-000	Engineering-Projects Maint. & Repair		5,959.50
04/24/18	69875	bar004	Deborah Barnes			100.52	
				4040-101-000	Employee Benefits-General		20.00
				4020-101-000	Employee Expense-General		30.52
				4343-101-000	Employee Benefits-General		50.00
04/24/18	69876	ben002	Benefit Extras, Inc.	4040-101-000	Employee Benefits-General	129.00	
04/24/18	69877	cad003	Cady Building Maintenance, Inc.	4341-101-000	Janitorial/Trash Service	605.00	
04/24/18	69878	cit001	City of Little Canada	4342-101-000	Utilities/Bldg. Contracts	109.88	
04/24/18	69879	cit011	City of Roseville			2,513.82	
				4325-101-000	IT/Website/Software		2,211.00
				4310-101-000	Telephone-General		302.82
04/24/18	69880	ger003	Carole Gernes	4684-101-000	Weed Management Program	89.50	
04/24/18	69881	gil001	Gilbert Mechanical Contractors, Inc.	4343-101-000	Bldg./Site Maintenance	568.62	
04/24/18	69882	gou001	Ryan Gould			41.05	
				4020-101-000	Employee Expense-General		17.27
				4670-101-000	Natural Resources Project-General		23.78
04/24/18	69883	han007	Ben Hanson	4670-101-000	Natural Resources Project-General	1,500.00	
04/24/18	69884	ing002	INGCO International, Inc.	4371-101-000	Communications & Marketing	500.00	

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From April 1, 2018 - April 30, 2018

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
04/24/18	69885	inn002	Innovative Office Solutions, LLC			338.80	
				4320-101-000	Office Supplies-General		42.96
				4320-101-000	Office Supplies-General		233.19
				4684-101-000	Weed Management Program		53.70
				4320-101-000	Office Supplies-General		8.95
04/24/18	69886	inn003	Innovational Concepts, Inc.	4342-101-000	Utilities/Bldg. Contracts	206.75	
04/24/18	69887	int001	Office of MN, IT Services	4310-101-000	Telephone-General	55.40	
04/24/18	69888	kor001	Eric Korte			127.85	
				4040-101-000	Employee Benefits-General		40.00
				4020-101-000	Employee Expense-General		17.00
				4530-101-000	Water QM Staff-General		70.85
04/24/18	69889	lea003	L. Tracy Leavenworth	4370-101-000	Educational Program-General	1,979.24	
04/24/18	69890	mel001	Michelle Melser			181.59	
				4131-101-000	Atty.Gen.-General Fund		120.00
				4131-520-000	Atty Gen.-Flood Damage		61.59
04/24/18	69891	met007	Metropolitan Council	4650-101-000	Project Operations-General	39,555.48	
04/24/18	69892	mmc001	MMC Associates, Inc.	4372-101-000	Events	3,640.00	
04/24/18	69893	nsp001	Xcel Energy			1,599.65	
				4342-101-000	Utilities/Bldg. Contracts		1,152.47
				4650-101-000	Project Operations-General		447.18
04/24/18	69894	obr001	Christopher O'Brien			271.87	
				4040-101-000	Employee Benefits-General		40.00
				4020-101-000	Employee Expense-General		15.00
				4371-101-000	Communications & Marketing		216.87
04/24/18	69895	pac001	Pace Analytical Services, Inc.	4530-101-000	Water QM Staff-General	189.00	
04/24/18	69896	pci001	Pci Roads, LLC	4630-549-000	Construction-Beltline/Battle	191,589.75	
04/24/18	69897	pro003	Lyndsey R. Provos			246.54	
				4040-101-000	Employee Benefits-General		240.00
				4020-101-000	Employee Expense-General		6.54
04/24/18	69898	qwe001	CenturyLink	4650-101-000	Project Operations-General	230.91	
04/24/18	69899	ram005	Ramsey Conservation District	4382-529-000	BMP Stewardship Program	16,416.00	
04/24/18	69900	red002	Redpath & Company, Ltd	4110-101-000	Auditor/Accounting	2,303.36	
04/24/18	69901	sod001	Nichole Soderholm	4040-101-000	Employee Benefits-General	40.00	
04/24/18	69902	tim002	Timesaver Off-Site Secretarial, Inc.	4365-101-000	Committee/Board Meeting Expense	211.00	
04/24/18	69903	usb002	U.S. Bancorp			2,492.47	
				4325-101-000	IT/Website/Software		29.00
				4820-101-000	Vehicle Maintenance-General		183.43
				4325-101-000	IT/Website/Software		82.22
				4630-516-000	Construction-Maint. & Rep.		310.80
				4530-101-000	Water QM Staff-General		66.57
				4670-101-000	Natural Resources Project-General		21.13
				4350-101-000	Training & Education-General		37.49

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From April 1, 2018 - April 30, 2018

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
				4320-101-000	Office Supplies-General		15.02
				4343-101-000	Bldg./Site Maintenance		27.48
				4320-101-000	Office Supplies-General		49.78
				4365-101-000	Committee/Board Meeting Expense		7.48
				4343-101-000	Bldg./Site Maintenance		40.00
				4320-101-000	Office Supplies-General		28.14
				4350-101-000	Training & Education-General		117.94
				4530-101-000	Water QM Staff-General		99.99
				4320-101-000	Office Supplies-General		8.05
				4350-101-000	Training & Education-General		102.01
				4350-101-000	Training & Education-General		180.00
				4371-101-000	Communications & Marketing		230.94
				4350-101-000	Training & Education-General		75.00
				4371-101-000	Communications & Marketing		80.00
				4350-101-000	Training & Education-General		100.00
				4350-101-000	Training & Education-General		100.00
				4350-101-000	Training & Education-General		100.00
				4350-101-000	Training & Education-General		100.00
				4350-101-000	Training & Education-General		100.00
				4350-101-000	Training & Education-General		100.00
				4350-101-000	Training & Education-General		100.00
04/24/18	69904	usb005	US Bank Equipment Finance	4335-101-000	Printing-General	285.67	
04/24/18	69905	vik001	Viking Industrial Center			156.55	
				4530-101-000	Water QM Staff-General		104.40
				4697-101-000	Health & Safety Program		52.15
04/24/18	69906	was002	Washington Conservation District			3,443.50	
				4530-101-000	Water QM Staff-General		381.00
				4683-101-000	Outside Program Support		3,062.50
04/24/18	69907	whe001	Wheeler Hardware Company	4343-101-000	Bldg./Site Maintenance	188.50	
						$440,014.89	

BARR

Summary of Professional Engineering Services During the Period
March 17, 2018 through April 13, 2018

	Total Budget* (2018)	Total Fees to Date (2018)	Budget Balance (2018)	Fees During Period	District Accounting Code	Plan Imple-mentation Task Number
Engineering Administration						
General Engineering Administration	$76,000.00	$21,693.00	$54,307.00	$5,507.50	**4121-101**	DW-13
RWMWD Health and Safety/ERTK Program	$2,000.00	$0.00	$2,000.00		**4697-101**	DW-13
Educational Program/Educational Forum Assistance	$20,000.00	$387.50	$19,612.50	$387.50	**4698-101**	DW-11
Engineering Review						
Engineering Review	$55,000.00	$19,184.94	$35,815.06	$6,687.44	**4123-101**	DW-13
Project Feasibility Studies						
Aquifer Recharge Site Search and Feasibility Study	$15,000.00	$0.00	$15,000.00		**4129-101**	DW-10
Owasso County Park Stormwater Master Plan and Detailed Design: Phase 1 and Phase 2	$75,000.00	$1,051.00	$73,949.00	$601.00	**4129-101**	DW-5
Beltline Resiliency and Phalen Chain Water Level Management	$250,000.00	$3,204.00	$246,796.00	$952.00	**4129-101**	BELT-3
Beaver Lake Subwatershed Feasibility Study	$15,000.00	$3,908.00	$11,092.00	$2,389.00	**4129-101**	BL-1
Owasso Lake Subwatershed Feasibility Study	$15,000.00	$2,832.00	$12,168.00	$1,331.50	**4129-101**	LO-3
Battle Creek Lake Subwatershed Feasibility Study	$15,000.00	$5,124.38	$9,875.62	$3,586.50	**4129-101**	BCL-3
Create an Emergency Reponse Plan for Lake Owasso	$5,000.00	$3,132.00	$1,868.00		**4129-101**	LO-2
FEMA Flood Mapping Update	$100,000.00	$0.00	$100,000.00		**4129-101**	DW-9
West Vadnais Lake to East Vadnais Lake Water Quality Treatment	$24,400.00	$25,958.69	-$1,558.69	$6,775.89	**4129-101**	DW-9
Snail Lake to Sucker Lake Reverse Pumping Evaluation	$9,100.00	$9,715.50	-$615.50		**4129-101**	DW-9
Snail, Grass, and West Vadnais outlet permitting with the MnDNR	$10,000.00	$12,399.00	-$2,399.00	$5,772.00	**4129-101**	DW-9
Modeling of 95% Confidence Limit Atlas 14 District-wide (Climate Change Scenario); Flood Map Generation for Future Outreach	$129,500.00	$12,355.50	$117,144.50	$10,077.00	**4129-101**	DW-9
GIS Maintenance						
GIS Maintenance	$5,000.00	$0.00	$5,000.00		**4170-101**	DW-13
Monitoring Water Quality/Project Monitoring						
Lake Water Quality Monitoring (Misc QA/QC)	$10,000.00	$63.00	$9,937.00		**4520-101**	DW-2
Grass Lake WOMP station	$10,000.00	$0.00	$10,000.00		**4520-101**	DW-3
Battle Creek longitudinal monitoring of TSS	$15,000.00	$801.00	$14,199.00		**4520-101**	BC-3
Auto Lake monitoring systems (5)	$50,000.00	$5,201.78	$44,798.22	$2,439.36	**4520-101**	DW-18
Maplewood Mall Monitoring	$10,000.00	$713.00	$9,287.00		**4520-101**	DW-12
Permit Processing, Inspection and Enforcement						
Permit Application Inspection and Enforcement	$15,000.00	$1,175.00	$13,825.00		**4122-101**	DW-7
Permit Application Review	$50,000.00	$9,160.50	$40,839.50	$4,932.50	**4124-101**	DW-7
Lake Studies/WRPPs/TMDL Reports						
2018 Grant Applications	$30,000.00	$0.00	$30,000.00		**4661-101**	--
Tanners Flood Response Tool Model Update	$3,000.00	$1,408.00	$1,592.00	$718.00	**4661-101**	TaL-1
Evaluate water quality benefit of removing accumulated sediment from south end of Wakefield Lake to improve Lake Phalen water quality	$10,000.00	$0.00	$10,000.00		**4661-101**	WL-5
Research Projects						
New Technology Mini Case Studies (average 6 per year)	$12,000.00	$1,426.50	$10,573.50	$448.50	**4695-101**	DW-12
Kohlman Permeable Weir Test System - Implement Monitoring Plan	$15,000.00	$0.00	$15,000.00		**4695-101**	DW-12
Project Operations						
2018 Tanners Alum Facility Monitoring	$15,000.00	$729.00	$14,271.00	$337.50	**4650-101**	TaL-3
Capital Improvements						
Wakefield Park/Frost Avenue Stormwater Project	$25,000.00	$7,655.00	$17,345.00	$3,536.00	**4128-553**	WL-1
Frost Kennard Spent Lime BMP	$24,000.00	$13,862.69	$10,137.31	$5,677.00	**4128-550**	WL-1
Commercial Sites Retrofit Projects 2018	$55,000.00	$0.00	$55,000.00		**4128-518**	DW-6
School Sites Retrofit Projects 2018	$55,000.00	$2,970.00	$52,030.00	$1,463.00	**4128-518**	DW-6
Church Sites Retrofit Projects 2018	$55,000.00	$1,080.00	$53,920.00	$262.00	**4128-518**	DW-6
Roseville High School Campus Stormwater Retrofit (Bennett Lake Subwatershed)	$30,000.00	$572.00	$29,428.00	$572.00	**4128-518**	DW-6
BMP Incentive Fund: General BMP Design Assistance and Review	$30,000.00	$14,366.50	$15,633.50	$5,278.00	**4682-529**	DW-6
BMP Incentive Fund: Faith-Based Organizations	$20,000.00	$918.00	$19,082.00		**4128-528**	DW-6
Willow Pond CMAC Implementation	$100,000.00	$23,324.50	$76,675.50	$5,908.00	**4128-554**	BeL-4
Grass Lake Berm Construction Administration	$75,000.00	$25,357.44	$49,642.56	$6,328.00	**4128-520**	GrL-1
Phase 1 implementation from Owasso Basin Improvements Feasibility Study	$75,000.00	$4,555.50	$70,444.50	$1,540.50	**4128-520**	GC-3
District Office Solar Energy Retrofit	$20,000.00	$10,211.00	$9,789.00	$154.00	**4128-519**	DW-13
CIP Project Repair & Maintenance						
2017-2018 Beltline Repairs Construction Services	$360,000.00	$409,783.09	-$49,783.09	$22,576.98	**4128-549**	BELT-2
Routine CIP Inspection and Unplanned Maintenance Identification	$75,000.00	$5,023.50	$69,976.50	$2,029.00	**4128-516**	DW-5
2018 CIP Maintenance and Repairs	$90,000.00	$65,596.40	$24,403.60	$5,959.50	**4128-516**	DW-5
2019 CIP Maintenance and Repairs	$150,000.00	$0.00	$150,000.00		**4128-516**	DW-5

*For projects carried over from previous years, the total budget reflects the total project budget, and not just the 2018 portion.

Subtotal **$114,227.17**

TOTAL PAYABLE FOR PERIOD 3/17/2018 - 4/13/2018 **$114,227.17**

Barr declares under the penalties of Law that this Account, Claim, or Demand is just and that no part has been paid.

Bradley J. Lindaman, Vice President

Application for Payment No. 13

Beltline and Battle Creek Repairs
Ramsey-Washington Metro Watershed District

Owner: Ramsey-Washington Metro Watershed District
Contractor: PCi Roads, LLC **Engineer:** Barr Engineering, Co.

For work accomplished through the date of April 15, 2018

1.0	Completed to Date:	$3,129,441.78
2.0	Less Previously Billed:	$2,937,852.03
3.0	Amount Completed This Period:	$191,589.75
4.0	Amount Previously Retained:	$166,145.80
5.0	Amount Retained This Period (See Note 1):	$0.00
6.0	Total Amount Retained:	$166,145.80
7.0	Retainage Released Through This Period:	$0.00
8.0	Less Total Retainage Remaining:	$166,145.80
9.0	Less Amounts Previously Paid:	$2,771,706.23
10.0	Amount Due This Estimate:	$191,589.75

Note 1: The specifications require 10% to be retained up to 50% of the project costs.

CONTRACTOR's Certification

The undersigned CONTRACTOR certifies that: (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with Work covered by prior Applications for Payment numbered 1 through 12 inclusive; (2) title to all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all liens, claims, security interest and encumbrances (except such as are covered by Bond acceptable to OWNER indemnifying OWNER against any such lien, claim, security interest or encumbrance); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not defective as that term is defined in the Contract Documents.

SUBMITTED BY:
Name: Leo Flynn Date: 4/19/18
Title: Project Coordinator
Contractor: PCi Roads, LLC
Signature: Leo S. Flynn

RECOMMENDED BY:
Name: Nathan Campeau Date: 4/19/18
Title: Project Engineer
Engineer: Barr Engineering Co.
Signature: Nathan Campeau

APPROVED BY:
Name: Marj Ebensteiner Date:
Title: President
Owner: Ramsey-Washington Metro Watershed District
Signature:

Beltline and Battle Creek Repairs
Ramsey-Washington Metro Watershed District
Summary of Work Completed Through April 15, 2018 for Progress Payment No. 13

				PCi Roads, LLC		(1) Total Completed This Period		(2) Total Completed Previous Periods		(3) Total Completed To Date	
Item	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	EXTENSION	Quantity		Quantity		Quantity	
A	Mobilization	LS	1	$ 280,000.00	$ 280,000.00	0.01785714	$5,000.00	0.982143	$275,000.00	1	$280,000.00
B	Water Management	LS	1	$ 5,000.00	$ 5,000.00	0.05	$250.00	0.95	$4,750.00	1	$5,000.00
C	Erosion Control	LS	1	$ 35,000.00	$ 35,000.00	0.05	$1,750.00	0.95	$33,250.00	1	$35,000.00
D	Traffic Control	LS	1	$ 25,000.00	$ 25,000.00	0.05	$1,250.00	0.95	$23,750.00	1	$25,000.00
E	Cold Joint Orientation Core Hole	EA	90	$ 440.00	$ 39,600.00	0	$0.00	0	$0.00	0	$0.00
F	Crack Repair - Hydrophobic	LF	12500	$ 65.00	$ 812,500.00	266.5	$17,322.50	13172.65	$856,222.25	13439.15	$873,544.75
F	Crack Repair - Hydrophilic	LF	5000	$ 65.00	$ 325,000.00	0	$0.00	3448.25	$224,136.25	3448.25	$224,136.25
G	Chemical Grout – Hydrophobic	GAL	3000	$ 50.00	$ 150,000.00	184	$9,200.00	2027	$101,350.00	2211	$110,550.00
G	Chemical Grout – Hydrophilic	GAL	1200	$ 50.00	$ 60,000.00	0	$0.00	638	$31,900.00	638	$31,900.00
H	Concrete Surface Repair*	SF	13000	$ 63.00	$ 819,000.00	2359.75	$148,664.25	7738.5	$487,525.50	10098.25	$636,189.75
I	Cementitious Mortar Patch	EA	20	$ 1,000.00	$ 20,000.00	2	$2,000.00	14	$14,000.00	16	$16,000.00
J	Manhole Steps	EA	391	$ 84.00	$ 32,844.00	2	$168.00	312	$26,208.00	314	$26,376.00
K	Root Removal	LS	1	$ 5,000.00	$ 5,000.00	0	$0.00	0	$0.00	0	$0.00
L	Encrustation Demolition and Disposal	LS	1	$ 35,000.00	$ 35,000.00	0	$0.00	1	$35,000.00	1	$35,000.00
M	Precast Joint Repairs	LF	200	$ 56.00	$ 11,200.00	0	$0.00	440.3	$24,656.80	440.3	$24,656.80
N	Rubble Removal (Station 14+94)	LS	1	$ 5,000.00	$ 5,000.00	0	$0.00	1	$5,000.00	1	$5,000.00
N	Rubble Removal (Station 15+87)	LS	1	$ 2,000.00	$ 2,000.00	0	$0.00	1	$2,000.00	1	$2,000.00
N	Rubble Removal (Station 89+76)	LS	1	$ 2,000.00	$ 2,000.00	0	$0.00	0	$0.00	0	$0.00
N	Rubble Removal (Station 454+65)	LS	1	$ 2,000.00	$ 2,000.00	0	$0.00	1	$2,000.00	1	$2,000.00
N	Rubble Removal (Station 454+94)	LS	1	$ 2,000.00	$ 2,000.00	0	$0.00	1	$2,000.00	1	$2,000.00
O	Point Repair	EA	27	$ 900.00	$ 24,300.00	2	$1,800.00	18	$16,200.00	20	$18,000.00
O	Point Repair (Station 50+61)	EA	1	$ 1,585.00	$ 1,585.00	0	$0.00	1	$1,585.00	1	$1,585.00
O	Point Repair (Station 79+65)	EA	1	$ 1,585.00	$ 1,585.00	0	$0.00	1	$1,585.00	1	$1,585.00
O	Point Repair (Station 446+15)	EA	1	$ 1,585.00	$ 1,585.00	0	$0.00	1	$1,585.00	1	$1,585.00
O	Point Repair (Station 449+12)	EA	1	$ 1,585.00	$ 1,585.00	0	$0.00	1	$1,585.00	1	$1,585.00
O	Point Repair (Station 44+97)	EA	1	$ 1,585.00	$ 1,585.00	1	$1,585.00	0	$0.00	1	$1,585.00
P	Invert Repair (Station 63+92)	SF	15	$ 1,000.00	$ 15,000.00	0	$0.00	15	$15,000.00	15	$15,000.00
P	Invert Repair (Station 450+94)	SF	64	$ 500.00	$ 32,000.00	0	$0.00	78	$39,000.00	78	$39,000.00
Q	Uncover Manhole	EA	4	$ 1,800.00	$ 7,200.00	0	$0.00	4	$7,200.00	4	$7,200.00
R	Adjust Manhole Height	EA	4	$ 1,800.00	$ 7,200.00	0	$0.00	0	$0.00	0	$0.00
S	CCTV Inspection	LS	1	$ 35,000.00	$ 35,000.00	0	$0.00	0.9	$31,500.00	0.9	$31,500.00
BASE BID TOTAL					**$ 2,796,769.00**		**$188,989.75**		**$2,263,988.80**		**$2,452,978.55**

Beltline and Battle Creek Repairs
Ramsey-Washington Metro Watershed District
Summary of Work Completed Through April 15, 2018 for Progress Payment No. 13

				PCi Roads, LLC		(1) Total Completed This Period		(2) Total Completed Previous Periods		(3) Total Completed To Date	
Item	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	EXTENSION	Quantity		Quantity		Quantity	
BID ALTERNATE #1: REINFORCEMENT STEEL											
Item	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	EXTENSION						
T	Reinforcement Seal - 6 in.	EA	264	$ 12.00	$ 3,168.00	0	$0.00	1674	$20,088.00	1674	$20,088.00
T	Reinforcement Seal - 12 in.	EA	2197	$ 24.00	$ 52,728.00	0	$0.00	1738	$41,712.00	1738	$41,712.00
T	Reinforcement Seal - 24 in.	EA	882	$ 48.00	$ 42,336.00	0	$0.00	991	$47,568.00	991	$47,568.00
T	Reinforcement Seal - 36 in.	EA	252	$ 70.00	$ 17,640.00	0	$0.00	536	$37,520.00	536	$37,520.00
BID ALTERNATE #1					**$ 115,872.00**		**$0.00**		**$146,888.00**		**$146,888.00**
TOTAL BASE BID PLUS BID ALTERNATE #1					**$ 2,912,641.00**		**$188,989.75**		**$2,410,876.80**		**$2,599,866.55**
CHANGE ORDER - ADDITIONAL ITEMS											
1-2	Deep Concrete Surface Repair*	SF	3,000	$ 87.00	$ 261,000.00	0	$0.00	3000	$261,000.00	3000	$261,000.00
2-2	Beaver Lake Branch Deep Concrete Surface Repair Exceeding 3,000 SF	SF	0	$ 63.00	$ -	0	$0.00	1831.75	$115,400.25	1831.75	$115,400.25
2-3	Repair a Void at Station 440+95	LS	1	$ 14,600.00	$ 14,600.00	0	$0.00	1	$14,600.00	1	$14,600.00
3-1	Beaver Lake Branch Crack Sealing	LS	1	$ 119,724.98	$ 119,724.98	0	$0.00	1	$119,724.98	1	$119,724.98
4-2	Additional Battle Creek Point Repairs	EA	23	$ 650.00	$ 14,950.00	4	$2,600.00	25	$16,250.00	29	$18,850.00
SUBTOTAL CHANGE ORDERS					**$ 410,274.98**		**$2,600.00**		**$526,975.23**		**$529,575.23**
TOTAL BASE BID PLUS BID ALTERNATE #1, PLUS CHANGE ORDERS					**$ 3,322,915.98**		**$191,589.75**		**$2,937,852.03**		**$3,129,441.78**
RETAINAGE (10% Retainage, up to 50% of Work Completion)					**$ 166,145.80**		**$0.00**		**$166,145.80**		**$166,145.80**
TOTAL AMOUNT DUE:							**$191,589.75**		**$2,771,706.23**		**$2,963,295.98**

*Change Order 1-2 results in an estimated reduction of Item H of 3,000 SF, for an estimated reduction of $189,000. This results in an estimated net increase of $72,000.

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Permit Program

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Permit Application Coversheet

Date May 02, 2018

Project Name Shoreview 2018 SIP **Project Number** 18-08

Applicant Name Tom Wesolowski, City of Shoreview

Type of Development Linear

Property Description

This project is located in two neighborhoods within the City of Shoreview: Dale Street North/Arner Avenue north of Snail Lake and Bridge Street/Lion Lane east of Snail Lake. The applicant is proposing to reconstruct residential roadway within these areas. Volume reduction and rate control will be achieved through construction of 9 underground infiltration areas. Pretreatment will include sumped manholes. The two project areas are located within different major subwatersheds. Stormwater management requirements have been achieved separately to ensure proper treatment to both the Snail Lake and Grass Lake subwatersheds.

Watershed District Policies or Standards Involved:

- ☐ ***Wetlands***
- ☑ ***Erosion and Sediment Control***
- ☑ ***Stormwater Management***
- ☐ ***Floodplain***

Water Quantity Considerations

The proposed stormwater management plan is sufficient to handle the runoff from the site.

Water Quality Considerations

Short Term

The proposed erosion and sediment control plan is sufficient to protect downstream water resources during construction.

Long Term

The proposed stormwater management plan is sufficient to protect the long term quality of downstream water resources.

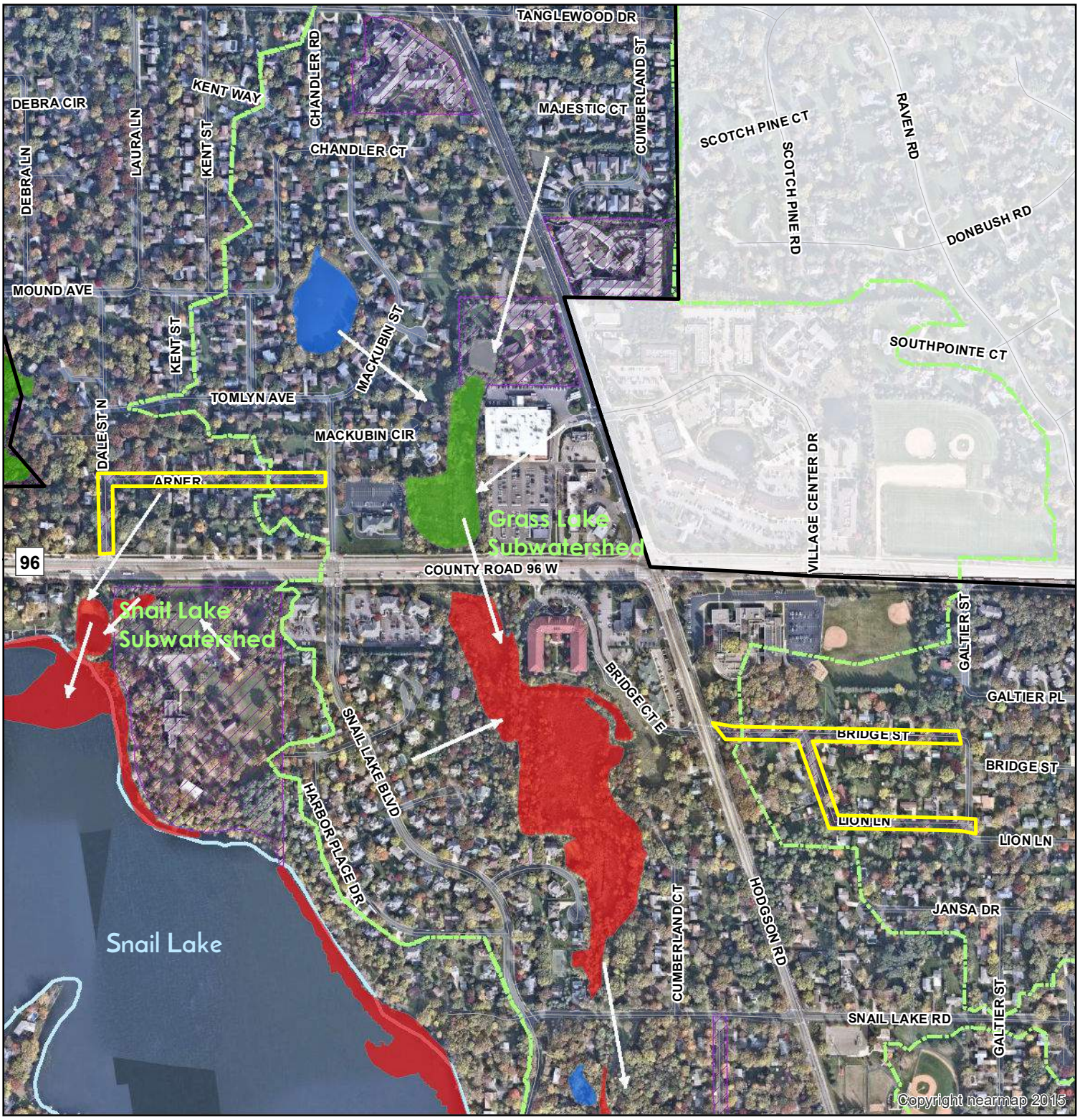
Staff Recommendation

Staff recommends approval of this permit with the special provisions.

Attachments:

- ☑ **Project Location Map**
- ☐ **Project Grading Plan**

#18-08 Shoreview 2018 SIP



Wetlands
- Manage A
- Manage B
- Manage C
- Lake
- Sediment Pond
- Not Assessed

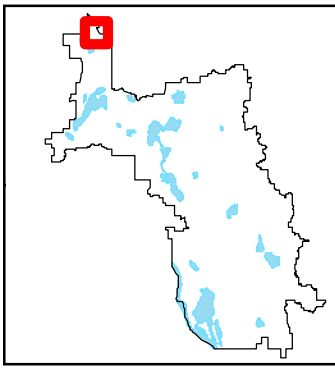
- RWMWD Boundary
- Flow Arrows
- Major Flow Arrows
- Subwatersheds
- Creeks
- Permits
- City Boundaries

Highlighted Areas Represent Active Permit

0 350 700
Feet

0 0.1 0.2
Miles

N



18-08

Special Provisions

1. The applicant shall update the 100-year High Water Levels for each stormwater facility on the plans to match the model provided.

2. The applicant shall provide contact information for the trained erosion control coordinator responsible for implementing the Stormwater Pollution Prevention Plan (SWPPP).

3. The applicant shall submit a copy of the approved Minnesota Pollution Control Agency's NPDES Phase 2 Construction Permit.

4. The applicant shall submit a final copy of the signed construction plans.

Permit Application Coversheet

Date May 02, 2018

Project Name Keller Golf Course Practice Range Improvemen **Project Number** 18-09

Applicant Name Brett Blumer, Ramsey County Parks & Recreation

Type of Development Park/Green Space

Property Description

This project is located at Keller Golf Course in the City of Maplewood. The applicant is proposing to realign the existing practice range and parking/drive areas to achieve ADA-compliant accessibility and improve conditions for neighboring residential properties. The total site area is 4 acres. Volume reduction will be partially achieved through construction of a filtration basin. Filtration is being proposed due to poor soils, and pretreatment will include a sumped catch basin. The applicant is planning to utilize 465 cubic feet in available banked credits to meet the full permit requirements. Rate control has been met onsite.

Watershed District Policies or Standards Involved:

- ☐ ***Wetlands***
- ☑ ***Erosion and Sediment Control***
- ☑ ***Stormwater Management***
- ☐ ***Floodplain***

Water Quantity Considerations

The proposed stormwater management plan is sufficient to handle the runoff from the site.

Water Quality Considerations

Short Term

The proposed erosion and sediment control plan is sufficient to protect downstream water resources during construction.

Long Term

The proposed stormwater management plan is sufficient to protect the long term quality of downstream water resources.

Staff Recommendation

Staff recommends approval of this permit with the special provisions.

Attachments:

- ☑ **Project Location Map**
- ☑ **Project Grading Plan**

#18-09 Keller Golf Course Practice Range Improvements

Wetlands
- Manage A
- Manage B
- Manage C
- Lake
- Sediment Pond
- Not Assessed

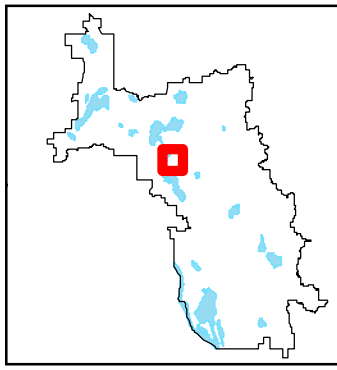
- RWMWD Boundary
- Flow Arrows
- Major Flow Arrows
- Subwatersheds
- Creeks
- Permits
- City Boundaries

Highlighted Areas Represent Active Permit

0 350 700
Feet

0 0.075 0.15
Miles

N



18-09

Special Provisions

1. The applicant shall submit calculations for the time of concentration used in each subwatershed or provide a discussion in the narrative.

2. The applicant shall submit a revised Stormwater Pollution Prevention Plan (SWPPP) that lists the correct square footage of impervious area.

3. The applicant shall provide contact information for the trained erosion control coordinator responsible for implementing the SWPPP.

4. The applicant shall submit a copy of the approved Minnesota Pollution Control Agency's NPDES Phase 2 Construction Permit.

5. The applicant shall submit a final copy of the signed construction plans.

EXISTING RIPRAP DRAINAGE AREA.

FIELD VERIFY OUTLET
INVERT = 896.0

SILT FENCE TYP.

MATCH EXISTING PAVEMENT

SXH
Elev=935.1
N=N81.3 E
N=N84.1 N

North Line of the NW 1/4 of the NE 1/4
Sec. 6, Twp. 29, Rng. 22

Clifton

1-18

MATCH EXISTING PAVEMENT

SILT FENCE TYP.

CLASS III RIP RAP

CB1 - 60" DIA.
CASTING - R3067-V
RIM = 898.2
INVERT =892.7
SUMP = 889.2

SILT FENCE TYP.

3:1 MAX. SLOPE

216 LF 12" PLASTIC DRAINTILE
@ 1% MIN. SLOPE

WEIR E.O.F. 898.1

1-20

CB2 - 24" DIA. W/OFFSET BASIN
CASTING - DOME GRATE
RIM = 894.0
INVERT =890.0 DRAINTILE
INVERT = 889.0 OUTLET

59 LF 6" PERF. PVC PIPE

L.P = 892.6

12" RCP @ 67%

1-22

1-21

SILT FENCE TYP.

4" PERF.
DRAINTILE

BASIN 100 YR.HWL = 894.9

25LF OF 12"RCP @ .67%

OUTLET INVERT= 892.5

4" SOLID
PIPE

MATCHLINE SHEET 4.2

STORMWATER FILTRATION BASIN
SEE DETAIL SHEET 9.1

THE CONTRACTOR WILL BE REQUIRED TO FIELD VERIFY UNDERLYING SOILS IN THE AREA OF THE EXISTING PARKING LOT PRIOR TO CONSTRUCTION OF THE PROPOSED STORMWATER FILTRATION BASIN. RAMSEY COUNTY AND WATERSHED DISTRICT STAFF SHALL BE PRESENT TO MAKE FIELD OBSERVATION. IF SOILS ARE FOUND UPON FIELD VERIFICATION TO SUPPORT INFILTRATION, THEN THE UNDERDRAIN SYSTEM OF THE BASIN WILL BE OMITTED FROM THE PROJECT. SEE PLAN SET DETAILS FOR BASINS WITH AND WITHOUT UNDERDRAIN.

16, Twp. 29, Rng. 22

1-41

CONNECT TO
EXISTING
DRAIN BOX

SILT FENCE TYP.

PROTECT EXISTING
DRAIN INLET

4910.6

4910.7

4" PERF.
DRAINTILE

4" PERF.
DRAINTILE

4" PERF.
DRAINTILE

GENERAL GRADING PLAN NOTES:

CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC CONDITIONS PRIOR TO CONSTRUCTION START. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS. ANY DISCREPANCIES FOUND THAT AFFECT THE WORK SHALL BE REPORTED TO THE OWNER or OWNER'S REPRESENTATIVE FOR CLARIFICATION PRIOR TO ANY ADDITIONAL WORK BEING COMPLETED.

CONTRACTOR SHALL CONTACT "GOPHER STATE ONE CALL" FOR ALL UTILITY LOCATIONS (651-454-0002) 48 HR. PRIOR TO EXCAVATION/CONSTRUCTION.

CONTRACTOR TO VERIFY HORIZONTAL LOCATION AND ELEVATION WHERE A CONNECTION TO EXISTING PAVEMENT, STRUCTURE OR SITE FEATURE IS TO BE MADE.

CONTRACTOR TO WORK OUT OF TREE DRIP ZONE EXCEPT IN AREAS DESIGNATED BY LANDSCAPE ARCHITECT.

CRITICAL LAYOUT DIMENSIONS: THE OWNER OR OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REVISE THE PROJECT LAYOUT TO AVOID UNFORESEEN CONSTRAINTS SUCH AS MATURE TREES, UNFORESEEN SOIL CONSTRAINTS, ETC. THESE ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES, TREES, SITE AMENITIES, ETC. FROM DAMAGE DURING CONSTRUCTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DAMAGE (AT CONTRACTORS EXPENSE). THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOCATES. LOCATES SHALL BE MARKED IN THE FIELD FOR REVIEW BY THE OWNER OR OWNER'S REPRESENTATIVE.

CONTRACTOR SHALL STAY WITHIN CONSTRUCTION LIMITS UNLESS APPROVED OTHERWISE BY THE OWNER OR OWNERS REPRESENTATIVE. THE WORK ZONE SHALL BE KEPT AS MINIMAL AS POSSIBLE DURING CONSTRUCTION. MOVEMENT AND PARKING OF EQUIPMENT SHALL STAY WITHIN WORK ZONE AND NOT CROSS AREAS OTHERWISE UNDISTURBED DURING EARTHWORK OPERATION.

CONTRACTOR BASE BID SHALL ASSUME TREES TO BE REMOVED BY RAMSEY COUNTY PRIOR TO CONSTRUCTION. CLEARING, GRUBBING, AND STUMP REMOVAL IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE DISPOSED OF OFF SITE. TREES UNDER 6" DIA. SHALL BE INCIDENTAL TO THE GRADING.

ASPHALT ROADWAY, PARKING LOTS AND OTHER ITEMS - LAYOUT NOTES:
BITUMINOUS TRAIL, CONCRETE CURBS, AND CONSTRUCTION LIMITS SHALL BE FIELD STAKED BY CONTRACTOR. CONTRACTOR WILL NEED APPROVAL BY RAMSEY COUNTY LANDSCAPE ARCHITECT PRIOR TO COMMENCING CONSTRUCTION. CONTRACT ITEMS LAID OUT AND INSTALLED INCORRECTLY WITHOUT PRIOR REVIEW BY RAMSEY COUNTY REPRESENTATIVE WILL BE REMOVED AND REINSTALLED AT CONTRACTORS OWN EXPENSE.

SPOT GRADES & DRAINAGE REQUIREMENTS: ALL SPOT ELEVATIONS REPRESENT FINISHED SURFACE GRADE UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL REVIEW GRADING WITH THE LA-ENG. PRIOR TO EARTHWORK TO ENSURE PROPER DRAINAGE. THE INTENT OF ALL PROPOSED SPOT GRADES AND GRADING IS TO MATCH EXISTING GRADES ADJACENT TO NEW CONSTRUCTION TO ENSURE PROPER DRAINAGE AND BLENDING OF NEW GRADES WITH EXISTING ONES. MAX. SLOPES SHALL NOT BE GREATER THAN 4:1 UNLESS OTHERWISE NOTED ON THE PLAN.

SUB CUT REQUIREMENTS: GRADES AS SHOWN ARE TO FINISH GRADE. CONTRACTOR SHALL SUB CUT IN ACCORDANCE WITH PAVEMENT SECTIONS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SURVEYING RELATING TO LAYOUT & SITE GRADING. THE CONTRACTOR SHALL FIELD VERIFY ALL GRADES WITH THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OF ANY DISCREPANCIES OR VARIATION FROM PLAN.

TOPSOIL STRIPPING, STOCKPILING AND RE-SPREADING REQUIREMENTS:
TOPSOIL SHALL BE STRIPPED FROM ALL DISTURBED AREAS FROM COMMON EXCAVATION AND SHALL BE SALVAGED AND STOCKPILED. THE LANDSCAPE ARCHITECT SHALL DETERMINE PLACEMENT OF THE STOCKPILE PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL STRIP, STOCKPILE & RE-SPREAD SUFFICIENT TOPSOIL TO PROVIDE A MINIMUM 4 INCH DEPTH (COMPACTED) TO ALL DISTURBED AREAS TO BE SEEDED, UNLESS OTHERWISE NOTED. ALL DISTURBED AREAS TO RECEIVED SEED/TURF ESTABLISHMENT AND ADD SOIL AMENDMENTS FOR OPTIMUM PLANT GROWTH. TOPSOIL SHALL BE IN A RELATIVELY DRY STATE WHEN PLACED. FINE GRADE TOPSOIL TO ELIMINATE ROUGH OR LOW SPOTS. MANUALLY SPREAD TOPSOIL CLOSE TO TREES, PLANTS, AND PAVEMENT TO PREVENT DAMAGE.

SOIL NOT SUITABLE TO BE USED ON SITE OR UNDER STRUCTURAL SITE ELEMENTS, BUT ACCEPTABLE FOR GENERAL LANDSCAPE FILL MAY BE PERMANENTLY DISPOSED OF ON RAMSEY COUNTY PARKS PROPERTY AT COUNTY ROAD H AND I-35 W, NORTH OF THE TCCAP PROPERTY. SOILS DISPOSED AT THAT LOCATION MUST MEET THE REQUIREMENTS OF THE SWPPP FOR STOCKPILE STABILIZATION.

IMPORTED TOPSOIL SHALL BE PLACED IN AREAS WITH INADEQUATE TOPSOIL AS DETERMINED IN THE FIELD BY OWNERS REPRESENTATIVE. CLEAN TOPSOIL IMPORT SHALL CONFORM TO MNDOT 3877 TYPE A REQUIREMENTS

SILT AND TREE PROTECTIVE FENCE: CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING SILT FENCE PER PLAN PRIOR TO CONSTRUCTION. SILT FENCE LOCATIONS SHALL BE REVIEWED PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL STORM DRAIN INLETS

CONTRACTOR SHALL ERECT AND MAINTAIN PROTECTIVE FENCING FOR EXISTING TREES THAT ARE TO REMAIN AND THAT ARE NEAR THE CONSTRUCTION ZONE. OWNER WILL WALK THE SITE WITH THE CONTRACTOR PRIOR TO ROUGH GRADING TO IDENTIFY TREES TO BE PROTECTED. TREE PROTECTION INCLUDING PROTECTIVE FENCING SHALL BE CONSIDERED INCIDENTAL TO THE GRADING WORK AND SHOULD BE INCLUDED IN THE CONTRACTORS BID PRICE FOR THAT WORK. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

OTHER NOTES
N.I.C. = NOT IN CONTRACT

DRAINAGE ARROW

CONSTRUCTION LIMITS

SILT FENCE

TREE FENCING

0 10' 20' 40' 60'

RAMSEY COUNTY
Parks & Recreation
2015 VAN DYKE STREET
MAPLEWOOD, MN 55109
TEL (651)748-2500
FAX (651)748-2508

CONTACT INFORMATION:

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

Registration:	Landscape Architect
State:	Minnesota
Number:	42958
Signature:	B. Gary Shupryt

NO.	DATE:	DESCRIPTION:
1	X/XX/16	90D DOCUMENTS

DESIGN PHASE:

REVIEW DOCUMENTS

KELLER GOLF COURSE PRACTICE RANGE REALIGNMENT PROJECT

RAMSEY COUNTY PARKS AND RECREATION DEPARTMENT

KELLER REGIONAL PARK

DATE:	APRIL 2016
DESIGNED BY:	BGS
DRAWN BY:	BGS
CHECKED BY:	GAY

TITLE:

GRADING & DRAINAGE PLAN

BD 4.1

SHEET X OF X

RAMSEY-WASHINGTON
METRO WATERSHED DISTRICT

MEMORANDUM

Date: May 2, 2018

To: RWMWD Board of Managers

From: Nicole Soderholm, Permit Coordinator

Subject: #18-03 WCA: Nature Path Extension Wetland Replacement Plan

Launch Properties is planning to develop the parcel southwest of Tamarack Road and Bielenberg Drive in the City of Woodbury. The property is planned for commercial use. A city road extension of Nature Path would be required to service the proposed development.

To ensure safe access and meet traffic requirements, the proposed roadway will align with Nature Path to the east and the I-494 interchange to the north. Construction of the road would result in 0.48 acre of permanent wetland impacts.

In order to mitigate these impacts, the applicant is proposing a wetland replacement plan that achieves creation of 1.02 acres of wetland and 0.95 acre of wetland buffer. The replacement plan meets the Wetland Conservation Act's (WCA) 2:1 replacement ratio and the RWMWD Board of Managers' policy for 'no net loss' of wetlands in the watershed district.

The applicant has worked with the WCA Technical Evaluation Panel (TEP) comprised of local, state, and federal agencies to develop a replacement plan that minimizes impacts while meeting regulatory standards. A WCA Notice of Application was sent to the TEP on April 11th, 2018 with the comment period expiring on May 2nd, 2018. A TEP meeting took place on April 19th, 2018 to discuss any final concerns. The replacement plan was determined acceptable, but a list of revisions were requested to the application. The requested revisions are outlined in the enclosed Findings of Fact report.

The developer is interested in getting Board approval of the wetland replacement plan prior to submitting a grading permit application. If approved by the Board, the replacement plan includes a required 5 years of maintenance and monitoring by the applicant. A WCA financial assurance will be collected and returned upon successful completion of the 5-year monitoring period.

Staff recommends approval of the replacement plan with the requested revisions to the application as outlined in the Findings of Fact report.

(651) 792-7950
fax (651) 792-7951
office@rwmwd.org
rwmwd.org
2665 Noel Drive
Little Canada, MN 55117

Kimley»Horn

0 150 300 Feet

Figure 3. Proposed Wetland Impacts

Minnesota Wetland Conservation Act
Notice of Application

Local Government Unit (LGU)	Address
Ramsey-Washington Metro Watershed District	**2665 Noel Drive** **Little Canada, MN 55117**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Dan Regan, Launch Properties **800 Lasalle Avenue, Suite 1610** **Minneapolis, MN 55402** **dregan@launchproperties.com**	**Nature Path Extension**	**4/3/18**	**18-03 WCA**

Type of Application (check all that apply):

☐ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☒ Replacement Plan ☐ Banking Plan

Summary and description of proposed project (attach additional sheets as necessary):

A delineation report identifying 5 wetlands on an undeveloped parcel located southwest of Tamarack Road and Bielenberg Drive was approved on August 25, 2015 (#15-03 WCA). A subsequent no-loss application was approved on April 7, 2016 (#16-05 WCA) classifying 2 of the wetlands on the site (B and C) as incidental.

The property is located in the City of Woodbury: Section 5, Township 28N, Range 21W. Kimley-Horn and Associates on behalf of Launch Properties is submitting a replacement plan to mitigate wetland impacts for construction of a new road on the parcel. This road will be owned by the city and act as an extension of Nature Path to service a future development on the site. The road is proposed to alleviate existing congestion as well.

A traffic impact study was completed in the area, and the city has concluded the road is necessary for development of this parcel. The alignment of the road has been set for direct connection to the existing Nature Path as well as the I-494 and Tamarack Road interchange per city and MnDOT requirements.

The proposed road results in 0.48 acre of permanent wetland impacts (Types 2 and 3) requiring 2:1 replacement. Temporary impacts are not anticipated. Attachment C of the enclosed joint application outlines avoidance alternatives and minimization considered.

Wetland mitigation is proposed onsite with 1.04 acres of replacement and 0.95 acre of buffer, which fulfills the WCA 2:1 replacement requirements and satisfies the RWMWD Board of Managers' no net loss policy.

2. APPLICATION REVIEW AND DECISION

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 3 provides notice that an application was made to the LGU under the Wetland Conservation Act as specified above. A copy of the application is attached. Comments can be submitted to:

Name and Title of LGU Contact Person	Comments must be received by (minimum 15 business-day comment period):
Nicole Soderholm **Permit Coordinator**	**May 2, 2018**
Address (if different than LGU)	Date, time, and location of decision:

	6:30pm May 2, 2018 **RWMWD Board of Managers meeting** **2665 Noel Drive** **Little Canda, MN 55117**
Phone Number and E-mail Address **651-792-7976** **nicole.soderholm@rwmwd.org**	Decision-maker for this application: ☐ Staff ☒ Governing Board or Council

Signature: Nicole Soderholm **Date:** 4/11/18

3. LIST OF ADDRESSEES

☒ SWCD TEP member: **Jay Riggs (Washington Conservation District)**

☒ BWSR TEP member: **Ben Meyer**
☐ LGU TEP member (if different than LGU Contact):
☒ DNR TEP member: **Jenifer Sorensen, Becky Horton**
☐ DNR Regional Office (if different than DNR TEP member)
☐ WD or WMO (if applicable):
☒ Applicant (notice only) and Landowner (if different)
☐ Members of the public who requested notice (notice only):

☒ Corps of Engineers Project Manager (notice only)
☐ BWSR Wetland Bank Coordinator (wetland bank plan applications only)

4. MAILING INFORMATION

➢ For a list of BWSR TEP representatives: www.bwsr.state.mn.us/contact/WCA_areas.pdf

➢ For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➢ Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.
Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources
2115 Birchmont Beach Rd. NE	1201 E. Hwy. 2	1200 Warner Road	261 Hwy. 15 South
Bemidji, MN 56601	Grand Rapids, MN 55744	St. Paul, MN 55106	New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➢ For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687
or send to:

➢

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

➢ For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

5. ATTACHMENTS

In addition to the application, list any other attachments:

- ☒ **Figure 1- Project Location**
- ☒ **Figure 2- Delineated Wetland Boundaries**
- ☒ **Figure 3- Proposed Wetland Impacts**
- ☒ **Wetland Impact & Replacement Exhibit**
- ☒ **Appendix F- Replacement/Monitoring Plan**

PRELIMINARY - NOT FOR CONSTRUCTION

WETLAND IMPACT & REPLACEMENT EXHIBIT

LAUNCH PROPERTIES
WOODBURY, MN

SHEET NUMBER
1 OF 11

KHA PROJECT
160734004
DATE
03/14/2018
SCALE: AS SHOWN
DESIGNED BY: BRJ
DRAWN BY: ACL
CHECKED BY: BMW

PRELIMINARY

Kimley»Horn
© 2015 KIMLEY-HORN AND ASSOCIATES, INC.
2550 UNIVERSITY AVENUE WEST, SUITE 238N, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

No.	REVISIONS	DATE	BY

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
0+00.00	145.58	170.21	0.00	0.00	0.00	0.00
0+50.00	395.44	490.23	500.95	611.52	500.95	611.52
1+00.00	217.41	351.01	544.82	851.41	1045.76	1462.92
1+50.00	264.24	187.22	407.16	572.80	1452.93	2035.73
2+00.00	544.13	15.94	707.94	214.39	2160.86	2250.12
2+50.00	741.98	25.86	1141.57	44.62	3302.44	2294.74
3+00.00	627.67	32.68	1221.18	62.31	4523.61	2357.05
3+50.00	471.51	102.33	980.91	145.29	5504.53	2502.33
4+00.00	672.90	137.57	989.35	257.87	6493.88	2760.20
4+50.00	798.94	95.20	1246.66	248.03	7740.54	3008.23
5+00.00	791.66	152.57	1391.34	251.18	9131.88	3259.41
5+50.00	756.72	249.10	1433.68	371.92	10565.56	3631.34
6+00.00	590.12	174.16	1247.07	391.91	11812.63	4023.25
6+50.00	170.57	212.96	704.34	358.45	12516.97	4381.70
7+00.00	35.73	453.45	191.02	617.05	12707.98	4998.74
7+50.00	18.91	375.66	50.59	767.69	12758.58	5766.44
8+00.00	35.20	848.51	50.11	1133.49	12808.68	6899.93
8+50.00	50.95	881.08	79.77	1601.47	12888.46	8501.40
9+00.00	79.63	419.80	120.91	1204.52	13009.37	9705.92
9+50.00	131.50	397.92	195.49	757.15	13204.86	10463.07
10+00.00	183.05	31.04	291.25	397.19	13496.11	10860.26
10+50.00	255.43	0.00	379.86	21.28	13875.97	10881.54
11+00.00	358.90	0.00	521.81	0.00	14397.79	10881.54
11+50.00	462.20	0.00	709.59	0.00	15107.38	10881.54
12+00.00	458.79	0.96	822.08	0.64	15929.46	10882.18
12+50.00	508.15	48.83	880.44	34.38	16809.90	10916.56
13+00.00	541.88	18.69	958.81	50.06	17768.71	10966.62
13+50.00	556.30	0.45	1016.84	17.72	18785.55	10984.34
14+00.00	8.00	4.78	522.50	4.84	19308.05	10989.19
14+04.37	13.12	0.01	1.71	0.39	19309.76	10989.57

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

K:\TWC_LDEV\LAUNCH PROPERTIES\WOODBURY - TAMARACK\3 Design\CAD\PlanSheets\Cross Sections\2018-0314-Wetland Road Cross Sections - Copy.dwg March 15, 2018 - 3:04pm

Minnesota Wetland Conservation Act
Technical Evaluation Panel Findings Report

Date(s) of Site Visit/Meeting:	4/19/18	LGU:	Ramsey-Washington Metro Watershed District
County:	Washington	LGU Contact:	Nicole Soderholm
Project Name:	Nature Path Extension	Phone #:	651-792-7976
Location of Project: (attach map if possible)	Southwest of Tamarack Rd and Bielenberg Dr, Woodbury	Email Address:	nicole.soderholm@rwmwd.org

TEP ATTENDEES:	OTHER ATTENDEES:	OTHER ATTENDEES:
LGU: Nicole Soderholm, Paige Ahlborg	Greg Larson, USACE	
SWCD: Jay Riggs	Sean Kelly, USACE	
BWSR: Ben Meyer	Ashley Payne, Kimley-Horn	
DNR: N/A		

PROJECT DESCRIPTION AND PURPOSE OF MEETING:
Kimley-Horn submitted a wetland replacement plan on behalf of Launch Properties for a proposed commercial development. The commercial development requires access through an extension of Nature Path, a city-owned roadway. The project would result in 0.48 acre of permanent wetland impacts. A TEP meeting was requested to discuss the onsite wetland mitigation plan.

TYPE OF MEETING: *Check all applicable*

☒ Office ☐ On-Site ☒ Phone Conference ☐ E-Mail ☐ Other: ____

TEP FINDINGS AND RECOMMENDATIONS [1]:

WCA Regulatory Timeline:

8/25/15: Notice of Decision approving wetland delineation (#15-03 WCA)
4/7/16: Notice of Decision approving incidental status for Wetlands B and C (#16-05 WCA)
4/3/18: Application received for onsite 2:1 replacement plan (#18-03 WCA)
4/11/18: Notice of Application for #18-03 WCA
4/19/18: TEP meeting at RWMWD office to discuss replacement plan
5/2/18: End of 15 business day TEP comment period
5/2/18: RWMWD Board of Managers' decision
5/16/18: LGU deadline for issuing Notice of Decision for #18-03 WCA (10 business days after final decision is made)

Summary of Launch Properties Wetland Impacts and Replacement Plan:

A delineation report identifying 5 wetlands on an undeveloped parcel located southwest of Tamarack Road and Bielenberg Drive was approved on August 25th, 2015 (#15-03 WCA). A subsequent no-loss application was approved on April 7th, 2016 (#16-05 WCA) classifying 2 of the wetlands on the site (B and C) as incidental.

The applicant is proposing to develop the property for commercial use. City and MnDOT requirements require city road access to the parcel via an extension of the existing Nature Path roadway. The proposed road results in 0.48 acre of

[1] TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear,based on rule and best professional judgement.

permanent wetland impacts (Types 2 and 3) requiring 2:1 WCA replacement. Temporary impacts are not anticipated.

Avoidance alternatives were considered including a no-build alternative. The no-build alternative would not meet the purpose and need for the project and was therefore eliminated. The full avoidance alternative results in an alignment that does not meet city or MnDOT requirements from a traffic and safety perspective.

Minimization efforts were undertaken during the design phase of the project including various roadway layouts with different curves and widths. A culvert below Nature Path is proposed to maintain hydrology to a southeast portion of Wetland A that would have been otherwise isolated by the road construction. Impacts to Wetland D have been avoided. Overall, the wetland impacts were reduced by 0.27 acre from earlier design iterations.

TEP members present at the 4/19/18 meeting agreed that the sequencing outlined by Kimley-Horn is acceptable.

Expansion of Wetland A would result in 2:1 onsite replacement for a total of 1.02 acres of credit. 0.74 acre of wet meadow will be created with a 75% credit ratio resulting in 0.555 acre credit generated. 0.3 acre of shallow marsh will be created with a 75% credit ratio resulting in 0.225 acre credit generated. 0.96 acre upland buffer will be created with a 25% credit ratio resulting in 0.24 acre of credit generated. In total, 2 acres of wetland and buffer creation are proposed for the project.

Summary of Comments Received from the TEP

TEP members present for the April 19th meeting include Jay Riggs (WCD), Ben Meyer (BWSR), Greg Larson (USACE), and Sean Kelly (USACE).

The Army Corps' 2.5:1 replacement ratio may be flexible and that the proposed project would likely be covered under the general permit.

The plan provided is generally acceptable with some revisions requested to Appendix F:
- Further specify performance standards by wetland type in terms of native vegetation establishment
- Address a plan to satisfy regulatory requirements should the onsite mitigation be unsuccessful
- Provide additional information on the vegetation plan (Woodbury Costco plan could be used as guidance)
- Submit a separate no-loss application for the future commercial development specifying no impacts to the southeast "finger" of Wetland A that is being hydrologically preserved
- Add an additional column on page 3 to specify Army Corps wetland credits
- Provide a description of the tree clearing plan and describe efforts for preservation
- Provide a description of the existing upland areas that are proposed for wetland creation
- Specify grading techniques, erosion control, and equipment considerations for minimizing soil compaction and preventing sedimentation of the mitigation areas during construction. Add details to the construction plans.

The TEP will provide any additional comments on the replacement plan to Kimley-Horn if applicable as soon as possible but no later than 5pm on May 2nd, 2018.

SIGNATURES

SWCD Representative	4-24-18 Date	BWSR Representative	4/24/2018 Date
Do not concur ☐		Do not concur ☐	
Nicole Rockwell LGU Representative	4/24/18 Date	N/A DNR Representative	Date
Do not concur ☐		Do not concur ☐	

[1] TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear, based on rule and best professional judgement.

RAMSEY-WASHINGTON
METRO WATERSHED DISTRICT

MEMORANDUM

Date: May 2, 2018

To: Board of Managers and Staff

From: Nicole Soderholm, Permit Coordinator

Subject: April Enforcement Action Report

During April 2018:

Number of Violations:	**7**
Install/Maintain Inlet Protection	1
Install/Maintain Perimeter Control	1
Install/Maintain Construction Entrance	1
Stabilize Exposed Soils	1
Contain Liquid/Solid Wastes	1
Install/Maintain Energy Dissipation	2

Ongoing Activities:

Regular erosion/sediment control inspections resumed this month now that winter conditions have subsided. Anna Beining started this month as the District's Inspector Intern. Anna will complete erosion and sediment control inspections on active construction sites and inspect stormwater BMPs for maintenance. In April, staff assisted private developers and and government entities with permitting. Staff completed monthly permit review with Barr Engineering and responded to permit-related inquiries on projects in the District. Staff provided Wetland Conservation Act (WCA) guidance/administration and helped initiate changes to the District's permitting database.

Project Updates:

Permit #15-22 Zibell Homes, Shoreview

Construction of residential homes has resumed on the Zibell Homes site near Lake Wabasso. Staff completed an inspection of the site and noted routine corrective actions needed including maintenance of construction entrances, perimeter control, and street sweeping.

Staff notified the developer of the issues onsite and will complete a follow-up inspection in May.

Permit #15-21 Owasso Beach, Shoreview

The Owasso Beach residential development is currently inactive. Staff visited the site to ensure compliance of the site. Erosion and sediment control practices were found to be in good condition, and the undeveloped area of the site is fully stabilized. Staff notified the developer that the rain garden constructed last year is holding water. It is possible the excessive snowmelt and partially frozen soil is contributing to this, but staff will continue to monitor as the season progresses.

Permit #17-18 Owasso Park Improvements, Shoreview

Staff visited the site late in the month and observed a number of items needing correction including energy dissipation on inlets, soil stabilization, and sediment tracking. Some of the same items were noted during an inspection in January, but snow cover prevented the contractor from implementing improvements on the site. Now that the weather is favorable, the contractor and county have been notified of the timeline for correcting these outstanding issues. A follow-up inspection is scheduled for the first week of May.

Permit #15-39 Conifer Ridge, Maplewood

MPCA staff completed an inspection of the Conifer Ridge apartment complex off Hazelwood Street in late March. Non-compliant issues were sent to the contractor. While some of the issues were corrected, subsequent frozen soil conditions and snow cover prevented completion of the full checklist. District staff met with the contractor in late April and completed an inspection of the site. A number of locations on the site required maintenance with respect to perimeter control and soil stabilization. An inspection report was sent to the contractor and MPCA. A follow-up inspection is scheduled for the beginning of May. At that time staff will determine whether or not further enforcement is needed.

Permits Closed in April 2018:

14-08 North St. Paul 2014 SIP (North St. Paul)

****

Stewardship Grant Program

****

BMP Incentive Application Summary

Project Name: Margaret Street Project **Application Number:** 18-06 CS

Board Meeting Date: 5/2/2018

Applicant Name: Barbara Mundahl

Residential ☐ **Commercial/Government** ☑

Project Overview:

This project is located in the City of St. Paul along a 3 mile stretch of Margaret Street. The City is doing a mill and overlay project and did not originally plan to install residential rain gardens. When they learned we identified this as a priority area for our equity initiative, they asked if we would like to coordinate with their contractor to install rain gardens. We have 5 property owners interested in having a curb cut rain garden installed. These will be installed by the city contractor and planted by one of our maintenance contractors. Our hope is that once these are installed, we can do a more targeted outreach effort to install additional rain gardens in 2019 or 2020.
Through our equity initiative, this project is eligible for 100% funding up to $100,000.

BMP type(s):

Rain Garden(5)

Grant Request:

$20,000.00

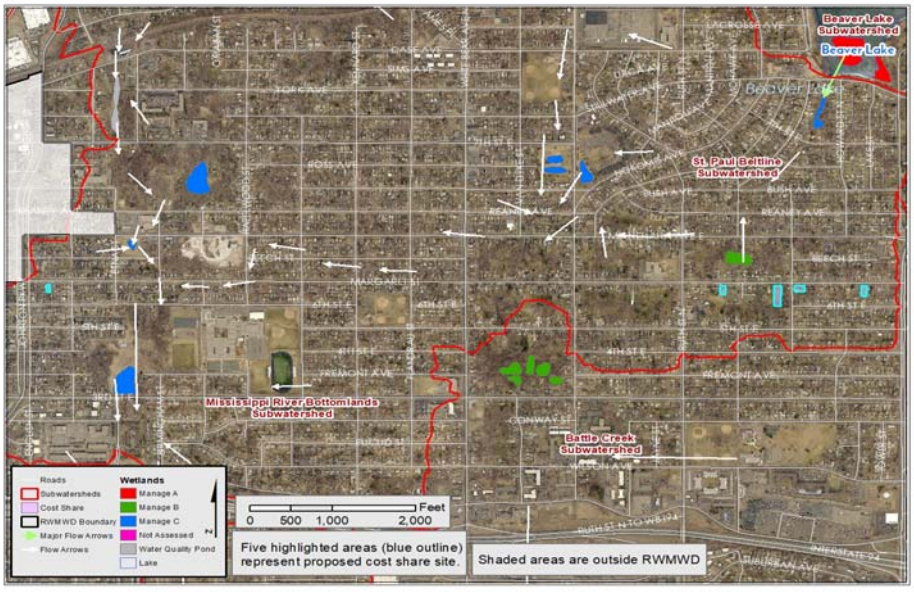
Recommendation:

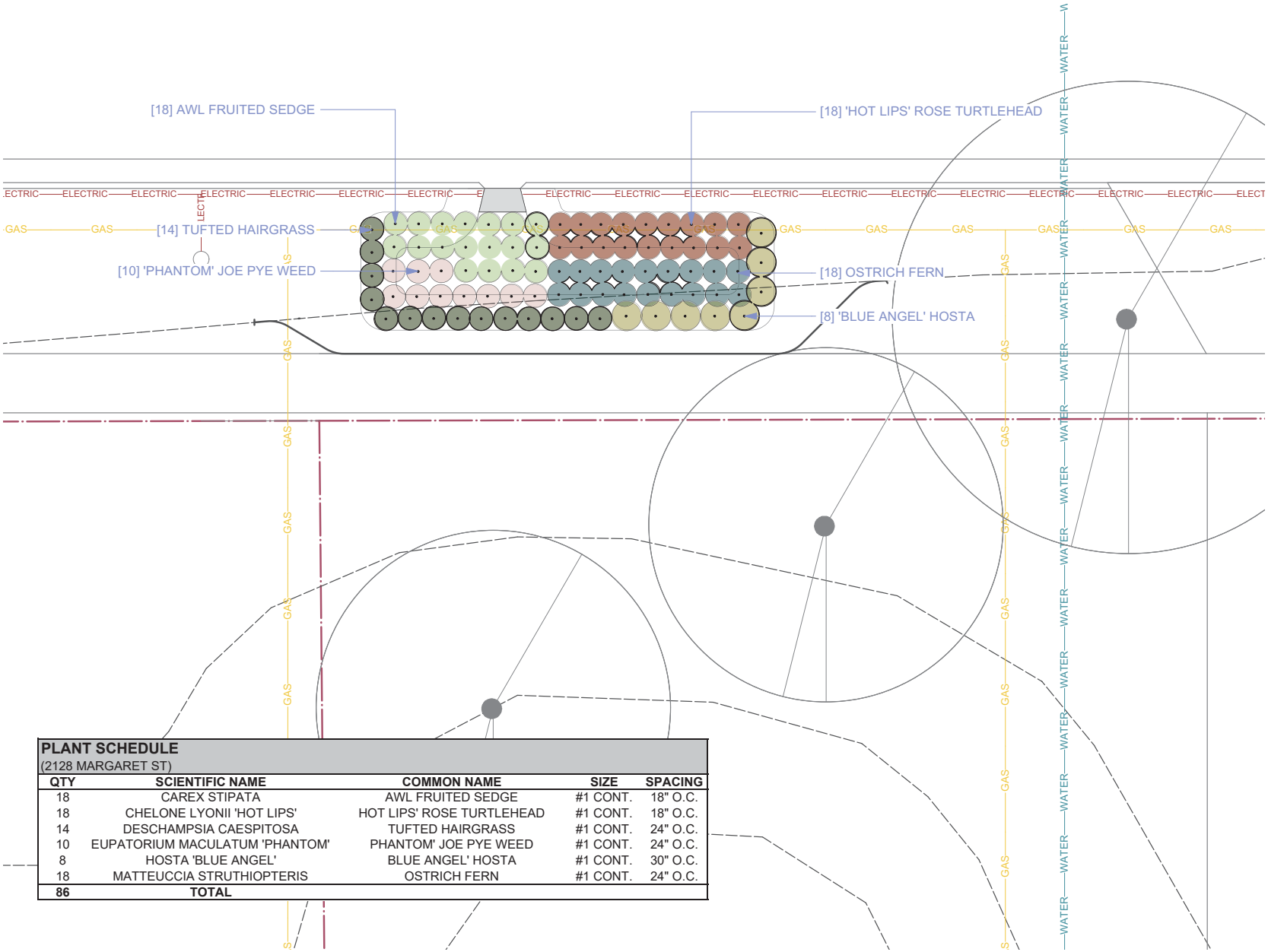
Staff recommends approval of this application.

Subwatershed:

St. Paul Beltline

Location Maps:





PLANT SCHEDULE
(2128 MARGARET ST)

QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING
18	CAREX STIPATA	AWL FRUITED SEDGE	#1 CONT.	18" O.C.
18	CHELONE LYONII 'HOT LIPS'	HOT LIPS' ROSE TURTLEHEAD	#1 CONT.	18" O.C.
14	DESCHAMPSIA CAESPITOSA	TUFTED HAIRGRASS	#1 CONT.	24" O.C.
10	EUPATORIUM MACULATUM 'PHANTOM'	PHANTOM' JOE PYE WEED	#1 CONT.	24" O.C.
8	HOSTA 'BLUE ANGEL'	BLUE ANGEL' HOSTA	#1 CONT.	30" O.C.
18	MATTEUCCIA STRUTHIOPTERIS	OSTRICH FERN	#1 CONT.	24" O.C.
86	**TOTAL**			

Ramsey Conservation District

RAMSEY CONSERVATION DISTRICT
1425 PAUL KIRKWOLD DR
ARDEN HILLS, MN 55112
651-266-7274
www.ramseyconservation.org

PROJECT: RSVP RAINGARDENS
LOCATION:
2128 MARGARET ST
ST PAUL, MN 55106

WATERSHED DISTRICT:

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

DESIGNER: MPS
DATE: 04/12/2018
REVISION:
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

NOTES:
FOR REFERENCE USE ONLY. NOT FOR CONSTRUCTION.

INSTALL PLANTS 18"-30" O.C. PER PLANT SCHEDULE

ALL SUBSTITUTIONS FOR CONSTRUCTION MATERIAL AND PLANT SPECIES/ QUANTITIES SHALL BE APPROVED PRIOR TO INSTALL

11" x 17" SHEET SIZE

SCALE: 1/8"=1'0"

PLANTING PLAN

N

L1.10

BMP Incentive Application Summary

Project Name: Willowbrook Reserve **Application Number:** 18-07 CS

Board Meeting Date: 5/2/2018

Applicant Name: David Woods

Residential ☐ **Commercial/Government** ☑

Project Overview:

This project is located on a 70 acre public park owned by the MN DNR. This project will focus on enhancing the habitat of 3 acres of floodplain forest at Willowbrook Reserve. The area is currently dominated by invasive trees, forbs, and grasses. The goal of the project is to remove and manage invasive plants and diversify the ground layer, understory, and canopy with native plants. Urban Roots youth interns will be taking a lead role in invasive removal, native planting, and community outreach. The total project cost is about $50,000. Urban Roots has received a DNR grant for a majority of the cost and is asking RWMWD for match funds.
This project is eligible for 50% funding up to $15,000.

BMP type(s):

Native Habitat Restoration(1)

Grant Request:

$15,000.00

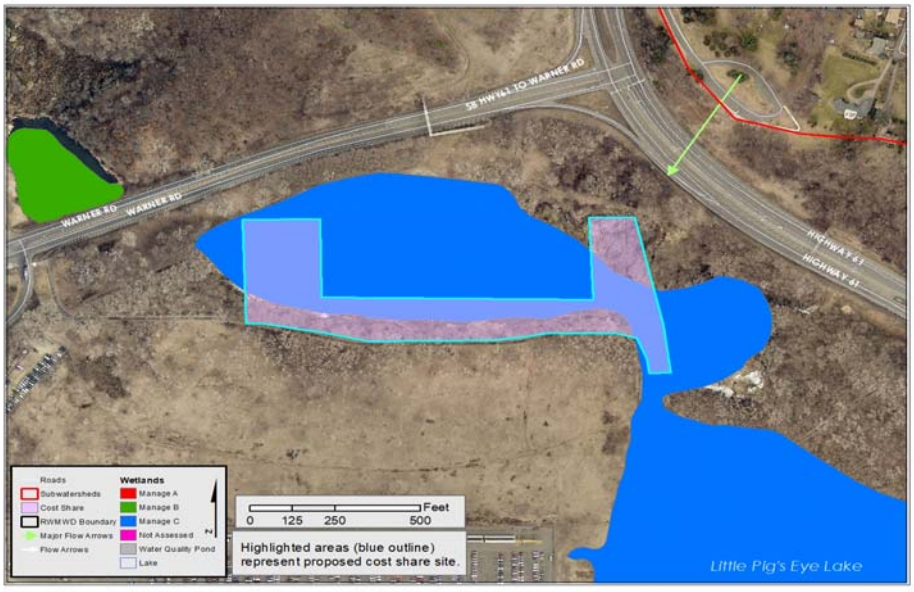
Recommendation:

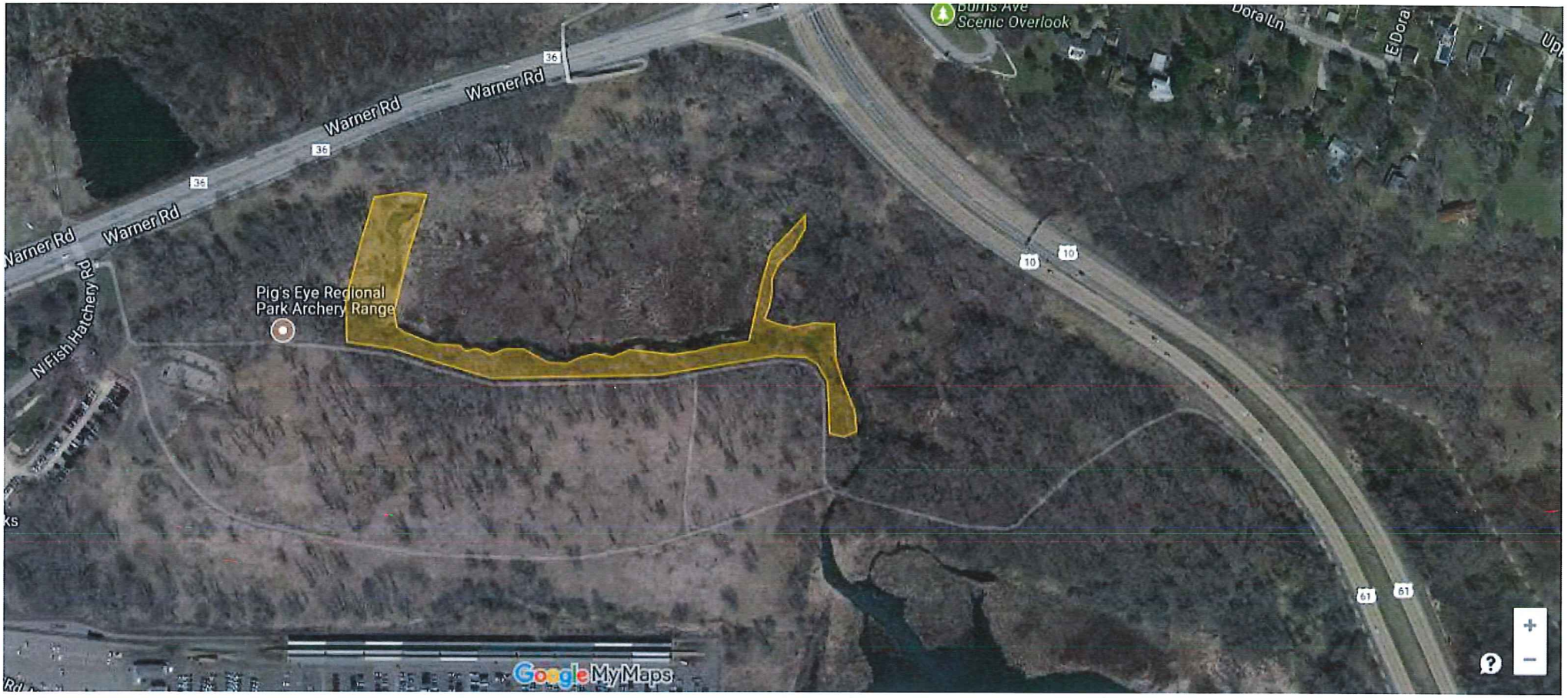
Staff recommends approval of this application.

Subwatershed:

Mississippi River Bottomlands

Location Maps:




Burns Ave
Scenic Overlook
Dora Ln
E Dora
Warner Rd
Warner Rd
Warner Rd
Warner Rd
36
36
36
Pig's Eye Regional
Park Archery Range
N Fish Hatchery Rd
10
10
61
61
Google My Maps

BMP Incentive Application Summary

Project Name: Wakefield Park Improvements **Application Number:** 18-08 CS

Board Meeting Date: 5/2/2018

Applicant Name: Audra Robbins

Residential ☐ **Commercial/Government** ☑

Project Overview:

City of Maplewood will be reconstructing the Wakefield Park facilities under permit #18-07. As part of this project, they will be installing 2 rain gardens. The first will be required to meet volume reduction standards for the permit. The City has asked to cost share on a more intense native planting plan for this basin rather than a standard planting as originally was in the project scope. This portion of the project is eligible for 50% funding up to $15,000. The City will also be installing a smaller rain garden south of the new pavilion. The estimated cost for this rain garden is $5,200. This rain garden is eligible for 100% funding up to $100,000. The rain gardens will be maintained by the City of Maplewood.

BMP type(s):

Native Habitat Restoration(1), Rain Garden(1)

Grant Request:

$20,200.00

Recommendation:

Staff recommends approval of this application.

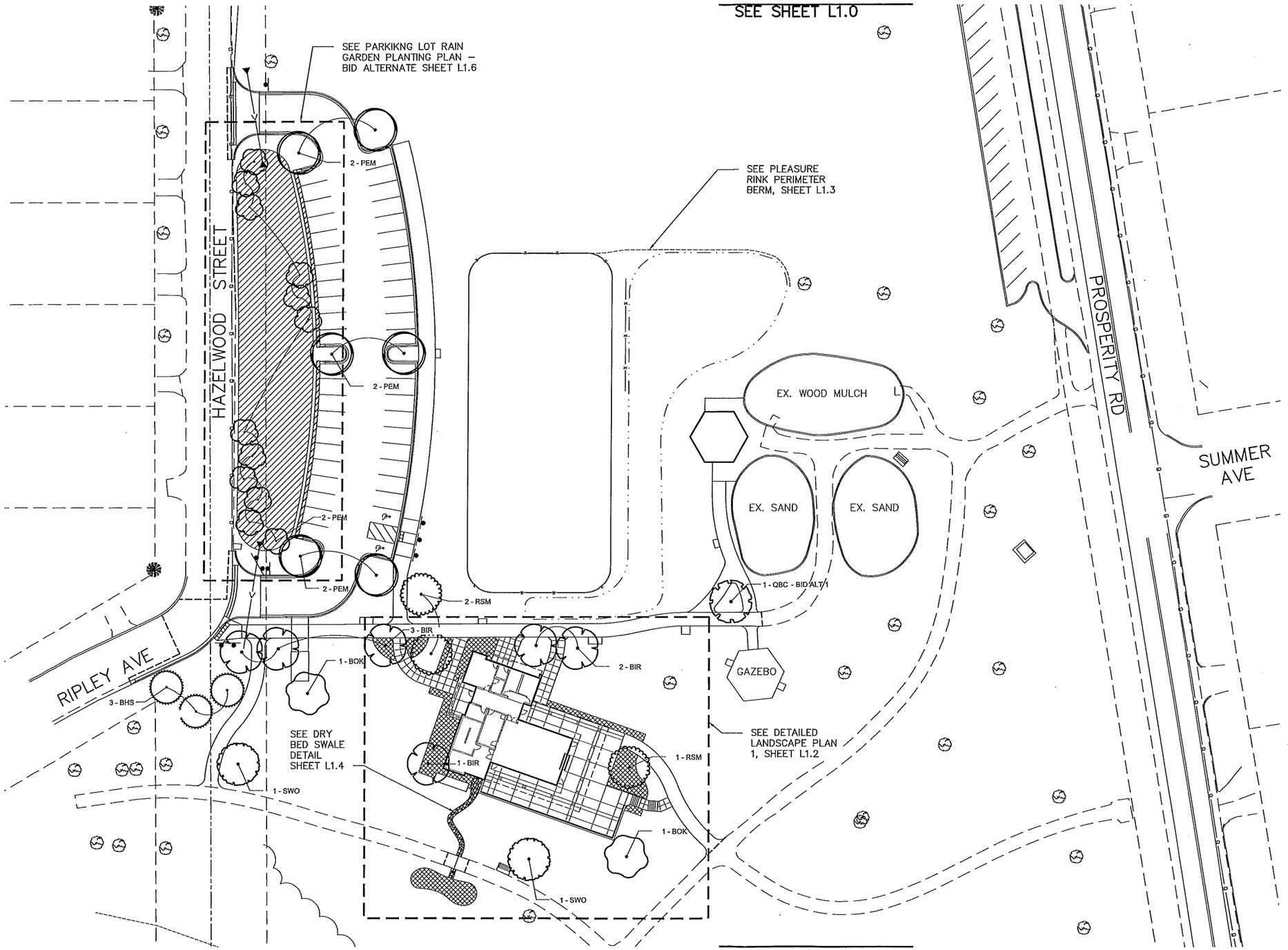
Subwatershed:

Wakefield Lake

Location Maps:

K:\TWC_Civil\City\MAPLEWOOD\WAKEFIELD PARK FINAL DESIGN\CAD\Plan Sheets\160500053-Landscape_Plan.dwg, March 01, 2018 - 5:04pm

SEE SHEET L1.0



LEGEND

PROPOSED SHRUB/PERENNIAL BED. SEE SHEET L1.2. ALL PLANTING BEDS SHALL RECEIVE 3" DOUBLE-SHREDDED HARDWOOD BARK MULCH.

MNDOT SEED MIXTURE 21-112

NOTE: SEE L1.3 FOR PLANT SCHEDULE.

NOTES:

1. COORDINATE ALL LANDSCAPE IMPROVEMENTS WITH REMOVALS, UTILITIES, AND SITE WORK. ADJUST TREE LOCATIONS ON-SITE TO ACCOMMODATE FOR UNDERGROUND UTILITIES. STAKE TREE LOCATIONS FOR APPROVAL OF LANDSCAPE ARCHITECT BEFORE PLANTING.
2. ALL LANDSCAPE AREAS SHALL HAVE MN/DOT TOPSOIL BORROW PLACED AT MINIMUM DEPTH OF 4" FOR SEEDED AREAS, AND MN/DOT BOULEVARD TOPSOIL BORROW AT 24" FOR PLANTING BEDS AND 36" FOR TREE AREAS.
3. DOUBLE SHREDDED HARDWOOD BARK MULCH SHALL BE PLACE AT A MINIMUM OF 3" IN DEPTH, FREE OF ALL DELETERIOUS MATERIAL AND LOCATED IN ALL LANDSCAPE BEDS AND TREE RINGS UNLESS OTHERWISE INDICATED.
4. INSTALL STEEL EDGER ANCHORED 4'-0" O.C. WITH METAL SPIKES, COLOR BLACK WHERE PLANTING BEDS AND ROCK MULCH ABUT GRASS AND WHERE NOTED ON PLAN.
5. PROTECT EXISTING TREES AND SHRUBS TO REMAIN.
6. CONTRACTOR TO VERIFY PLANTS REQUIRED AS REFLECTED ON PLAN.
7. CONTRACTOR TO WARRANTY NEW PLANTINGS FOR ONE YEAR UPON PROJECT COMPLETION. SEE SPECIFICATIONS FOR REQUIREMENTS DURING WARRANTY/PLANT ESTABLISHMENT PERIOD.
8. TRIM TREE LOCATIONS AS NECESSARY OR PER THE DIRECTION OF THE LANDSCAPE ARCHITECT DURING THE PLANT ESTABLISHMENT PERIOD.
9. PLACE PREEN IN ALL PLANTING BEDS PRIOR TO PLACING MULCH OR EROSION CONTROL BLANKET.
10. SEE SHEETS c6.0 AND c6.1 FOR SEED/SOD INFORMATION.

GRAPHIC SCALE IN FEET
0 15 30 60

No.	Date	Revisions	App.
1.			

DRAWING NAME DWG	
DESIGNED BY:	TPH
DRAWN BY:	JLK
CHECKED BY:	TPH
DATE:	2/28/2018
PROJECT NO.	160500053

Kimley»Horn
2550 UNIVERSITY AVENUE WEST, SUITE 238N
SAINT PAUL, MINNESOTA 55114
Ph: 651-645-4197 www.kimley-horn.com

HAGEN, CHRISTENSEN & McILWAIN ARCHITECTS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

TODD P. HALUNEN

DATE: 2/28/2018 MN LIC. NO. 24900

Maplewood

CITY OF MAPLEWOOD
WAKEFIELD PARK IMPROVEMENTS
CITY PROJECT NO. PR17-01
LANDSCAPE PLAN

SHEET NO.
L1.1

Stewardship Grant Program Budget Status Update

May 2, 2018

Homeowner	Coverage	Number of Projects	Funds Allocated
Habitat Restoration and rain garden w/o hard surface drainage	50% Cost Share $15,000 Max	1	$2,384.41
Rain garden w/hard surface drainage, pervious pavement, green roof	75% Cost Share $15,000 Max	1	$5,000
Shoreland Restoration (below 100-year flood elevation w/actively eroding banks)	100% Cost Share $15,000 Max	1	$14,000

Commercial, School, Government, Church, Associations, etc.	Coverage	Number of Projects	Funds Allocated
Habitat Restoration	50% Cost Share $15,000 Max	1	$230
Shoreland Restoration (below 100-year flood elevation w/actively eroding banks)	100% Cost Share $100,000 Max	0	$0
PRIORITY AREAS:	100% Cost Share $100,000 Max	1	$80,000
NON-PRIORITY AREAS:	75% Cost Share $50,000 Max	0	$0
Maintenance	50% Cost Share $5,000 Max for 5 Years	4	$5,000
Consultant Fees			$35,507
Total Allocated			**$142,121.41**

2018 Stewardship Grant Program Budget	
Budget	$800,000.00
Total Funds Allocated	$142,121.41
Total Available Funds	**$657,878.59**

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Action Items

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Request for Board Action

Board Meeting Date: May 2, 2018 **Agenda Item No:** 8A

Preparer: Tina Carstens, Administrator

Item Description: Grass Lake/Snail Lake Optimization Study Update and Recommended Actions

Background:
The purpose of this study is to evaluate the potential for optimization of the existing Snail Lake/Grass Lake system (from Snail Lake to Grass Lake to Highway 694), with the goal of lowering flood levels in the system's water bodies in order to reduce the risk of flooding to habitable structures and lessen the impacts to surrounding properties.

As you will recall at the November 2017 board meeting, Barr Engineering presented the findings and recommendations of next steps for the optimization study. At the December 2017 meeting, the board directed staff to proceed with the additional feasibility studies that were then presented to the board in February and March of 2018.

The attached memo further discusses the rest of the items from the optimization study that needed further study. The memo discusses each item that was studied and provides a staff recommendation for how to move forward with those options.

Barr staff will walk through the memo with a presentation at the board meeting and will lead a discussion on the recommended actions. Staff will be looking for the board's approval to move forward with the recommended steps.

Applicable District Goal and Action Item:

Goal: Manage risk of flooding – the District will reduce the public's risk to life and property from flooding through programs and projects that protect public safety and economic well-being.

Action Items: Maintain District flood storage facilities and storm sewer systems. Cooperate with appropriate stakeholders to identify, assess and address potential flooding problems in the District.

Staff Recommendation:
Discuss and consider the recommended options to move forward on.

Financial Implications:
There are funds available in the engineering feasibility study line item and flood damage reduction line item for the recommended next steps. Future improvement projects can also be budgeted for in the next budget cycle.

Board Action Requested:
Direct staff to continue with the recommended actions.

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

resourceful. naturally. engineering and environmental consultants BARR

Memorandum

To:	Board of Managers and Staff
From:	Tina Carstens, Brad Lindaman and Erin Anderson Wenz
Subject:	Flood Management Options for Snail, Grass and West Vadnais Lakes- Final Summary Technical Memorandum
Date:	April 26, 2018

Over the course of the last several board meetings, Barr has presented our progress in exploring the various options that have been identified for optimizing management of flood waters in the Grass Lake area, specifically in Snail, Grass, and West Vadnais lakes and in wetland A. This technical memo summarizes these options, paying special attention to those that the board has not yet seen, and comparing all options and their costs and benefits, to help the board of managers decide on next steps for the Ramsey-Washington Metro Watershed District's (RWMWD) flood management in the area.

Snail Lake

Increase flood storage by creating a connection between Snail Lake and the wetland to the northeast of Snail Lake

Many have wondered whether the flood storage (also called "live" storage) in Snail Lake might be increased by creating a connection (if it doesn't already exist) to the wetland to the lake's northwest. Barr recently visited the connection point between the two water bodies and confirmed that they are already connected.

Figure 1: From Snail Lake, looking west through the channel to the adjacent (and connected) wetland area

Figure 2: Sign at the channel between Snail Lake and the wetland area to its northwest, indicating a fish spawning area

Because there is already a hydraulic connection between the two water bodies that would allow flood waters from Snail Lake to equilibrate with the wetland during high water levels, no changes to the connection point are proposed for the purpose of managing flood elevations on Snail Lake. Confirmed that there is a connection between the two waterbodies and that our model is accurately reflecting conditions.

Recommendation: Take no other action on this option.

Evaluate the level of risk of future flood levels on Snail Lake that could cause damage to habitable structures; evaluate these risks for two different management scenarios: 1) Do nothing; and 2) lower West Vadnais Lake's outlet to 881 and add a Snail Lake outlet to Grass Lake at 882.

On May 22, 2017, Snail Lake reached its highest-ever recorded water elevation of 885.6 (NAVD88 datum). Since then, it has fallen slightly, but has remained high enough to cause concerns about the potential for damage to houses around Snail Lake, as well as for an overflow to the Crestview Addition homes to the south via the "back-door route," if a large-enough storm were to occur.

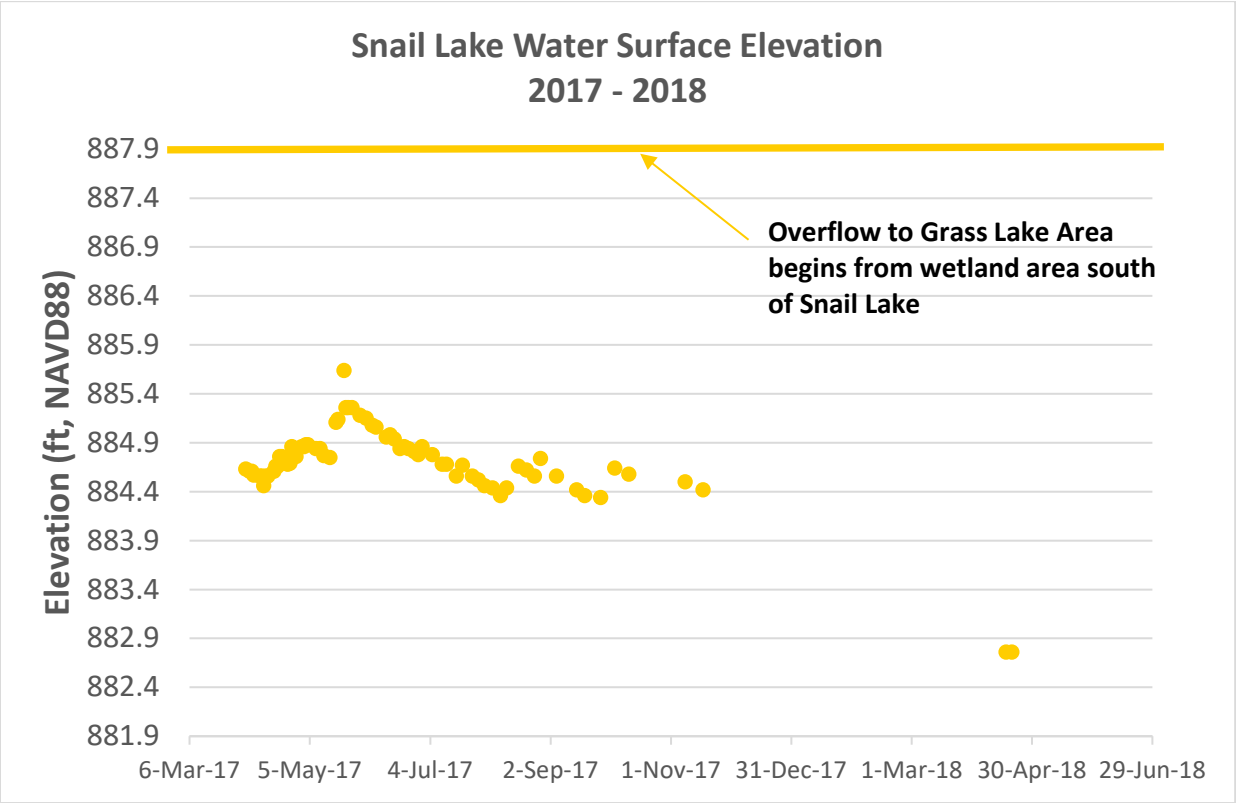

Figure 3: Recent lake-level monitoring data for Snail Lake (NAVD88 datum)

Barr has evaluated the potential for future damages in several ways. First, we created a series of model runs that evaluated what would happen if the 100-year, 96-hour storm hit for a range of starting elevations in Snail Lake. In the model we assumed there was evaporation but no seepage to groundwater and no outlet from Snail Lake to Grass Lake (existing conditions). This is an unlikely and a conservative assumption, but it serves as a worst case scenario with which we can judge management options. In reality, recent groundwater data indicates that the groundwater seepage is increasing near Snail Lake, based on the difference in elevation between Piezometer 7 and Snail Lake's water surface, according to recent monitoring data. Should this gradient (difference in elevation) continue to increase, we expect to see Snail Lake levels drop at an increasing rate.

Model results are shown below in Figure 4. Results indicate that Snail Lake would overflow during the 100-year, 96-hour storm only if it starts at an elevation above approximately 886- higher than its highest recorded elevation in May, 2017, and 3 feet higher than it is today. And, if that happened, only one home would be affected since the others reside above the overflow elevation. The impacts to the Crestview Addition as a result of a Snail Lake overflow depend on the starting level of Snail Lake when the storm hits. Model results indicate that if the Snail Lake starting elevation is above 886.4, overflow

waters would start to impact the Crestview Addition homes. , causing flood water to rise in the Crestview Addition.

A note on Snail Lake's overflow elevation: Snail Lake itself has to rise to an elevation of approximately 884.1 before flowing through a 24-inch pipe to the small wetland area to the south of the lake (which itself overflows at an elevation of 887.9 through the "backdoor route" to the Crestview Addition). At Snail Lake elevations above 884.1, these two waterbodies (the lake and the wetland) are equilibrated, thus 887.9 is also the overflow elevation for Snail Lake.

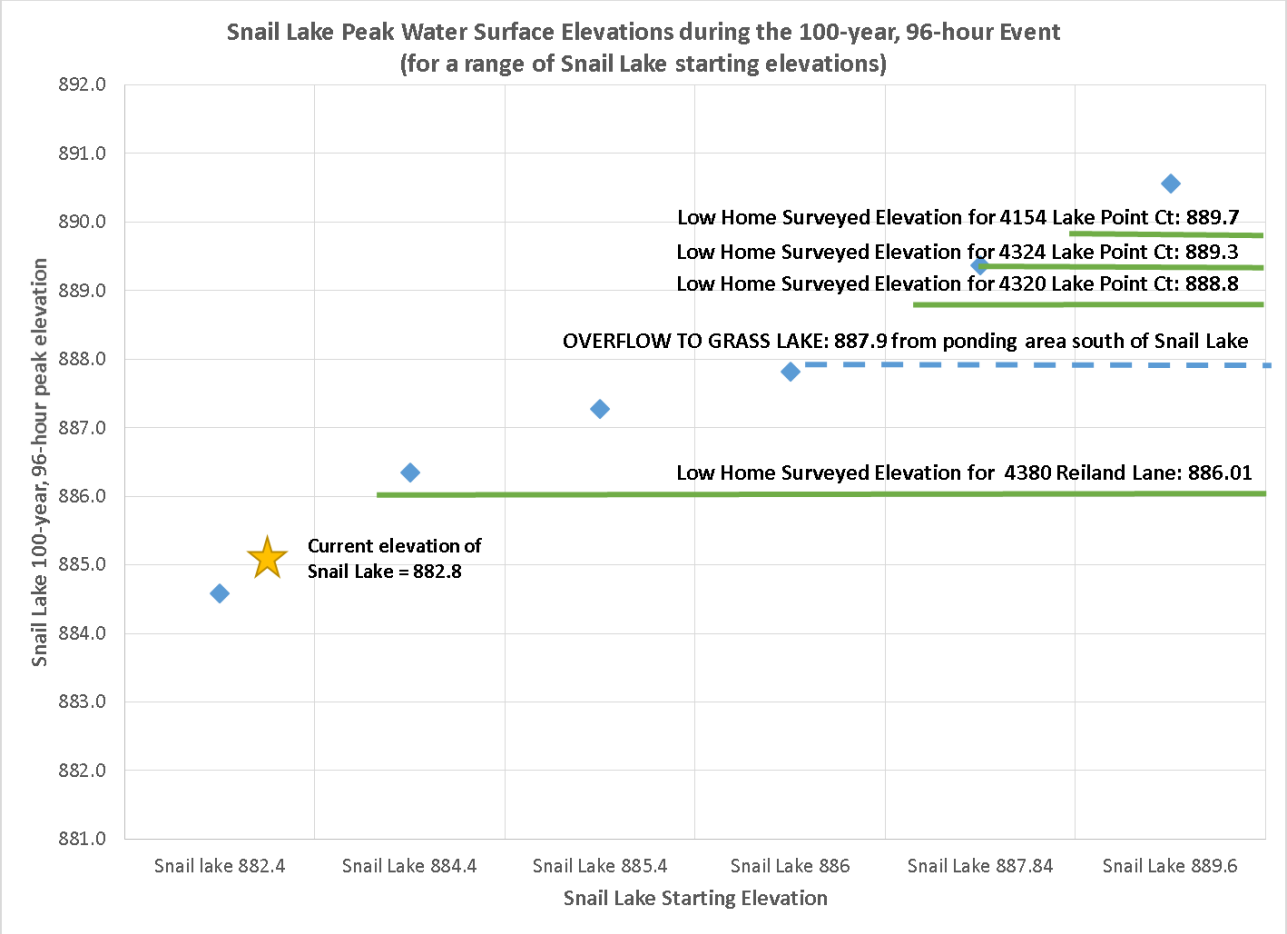

Figure 4: 100-year, 96-hour storm peak elevations for Snail Lake, assuming a range of Snail Lake starting elevations, no seepage (only evaporation), and no outlet to Grass Lake (NAVD88 datum)

In the Grass Lake Optimization Study technical memo (dated December 15, 2017) Barr discussed the possibility of constructing a 15-inch high-density polyethylene pipe to connect Snail and Grass lakes to provide a way for Snail to slowly draw down between storm events. An elevation of 882 was suggested, which would result in a 100-year, 96-hour peak elevation of 884.3 (if Snail Lake started at an elevation of 882- the pipe's invert elevation). This option would provide approximately 1.7 feet of freeboard to the lowest home on Snail Lake (4380 Reiland Lane, which has a low entry elevation of 886.01). However, given that the outflow from Snail Lake through this proposed outlet would be controlled by Grass Lake's ability to accept it (Grass Lake and Snail Lake have similar elevations during high water conditions, and so Grass Lake's water level would slow or stop the outflow from Snail to Grass Lake at times), there is no guarantee that Snail Lake would draw down to 882 before another storm hit the subwatershed again. In fact, it is best to think of this Snail Lake outlet option as one that would be utilized mostly to draw the lake down during off-peak periods downstream.

Because the assumption of a starting elevation in a landlocked area is so important, and because the drawdown time in Snail Lake, Grass Lake, and West Vadnais Lake is so long (on the order of months), we cannot assume that if the 100-year, 96-hour storm were to hit, these water bodies would have time to draw down in advance of more rain. Therefore, to understand the effect of different management options in Snail Lake or Grass Lake, we used current (April 20) elevations plus the anticipated bump in elevation due to the current snowmelt underway and ran 2015-2017 precipitation conditions through a continuous simulation of the water levels in water bodies in the Grass Lake area. The result (shown in Figure 5), is that only the lowest home would suffer an impact under the "Do Nothing" scenario. If the Snail Lake outlet was constructed (along with lowering the outlet from West Vadnais Lake), the lowest home would have 2 feet of freeboard above the highest Snail Lake elevation (which occurs in May, 2017). Snail Lake does not overflow in either scenario.

A note on winter months in the continuous simulation: Barr did not simulate winter snowfall and melt with the XP-SWMM model of the area. Rather, we applied a correction factor to the fall 2015 and fall 2016 modeled water elevations that adjusted the following spring elevations to the same degree as observed in the monitoring data on the lake over the same time periods. This adjustment simulates the lake level change due to snowmelt, evaporation, and seepage that may have happened over the winter months.

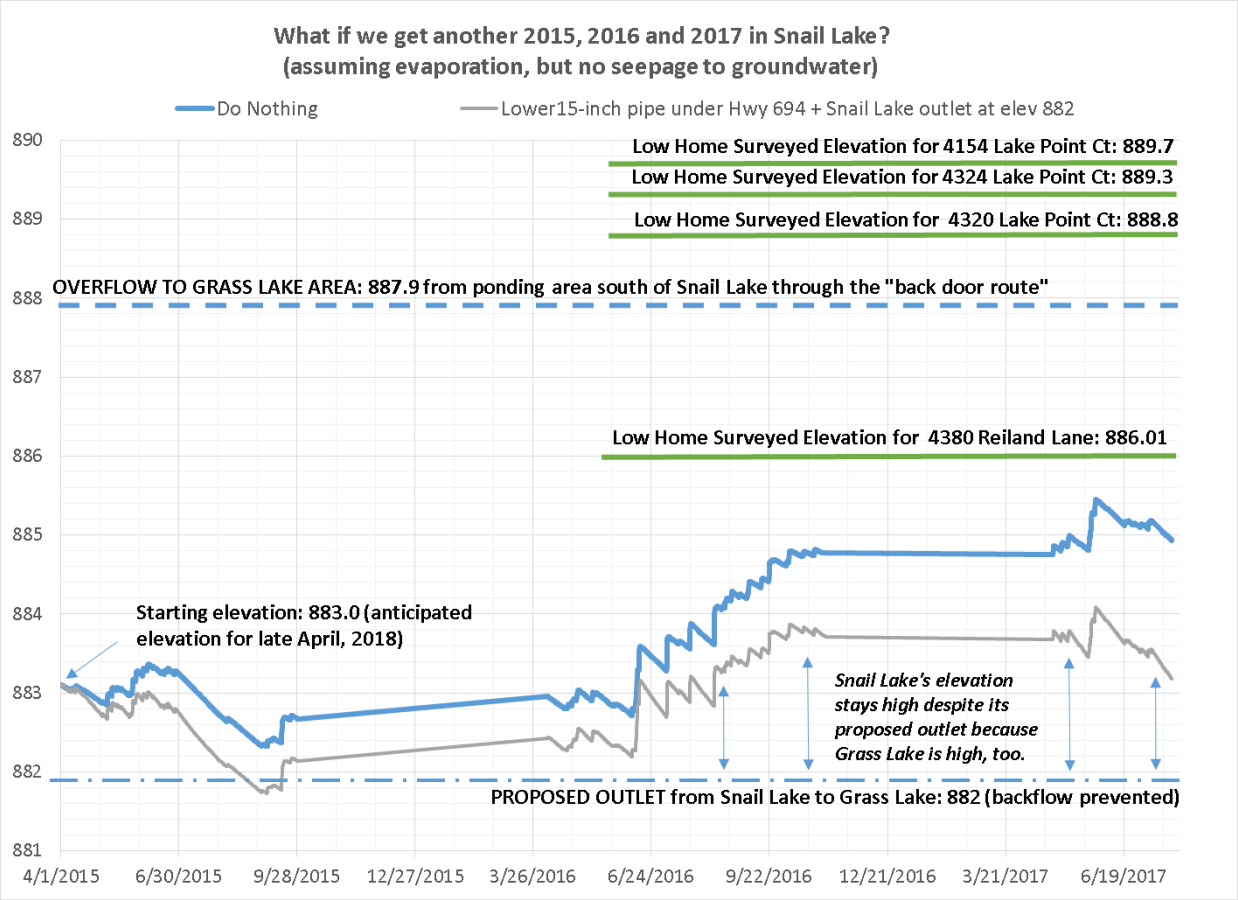

Figure 5: Continuous simulation modeling results for three Snail Lake management options, assuming 2015, 2016, and 2017 precipitation levels and evaporation and no seepage to groundwater (NAVD88 datum)

From these exercises, staff concludes that although an outlet could be constructed to connect Snail Lake and Grass Lake to keep the 100-year, 96-hour storm 1.7 feet below the lowest home on Snail Lake during ideal conditions (with Snail Lake starting at its proposed outlet elevation of 882), outflow from Snail to Grass lakes will likely be slowed during and after the storm event, keeping elevations high for long periods of time. Regardless, either with or without the implementation of a Snail Lake outlet, water surface elevations in 2015, 2016, and the first half of 2017 would have been low enough to prevent Snail Lake from overflowing, and from reaching the lowest home on Snail Lake. It is important to remember that Snail Lake has a relatively small tributary area (961 acres) relative to its surface area (190 acres, or a ratio of 5 to 1), which allows for considerable storage during storm events before an overflow would occur.

Nonetheless, the addition of the Snail Lake outlet does provide additional freeboard to the lowest home around the lake and a potential for off-peak drawdown of the lake for shoreline protection and recreational purposes. Because the benefits of this effort are largely attributable to private shoreline residents and County parkland, it is appropriate to consider a partnered approach with the City of Shoreview and Ramsey County Parks and Recreation for this implementation strategy.

Recommendation: Partner with the City of Shoreview and Ramsey County Parks and Recreation to implement an emergency response plan for Snail Lake

Recommendation: Partner with the City of Shoreview and Ramsey County Parks to install an off-peak drawdown pipeline that connects Snail Lake to Grass Lake.

Evaluate the effect of diverting Snail Lake overflow from the "back-door path" to wetland A

As indicated in the modeling results shown in figures 4 and 5, overflow from Snail Lake into the Grass Lake area is unlikely. However, area residents have understandably wondered what would happen if a large storm event hit the area when Snail Lake was already at a very high water stage. For the purposes of demonstration, we modeled the scenario where Snail Lake is at its overflow elevation of 887.9 and a 100-year, 96-hour storm occurs. Keep in mind that this stage is over 2 feet higher than the highest stage that the lake reached in 2017 (its highest level on record). In this extreme scenario, overflowing water could be routed through wetland A (through the use of sandbags and emergency clearing) to protect the homes in the Crestview Addition. Modeling indicates that doing this would prevent Snail Lake water from reaching the Crestview Addition. The time to peak during the 100-year, 96-hour storm is approximately seven days for this storm in Snail Lake, allowing enough time to mobilize action before the peak of the storm, especially if action begins when Snail Lake reaches an elevation of 886. Rerouting Snail Lake overflow to wetland A would increase wetland A's bounce, but during this storm event, wetland A and Grass Lake would be equilibrated above 884.5 anyway, with or without the Snail Lake overflow.

However, this modeled scenario assumes that downstream waterbodies (Grass Lake and West Vadnais Lake, for example) are at their normal elevations when the overflow happens. In reality, if Snail Lake rose high enough to overflow to this magnitude, the elevations of other area waterbodies would be at record levels as well.

Recommendation: Include provisions for an emergency diversion of overflows to wetland A (and away from the "back-door route") as a part of the emergency response plan for Snail Lake.

Evaluate the option of pumping water from Snail Lake to Sucker Lake to draw the lake down to 882 between storm events to the greatest extent possible

This option was presented in the technical memorandum dated February 5, 2018. Given the extremely high cost, the limited regional benefit to the Grass Lake area, and the low risk of flood impacts to Snail Lake homes, this option is not considered to be cost effective and is not recommended by staff. Table 1 contains a comparison to the costs and benefits of this option relative to other flood management options that have been evaluated for the Snail Lake, showing why this option is not considered cost effective.

Recommendation: No further action on this option.

Wetland A

Provide guidance for Ramsey County Parks and Recreation regarding water levels in wetland A to inform park planning and placement of trails

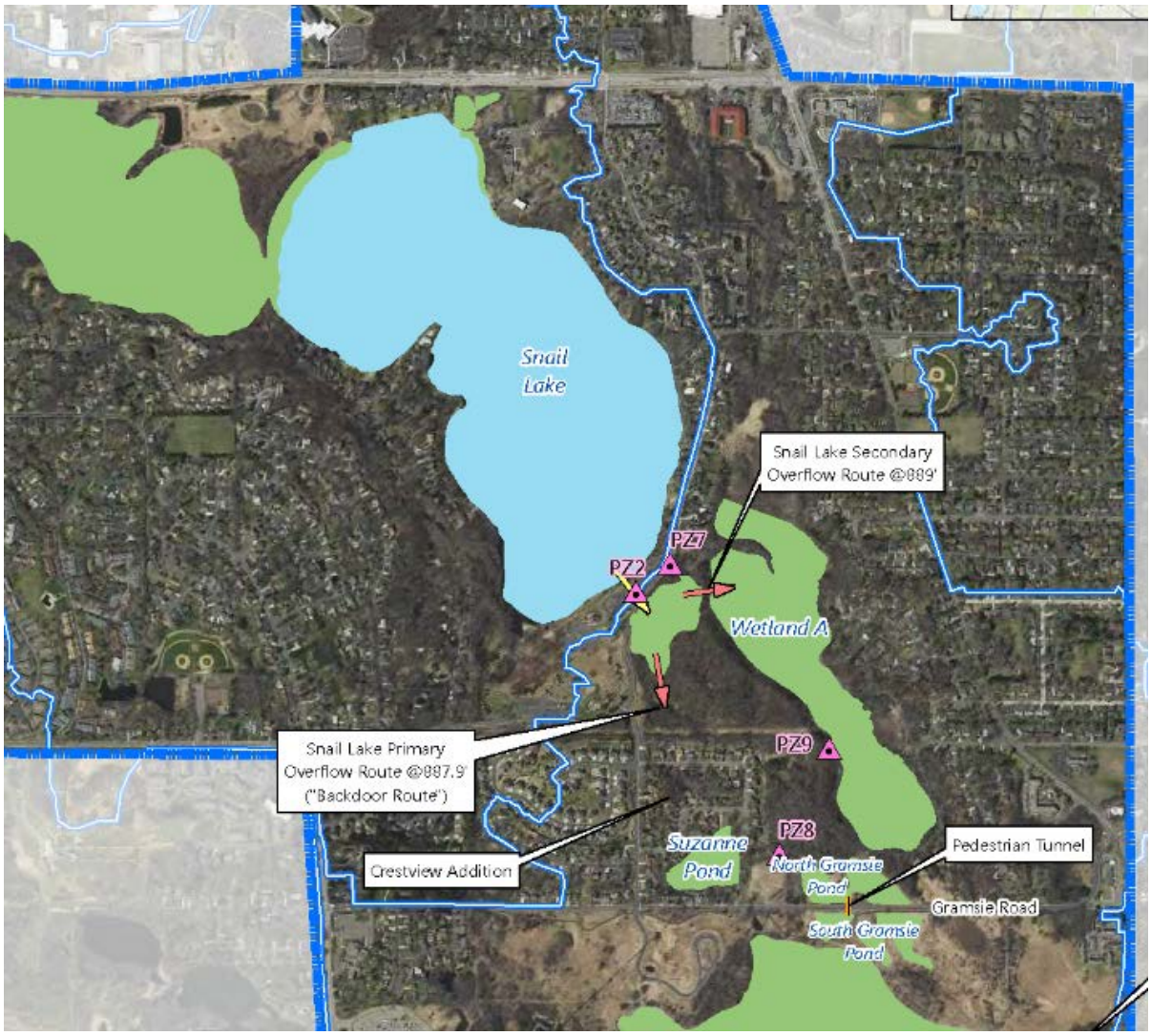

Figure 6: Piezometer locations (PZ2, PZ7, PZ8, and PZ9) near Snail Lake and wetland A

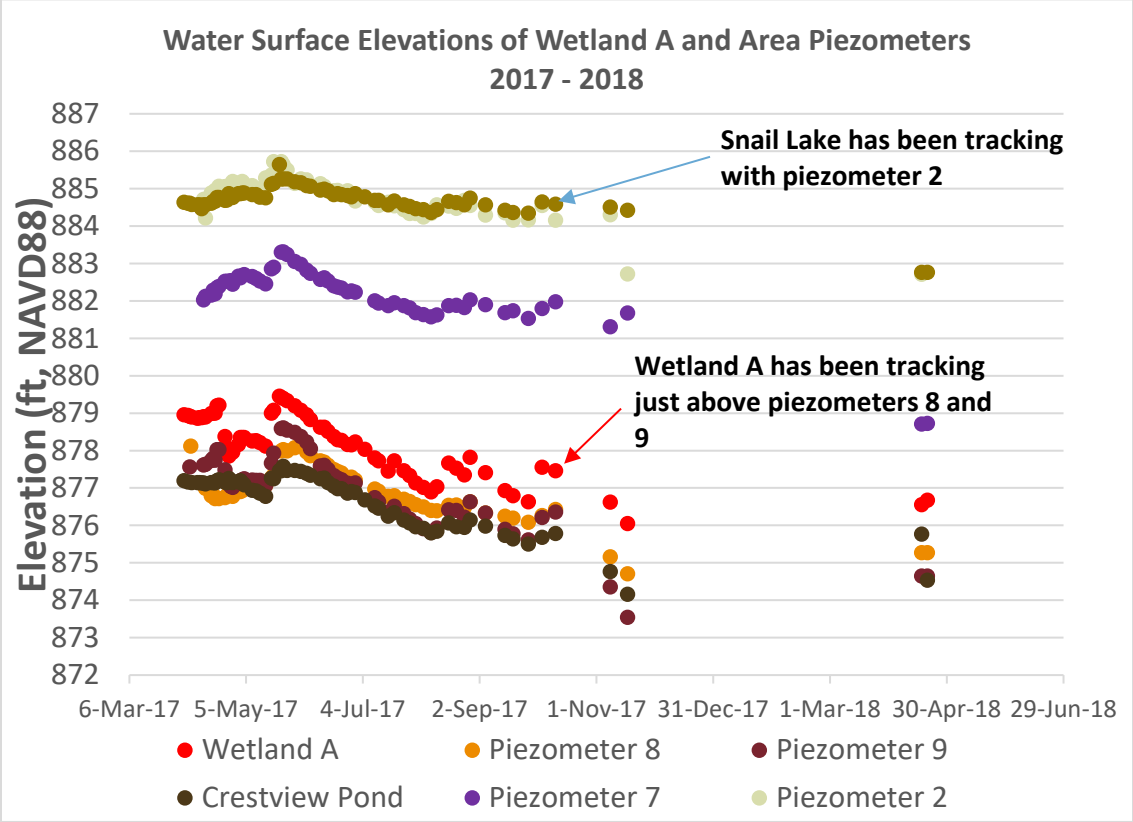

Figure 7: Wetland A and Snail Lake water surface elevations (2017 to April 20, 2018) showing a close correlation between the water level in these water bodies and associated groundwater tables.

Wetland A is one of the lowest points in the subwatershed and is landlocked. It receives water from its 175-acre subwatershed (including the 63-acre surface area of the wetland itself), and its water is "lost" through infiltration (seepage to groundwater) and evaporation. From a cursory review of vegetation shown on aerial photographs, Barr estimates that that typical water levels have historically been at or below elevation 873, with the exception of the last several years when elevations have been significantly higher due to overflows from Grass Lake entering the system as well as record levels of rainfall throughout the area.

Wetland A's response to its record water levels in 2016 and 2017 has been affected and its infiltration capability slowed by the high groundwater occurring at a larger, regional scale. During periods of more normal regional groundwater, the gradient (level difference) between local groundwater and the water level in wetland A, and between the local groundwater and the water level in Snail Lake, respectively, is typically much greater than observed in 2017. The smaller gradient limits the ability of wetland A to infiltrate to the groundwater.

Wetland A's future elevation will continue to depend on the elevation of the groundwater table and the runoff that reaches wetland A from its own watershed. Because it is one of the lowest points in the subwatershed, wetland A will continue to be susceptible to flooding should very large storms event

(larger than any events seen in the past several years) cause Grass Lake to overflow its emergency spillway (at elevation 884) and flow to wetland A, which would increase its surface elevation. However, the Grass Lake berm raising and other system optimization work currently underway will reduce the risk of this occurrence in the future.

In the meantime, to help facilitate the use of park trails that have been impacted (and in some areas, remain impacted) by high water levels in wetland A, staff recommends that Ramsey County Parks and Recreation choose an alternative path alignment through the north and east sides of wetland A that elevates the pathway to a higher elevation. This elevation could be determined by determined by looking at the past water levels in wetland A and its nearby piezometers, as well as by surveying the profile of the path around the wetland. Together, this information could be combined to establish the most cost effective path elevation to pursue going forward. The alternative path should be a boardwalk or floatable walkway and not a pavement on a soil-filled embankment that would cause significant wetland fill and cut off drainage from the non-wetland side of the trail. The district should work closely with Ramsey County Parks and Recreation to provide technical assistance as the design is developed. The county should conduct a soil and vegetation survey when conditions are acceptable to further refine elevation and location of the alternative pathway.

Figure 8: Ramsey County Park's trail around wetland A, and its estimated low point

Recommendation: Assist Ramsey County Parks and Recreation in choosing an alternative path alignment through the north and east sides of wetland A that elevates the pathway (final elevation to be confirmed after the county conducts topographic, soil and vegetation surveys to better define the future alignment and elevation).

Grass Lake

Evaluate flood management options (do nothing; lower West Vadnais Lake's 15-inch outlet under Highway 694 to elevation 881; lower West Vadnais Lake's outlet and add a Snail Lake outlet to Grass Lake) that could keep Grass Lake's peak water surface elevations at or below the lake's emergency spillway elevation of 884.0 in order to provide more live storage for the Grass Lake chain, prevent water from entering North Gramsie Pond (and affecting the homes in the Crestview Addition), protect parkland and prevent flood waters from traveling north to wetland A

To further evaluate the effect of various management scenarios on the water surface elevation of Grass Lake, continuous simulation modeling using 2015, 2016, and 2017 precipitation (as described for Snail Lake) were run for the three management scenarios.

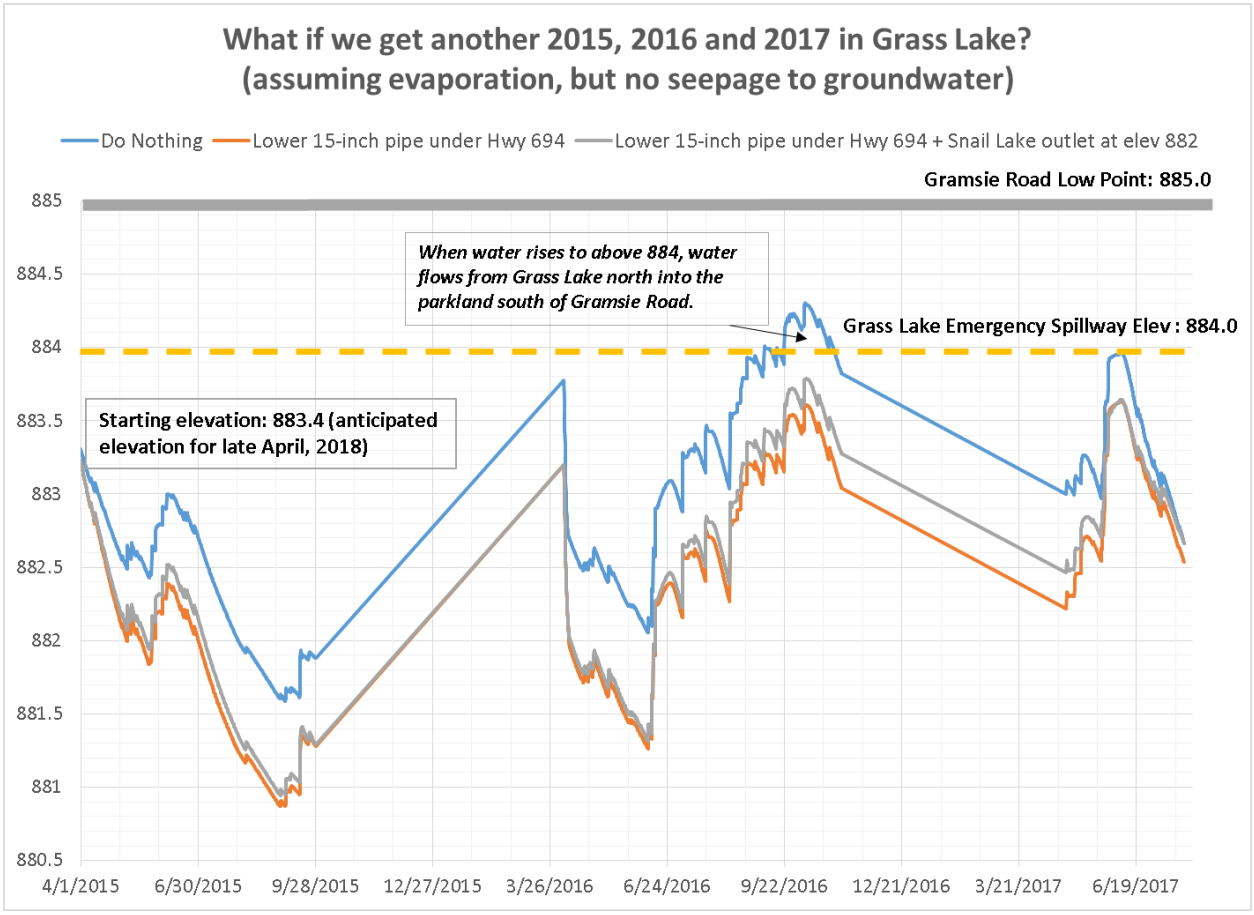

Figure 9: Continuous simulation modeling results for three management options for Grass Lake, assuming 2015, 2016, and 2017 precipitation levels and evaporation and no seepage to groundwater

As explained in the Grass Lake optimization study technical report (December 15, 2017), lowering the 15-inch outlet under Highway 694 provides enough live storage in Grass Lake and West Vadnais Lake to

keep the volume from the 100-year, 96-hour below the Grass Lake emergency spillway elevation of 884.0, assuming that Grass Lake is at its new outlet elevation (881.2) when the storm begins. Given the long drawdown time of Grass Lake (on the order of months), however, it is helpful to evaluate the effectiveness of this option over the course of a few years using the continuous simulations depicted in figure 9 above. From these model runs, we can see that without lowering the 15-inch pipe under Highway 694, there is a risk of water overflowing its emergency spillway. If the 15-inch outlet under Highway 694 is lowered, even with the addition of Snail Lake outflows through the proposed outlet to Grass Lake, the peak of Grass Lake stays below its emergency spillway elevation. For this reason, staff recommends that lowering the 15-inch pipe under Highway 694 be pursued further with the Minnesota Department of Natural Resources (DNR) and Vadnais Lake Watershed Management Organization (VLAWMO). An initial meeting with the DNR to discuss this option was held in late March 2018. A larger meeting involving more DNR staff is planned for May 1, 2018. Although staff does not believe that the May 1 meeting will fully resolve the requirements or likelihood of this potential, the meeting is nonetheless expected to further uncover issues and concerns that would need to be addressed.

Before West Vadnais Lake's outlet can be lowered, however, East Vadnais Lake must also be lowered by the SPRWS for reasons we will discuss further below.

Recommendation: Continue to pursue lowering the 15-inch pipe under Highway 694 with the DNR and VLAWMO, but only implement if East Vadnais Lake can be operated at a lower elevation to prevent the seepage of East Vadnais Lake water into West Vadnais Lake.

Evaluate whether SPRWS could operate East Vadnais Lake at an elevation of 881 to reduce the potential for seepage into West Vadnais Lake levels

During the course of our evaluation of pumping West Vadnais Lake to East Vadnais Lake, Barr evaluated the surface water elevations of East Vadnais Lake over the past few decades. Figure 10 compares East Vadnais Lake elevations to West Vadnais Lake and Grass Lake, since 2016. During this same time period, Grass Lake elevations have been elevated, and Grass Lake and West Vadnais Lake have acted largely as a single water body, equilibrated at roughly the same water surface elevation.

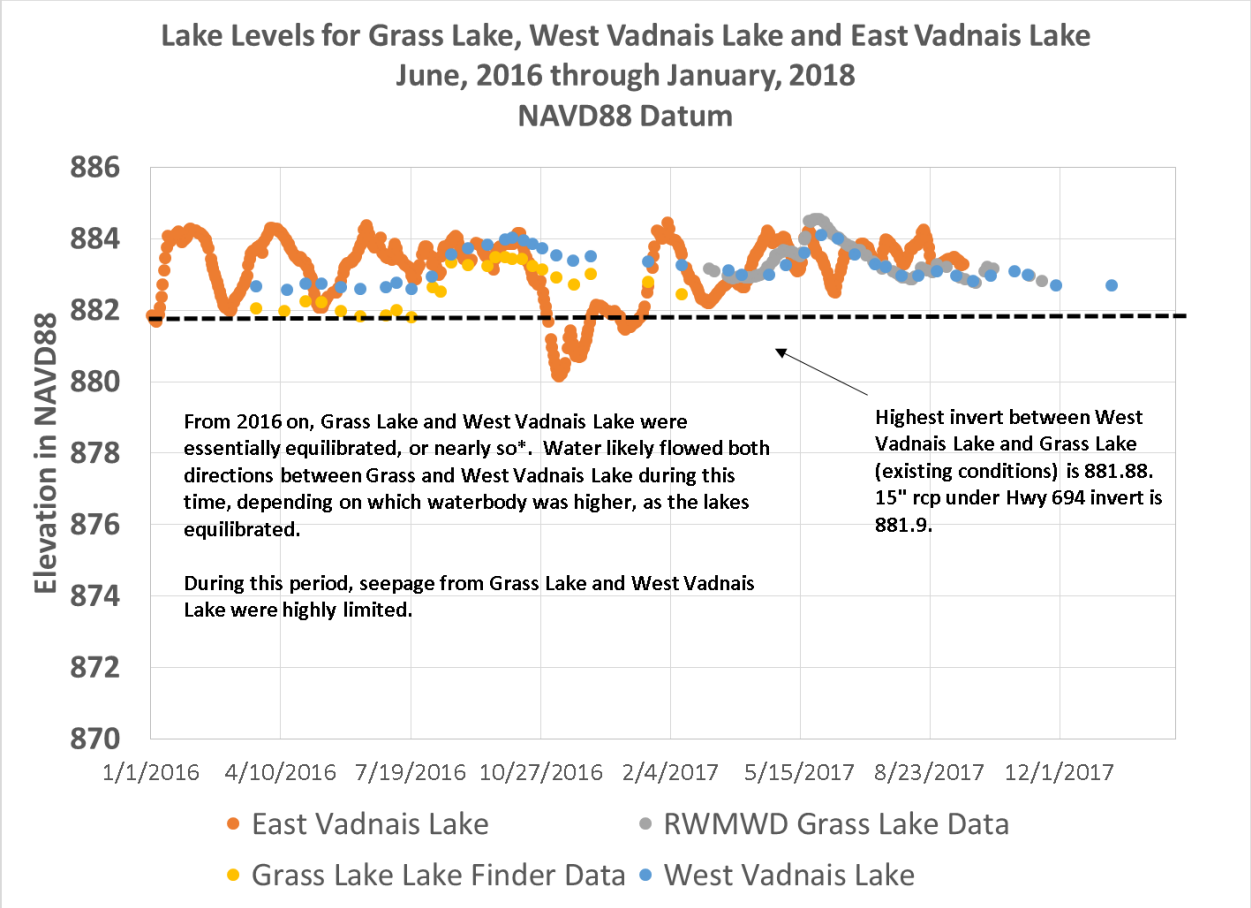

Figure 10: West Vadnais, East Vadnais, and Grass lakes water surface elevations, 2016 to early 2018

Prior to 2016, however, Grass Lake elevations have typically been much lower, and West Vadnais Lake's elevation is more comparable to that of East Vadnais Lake.

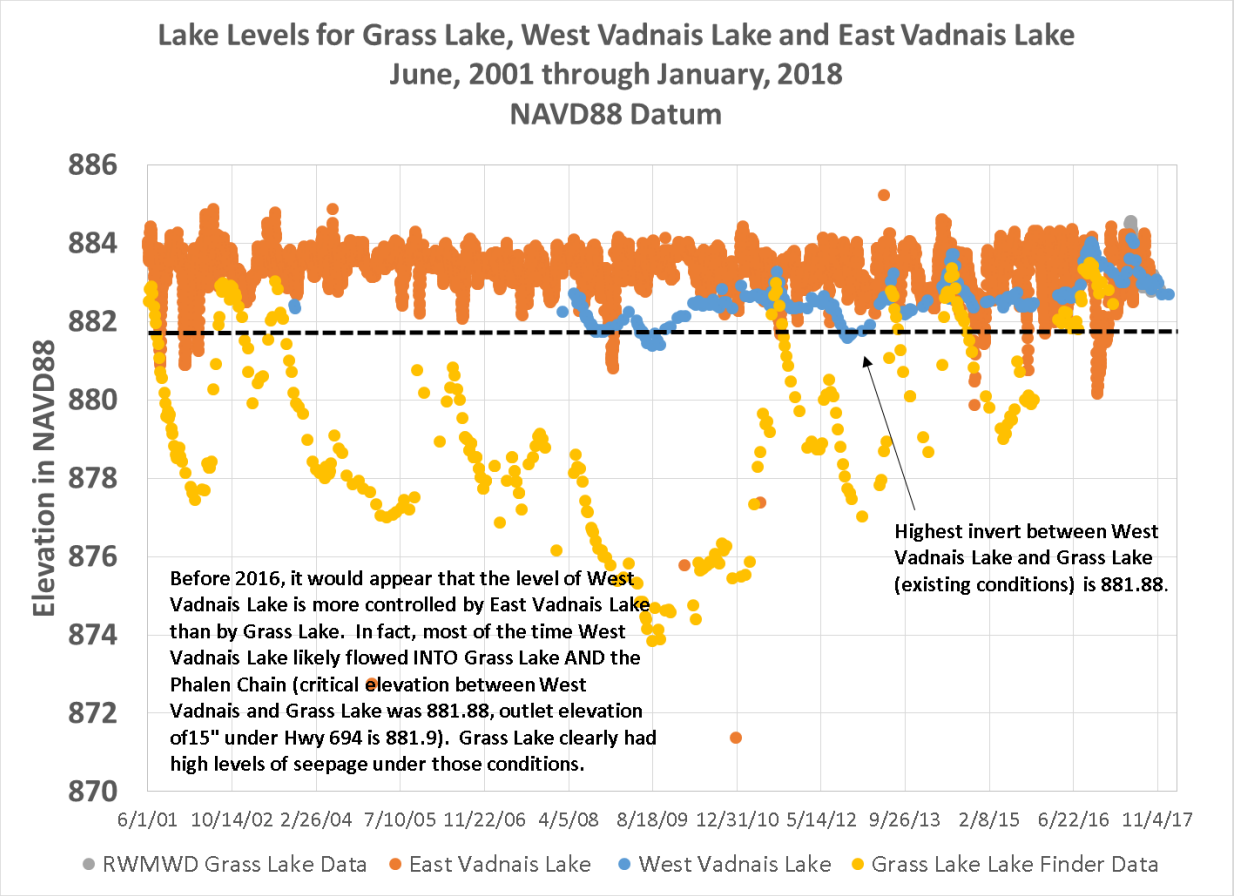

Figure 11: West Vadnais, East Vadnais, and Grass lakes water surface elevations, 2001 to 2017

East and West Vadnais lakes were one lake until the early 1900s, when the early versions of the berm between the two lobes were built.

Anecdotal accounts from Ramsey County Parks and Recreation staff indicates that the berm is made of concrete rubble in spots, and that settlement of the material drove the decision to turn the berm from a roadway into a trail in more recent years. Barr is working to confirm these accounts, and has drafted a new scope of work for board review (to be presented at the May board meeting) that would evaluate the current rate of seepage through the berm between the lakes. It seems likely that seepage from East Vadnais to West Vadnais lakes could be significant, and could offset any increase in live storage created by lowering the 15-inch outlet under Highway 694. In other words, it is possible that lowering the West Vadnais Lake outlet would only serve to drain more of East Vadnais Lake's seepage through the berm, and would not result in providing any live storage to the Grass Lake system, as intended.

SPRWS is open to the idea of operating East Vadnais Lake at a lower elevation, and if asked to lower to 881 (the proposed new outlet elevation of West Vadnais Lake) the water quality of West Vadnais Lake is not anticipated to be a concern.

Recommendation: Formally request that the SPRWS start to operate East Vadnais Lake at an elevation of 881.

Evaluate whether SPRWS could operate East Vadnais Lake at an elevation lower than 881 to promote the seepage of West Vadnais Lake into East Vadnais Lake

If East Vadnais Lake could be operated at an elevation lower than 881, it could reverse the current direction of seepage (allowing West Vadnais Lake, to seep into East Vadnais Lake). This scenario, in combination with lowering West Vadnais Lake's outlet to 881, would create another outflow of water from the Grass Lake system, decreasing drawdown time and increasing the live storage available in the Grass Lake/West Vadnais Lake system. However, in order for SPRWS to agree to this scenario, we anticipate that the water quality impact on East Vadnais Lake from West Vadnais Lake water would need to be evaluated and, potentially, mitigated in order for the SPRWS to accept operating East Vadnais Lake lower than 881.

It should be noted that West Vadnais Lake water quality (in 2017, total phosphorus averaged 130 mg/l) will eventually need to be improved to meet shallow lake water quality criteria of 60 mg/l due to West Vadnais Lake being on the state's impaired waters list for excess nutrients. There could be additional treatment via filtering through the existing or potentially re-engineered berm between West Vadnais Lake and East Vadnais Lake to meet the SPRWS' water quality needs.

Recommendation: Continue to pursue this option with the SPRWS, including completion of the proposed scope of work that will be presented to the district board at its May meeting.

Evaluate the possibility of decreasing the drawdown time of flood waters in Grass Lake and West Vadnais Lake by pumping water from West Vadnais Lake to East Vadnais Lake, including treating West Vadnais Lake water to acceptable water quality standards for the St. Paul Regional Water Service

This option was presented in the technical memorandum dated March 2, 2018. Recent discussions with the St. Paul Regional Water Service (SPRWS) have revealed that this option would not be acceptable to the SPRWS, and, due to the degree of treatment required and the associated costs for the relative comparative benefits, staff does not recommend pursuing this option any further. Table 1 contains a comparison to the costs and benefits of this option relative to other flood management options that have been evaluated for the Grass Lake area, showing why this option is not considered cost effective.

Recommendation: No further action on this option.

Evaluate the potential to manage the water level in North Gramsie Pond to Elevation 877 or lower and protect it from Grass Lake overflows (above Grass Lake elevation 884)

Review of the monitoring data from spring and summer 2017 indicates that the groundwater levels in a piezometer near the home located at 4000 Crestview Lane changes relative to water levels in the North Gramsie Pond (located just northwest of the pedestrian tunnel) and to water levels in Suzanne Pond. Significant reductions in groundwater levels observed at Piezometer PZ8 (nearest the home) occurred when Suzanne Pond was lowered after blockages were removed from the pumping system, and when the pond on the northwest side of Gramsie Road was lowered as a result of the district's pumping operations. These changes also correspond with significant reductions in pumping from the sumps at 4000 Crestview Lane home. And, starting in mid-April 2017, pumping was only intermittently needed from the sumps. (Changes in the stage of Wetland A and Grass Lake had showed minimal influence on that same piezometer when pumping lowered the water level in the wetland and the lake level fluctuated.) The ground water model for the area was refined using the data collected and model runs further confirmed the North Gramsie Pond's connection with ground water levels nearest the Crestview addition area.

Based on these findings, staff concluded that:

- The "North Gramsie Pond" does influence groundwater levels in Crestview Addition. Therefore, based on the data and the modeling, it should be managed at elevation 877 or lower to minimize related groundwater impacts.
- Suzanne Pond does influence groundwater levels in Crestview Addition. Therefore, based on the data and the modeling, it should be managed at elevation 873 or lower to minimize related groundwater impacts.
- The data and modeling inferred that Wetland A can be as high as Elevation 880 with little to no measureable impact on groundwater levels in the vicinity of the Crestview Addition.

Recommendations:

- Install a culvert in Gramsie Road that allows Grass Lake overflows, should they occur, to pass under Gramsie Road to the wetland area south of Wetland "A" and away from the North Gramsie Pond.
- Develop an emergency response plan to be implemented in the event Grass Lake overflows the berm. The plan should include a temporary diversion near, or a temporary blockage of, the pedestrian tunnel to keep Grass Lake overflow water from passing through the tunnel and away from the North Gramsie Pond.
- Install a pipeline with a manual gate valve to link the North Gramsie Pond to Suzanne Pond in an effort to utilize the existing pumps there to manage high water levels in the North Gramsie Pond. Since the North Gramsie Pond is currently landlocked, outflow to Suzanne Pond should begin to occur via the pipe at elevation 877 to help ensure pond levels do not excessively

elevate ground water levels near the Crestview Addition. The gate valve is precautionary and should be closed in the event the Suzanne Pond pumps fail or there is an extended power outage. Implementation of this recommendation would likely result in mostly localized benefits. Therefore, costs would likely be borne or shared with the City of Shoreview.

- Inspect the Suzanne Pond pumps and lift station and consider upgrading the pumps to increase their dependability and longevity. The proper functioning of Suzanne Pond's pumps is critical to maintaining groundwater levels below low floors in the Crestview Addition. Through discussions with the City of Shoreview (owners/operators of the lift station), staff understand that both of the Suzanne Pond pumps have both been running nearly nonstop through this entire multi-year wet period. This has likely resulted in much wear on the existing pumps and may indicate the pump system is undersized for its intended use. Common pump design for situations such as this plan for one pump to run at a time, cycling occasionally to the other pump, with secondary pump being available for back up and for use during times of maintenance. The costs of any pump upgrade would likely be borne by the City of Shoreview. However, the RWMWD may wish to offer design guidance and technical assistance.

Summary of options and final phasing of recommended actions

Ultimately, there are several actions that are recommended to improve flood management throughout the Grass Lake area. However, they should not be pursued all at once. Rather, we propose a stepwise approach, in a particular order based on urgency, and how the various actions relate to one another. The recommended actions are summarized below (in the order they were presented in this memo) and in Table 1, in the order that we recommend they are pursued.

Snail Lake

Increase flood storage by creating a connection between Snail Lake and the wetland to the northeast of Snail Lake

Recommendation: Take no other action on this option.

Evaluate the level of risk of future flood levels on Snail Lake that could cause damage to habitable structures; evaluate these risks for three different management scenarios: 1) Do nothing; and 2) lower West Vadnais Lake's outlet to 881 and add a Snail Lake outlet to Grass Lake at 882.

Recommendation: Partner with the City of Shoreview and Ramsey County Parks and Recreation to implement an emergency response plan for Snail Lake

Recommendation: Partner with the City of Shoreview and Ramsey County Parks to install an off-peak drawdown pipeline that connects Snail Lake to Grass Lake.

Evaluate the effect of diverting Snail Lake overflow from the "back-door path" to wetland A

Recommendation: Partner with the City of Shoreview to implement an emergency response plan for an emergency diversion of overflows to wetland A (and away from the "back-door route") as a part of the emergency response plan for Snail Lake.

Evaluate the option of pumping water from Snail Lake to Sucker Lake to draw the lake down to 882 between storm events to the greatest extent possible

Recommendation: No further action on this option.

Wetland A

Provide guidance for Ramsey County Parks and Recreation regarding water levels in wetland A to inform park planning and placement of trails

Recommendation: Assist Ramsey County Parks and Recreation in choosing an alternative path alignment through the north and east sides of wetland A that elevates the pathway (final elevation to be confirmed after the county conducts topographic, soil and vegetation surveys to better define the future alignment and elevation).

Grass Lake

Evaluate flood management options (do nothing; lower West Vadnais Lake's 15-inch outlet under Highway 694 to elevation 881; lower West Vadnais Lake's outlet and add a Snail Lake outlet to Grass Lake) that could keep Grass Lake's peak water surface elevations at or below the lake's emergency spillway elevation of 884.0 in order to provide more live storage for the Grass Lake chain, prevent water from entering North Gramsie Pond (and affecting the homes in the Crestview Addition), protect parkland and prevent flood waters from traveling north to wetland A

Recommendation: Continue to pursue lowering the 15-inch pipe under Highway 694 with the DNR and VLAWMO, but only implement if East Vadnais Lake can be operated at a lower elevation to prevent the seepage of East Vadnais Lake water into West Vadnais Lake.

Evaluate whether SPRWS could operate East Vadnais Lake at an elevation of 881 to reduce the potential for seepage into West Vadnais Lake levels

Recommendation: Formally request that the SPRWS start to operate East Vadnais Lake at an elevation of 881.

Evaluate whether SPRWS could operate East Vadnais Lake at an elevation lower than 881 to promote the seepage of West Vadnais Lake into East Vadnais Lake

Recommendation: Continue to pursue this option with the SPRWS, including completion of the proposed scope of work that will be presented to the district board at its May meeting.

Evaluate the possibility of decreasing the drawdown time of flood waters in Grass Lake and West Vadnais Lake by pumping water from West Vadnais Lake to East Vadnais Lake, including treating West Vadnais Lake water to acceptable water quality standards for the St. Paul Regional Water Service

Recommendation: No further action on this option.

Evaluate the potential to manage the water level in North Gramsie Pond to Elevation 877 or lower and protect it from Grass Lake overflows (above Grass Lake elevation 884)

Recommendations:

- Install a culvert in Gramsie Road that allows Grass Lake overflows, should they occur, to pass under Gramsie Road to the wetland area south of Wetland "A" and away from the North Gramsie Pond.
- Develop an emergency response plan to be implemented in the event Grass Lake overflows the berm. The plan should include a temporary diversion near, or a temporary blockage of, the pedestrian tunnel to keep Grass Lake overflow water from passing through the tunnel and away from the North Gramsie Pond.
- Install a pipeline with a manual gate valve to link the North Gramsie Pond to Suzanne Pond in an effort to utilize the existing pumps there to manage high water levels in the North Gramsie Pond. Costs would likely be borne or shared with the City of Shoreview.
- Inspect the Suzanne Pond pumps and lift station and consider upgrading the pumps to increase their dependability and longevity.

Recommended Actions and Phasing

Table 1 contains the projects (and their order of implementation) that RWMWD staff recommend, based on the relative costs and benefits for each option discussed in this technical memorandum.

Table 1: Benefits, costs and feasibility issues associated with the various flood management options evaluated for the Grass Lake area.

Conceptual Project No.	Conceptual Alternative Description	Primary Benefits: Increase Flood Storage: Drawdown Time (Lake, Days)	Primary Benefits: Homes and Beach at Snail Lake and Crestview Addition	Secondary Benefits: Parkland & Trails	No. of Permits	Implementation Timeline	Capital Cost	O&M Activities
Complete	**West Vadnais Outlet Cleanout:** 2018 - Cleanout channel to West Vadnais Outlet (15" at I-694)	Improve conveyance from West Vadnais Lake to outlet.	None	Less trail inundation frequency & duration due to recreational trails and park land	1 permit	Complete by first half of 2018	$55,000	Inspect and maintain channel
Under Construction	**Raise Grass Lake Berm and Trail at Gramsie Road**	No change	None	Less trail inundation frequency & duration due to recreational trails and park land	2+ permits	Complete by first half of 2018	$337,400	Inspect and maintain berm and emergency spillway
Under Construction	**Lower Grass Outlet:** 2018 - Lower Grass Lake Outlet 881.6 to 881.2	Improve conveyance from Grass Lake to West Vadnais Lake.	None	Less trail inundation frequency & duration due to recreational trails and park land	2+ permits	Complete by first half of 2018	$170,000	Inspect and maintain outlet
Project 1	**Emergency Flood Response Plan & Temporary Measures:** Partner with the City of Shoreview and Ramsey County Parks and Recreation to implement an emergency response plan for Snail Lake, including the emergency diversion of Snail Lake overflows to wetland A (and away from the "back-door route").	No change	Sandbag levees or other response actions to reduce risk to 1 home below the overflow (887.9) from Snail Lake to Grass Lake. Sandbag backdoor route to reduce risk to Crestview Addition and force water through wetland A instead.	Less trail inundation frequency & duration due to recreational trail raises and possible floating walkways	2+ permits	6 to 18 months	$15,000 (plan development cost)	Deploy and remove sandbag levees and precautionary trail safety measures
Project 2	**Manage the water level in North Gramsie Pond:** Manage the water level in North Gramsie Pond to Elevation 877 or lower and protect it from Grass Lake overflows.	None	Protects low homes in the Crestview Addition from flooding from groundwater.	Increases the likelihood that the pedestrian tunnel below Gramsie Road stays navigable during high water periods.	2+ permits	6 to 18 months	TBD	Pipe and Suzanne Pond pumps maintenance
Project 3	**Improve Park Trail Resiliency to Fluctuating Water Levels in Wetland A:** Assist Ramsey County Parks and Recreation in choosing an alternative path alignment through the north and east sides of wetland A that elevates the pathway (final elevation to be confirmed after the county conducts topographic, soil and vegetation surveys to better define the future alignment and elevation).	None	None	Navigable trail around wetland A, at higher water levels	2+ permits	6 to 18 months	TBD	TBD
Project 4	**Lower East Vadnais Lake Elevation to 881:** Formally request that the SPRWS start to operate East Vadnais Lake at an elevation of 881.	Increase flood storage on East Vadnais Lake to buffer Lambert Creek high flows. Potential to reduce flood risk to SPRWS facilities on East Vadnais.	No direct benefit to homes on Snail Lake.	May lessen the frequency and duration of park and trail inundation	1 permit?	6 to 18 months	TBD	Continuous monitoring of West Vadnais Lake levels
Project 5	**Lower West Vadnais Outlet to 881:** Lower the15" at I-694 from elevation 881.8 to 881.0 . Continue pursuing this option with the DNR and VLAWMO, but only implement if East Vadnais Lake can be operated at a lower elevation to prevent the seepage of East Vadnais Lake water into West Vadnais Lake.	Increase flood storage at West Vadnais and Grass Lake.	No direct benefit to homes on Snail Lake	May lessen the frequency and duration of park and trail inundation	5+ permits	12 to 24 months	$41,000 + costs for shoreline restorations	Seasonal gate operation between Grass Lake and West Vadnais Lake during dry years may be needed.
Project 6	**Lower East Vadnais Lake Elevation to below 881 to promote seepage from West Vadnais Lake to East Vadnais Lake:** Continue to pursue this option with the SPRWS, including completion of the proposed scope of work that will be presented to the district board at its May meeting. Perform water quality assessment for SPRWS (TP+MCL) and seepage assessment (West to East).	Increase flood storage on East Vadnais Lake to buffer Lambert Creek high flows. Potential to reduce flood risk to SPRWS facilities on East Vadnais. Increased flood storage at West Vadnais and Grass Lake.	No direct benefit to homes on Snail Lake.	May lessen the frequency and duration of park and trail inundation	3+ permits	18 to 24 months	TBD - scoping this work is underway	Ongoing monitoring of water levels, water quality and subsurface flow.
Project 7	**Snail Lake to Grass Lake 15" Pipe:** Partner with the City of Shoreview and Ramsey County Parks to install an off-peak drawdown pipeline that connects Snail Lake to Grass Lake (1.2 cfs gravity flow).	Increase flood storage at Snail Lake: 80 million gallons over 100 days @ 1.2 cfs	More ability to actively manage Snail Lake W.S.E. for 2' freeboard to homes and available flood storage. Less beach inundation.	Less variable Snail Lake level, less Snail Lake shoreline vegetation maintenance	4+ permits	12 to 36+ months	$620,000 disturb park land, wetland impacts	New regular lake level monitoring, seasonal management to open/close gate.
~~Not Recommended~~	**~~Pumping from Snail to Sucker:~~** ~~Snail Lake to Sucker Lake Pumping (1.2 cfs, 10 cfs, 20 cfs)~~	Draw down 100-year X 96 hour event to 882.0 and increase flood storage at Snail Lake: 80 million gallons over 100 days @ 1.2 cfs, 160 million gallons over 24 days @ 10 cfs, 170 million gallons over 13 days @ 20 cfs	Reduce flood risk to 4 homes on Snail Lake. Preserve 2 feet freeboard at 1 lowest home on Snail Lake. Less beach inundation.	Little or no benefit to trails and parkland at Grass Lake. Less Snail Lake shoreline maintenance.	10+ permits	24 to 48 months	$1.0 million to $3.5 million	Significant: electricity, maintenance
~~Not Recommended~~	**~~Pumping from West to East Vadnais:~~** ~~West Vadnais to East Vadnais Pumping (10 cfs, 20 cfs)~~	Draw down 100-year X 96 hour event to 881.8 and increase flood storage at West Vadnais and Grass Lake: 137 days @ 0 cfs (infiltration and evap), 375 million gallons over 58 days @ 10 cfs, 462 million gallons over 36 days @ 20 cfs	No direct benefit to homes on Snail Lake.	May lessen park and trail inundation associated with primary benefits	10+ permits	24 to 48 months	$2.5 million to $4.0 million	Significant: electricity, maintenance, chemicals, sedimentation pond cleanouts. In-lake treatment may also be required.

Request for Board Action

Board Meeting Date: May 2, 2018 **Agenda Item No:** 8B

Preparer: Tina Carstens, Administrator

Item Description: Review and Accept the 2017 District Annual Financial Audit

Background:
The District is required by law to complete and file an annual audit of the District's financial records. A final audit report is enclosed for your review. The auditor has also prepared an audit management letter that serves as an easier way to understand summary of the audit. The audit was sent to the State Auditor as well as the Board of Water and Soil Resources.

The audit gives the District a clean opinion. There were no changes to our financial management recommended.

Applicable District Goal and Action Item:

Goal: Manage organization effectively – Operate in a manner that achieves the District's mission while adhering to its core principles.

Action Item: Maintain financial solvency and accountability.

Staff Recommendation:
Accept the 2017 Annual Audit Report.

Financial Implications:
None.

Board Action Requested:
Accept the 2017 Annual Audit Report by motion of the Board.

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

AUDIT MANAGEMENT LETTER

December 31, 2017

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REDPATH AND COMPANY

To the Honorable Managers of the
Ramsey-Washington Metro Watershed District
Little Canada, Minnesota

We have completed our audit of the Ramsey-Washington Metro Watershed District (the District) for the year ended December 31, 2017, and have issued our report thereon. In conjunction with that audit, we present this management letter on matters relating to the financial operations of the District. We offer this report as an additional analytical perspective for the Board of Managers in monitoring the financial position and operations of the accounts and funds of the District. This report also contains required communications to those charged with governance.

Several reports are issued in conjunction with the audit. A summary is as follows:

- Opinion on Financial Statements – Unmodified (clean) opinion
- Report on Internal Control – No internal control findings
- Minnesota Legal Compliance Report – No compliance findings

Thank you for the opportunity to serve the District. We are available to discuss this report with you.

Redpath and Company, Ltd.

REDPATH AND COMPANY, LTD.
St. Paul, Minnesota

April 19, 2018

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Cash and Investments

Cash and investment balances at December 31, 2017 and 2016 were as follows:

Fund	December 31, 2017	December 31, 2016	Increase (Decrease)
General	$5,044,853	$4,135,419	$909,434
Debt Service Funds:			
General Obligation Bonds	112,050	112,055	(5)
Certificates of Participation	123,186	123,186	-
Capital Project Funds:			
Capital Projects CIB	8,519,909	9,572,195	(1,052,286)
Total	$13,799,998	$13,942,855	($142,857)

Investment income totaled $81,958 for the year ended December 31, 2017 as compared to $16,047 for the year ended December 31, 2016. Accrued interest relating to the bond sales are allocated to the debt service fund.

Taxes Receivable

Taxes receivable at December 31, 2017 and 2016 consisted of the following:

	December 31, 2017	December 31, 2016	Increase (Decrease)
Delinquent	$77,383	$83,942	($6,559)
Due from County	75,881	98,618	(22,737)
Total	$153,264	$182,560	($29,296)

Delinquent taxes receivable at December 31, 2017 represent the balance of unpaid property taxes levied for collection in 2008 through 2017. The uncollected portion of property taxes has been classified as unavailable revenue and is not part of the fund balance at the end of the current fiscal year. Generally accepted accounting principles of the United States of America related to revenue recognition requires revenue to be both measurable and available.

Due from County consists of current and delinquent taxes collected by the County but not remitted to the District as of December 31, 2017. These amounts have been remitted to the District in January 2018.

The District's overall property tax collection rate was 99.5% for the year ended December 31, 2017. The following table details the District's 2017 levy and collections:

	Ramsey & Washington Counties
Total levy (pay 2017)	$6,565,860
2017 collections:	
July 2017 collection	$3,416,208
December 2017 collection	3,042,372
January 2018 collection	74,992
Total collections - 2017	$6,533,572
Collection percentage - current and delinquent	99.5%

Fund Balances

Fund balances represent net current assets of each fund (i.e., cash plus receivables minus liabilities).

The District's funds are all governmental type funds. Governmental type funds are accounted for using the current financial resources measurement focus. With this measurement focus, only current assets and current liabilities generally are included on the balance sheet.

The fund balances of the District were as follows at December 31, 2017 and 2016:

Fund	December 31, 2017	December 31, 2016	Increase (Decrease)
General	$4,329,905	$3,420,562	$909,343
Debt Service Funds:			
General Obligation Bonds	359,578	114,726	244,852
Certificates of Participation	133,637	134,238	(601)
Capital Project Funds:			
Capital Projects CIB	8,211,887	9,474,472	(1,262,585)
Total	$13,035,007	$13,143,998	($108,991)

General Fund

The fund balance of the General Fund increased by $909,343 during the year. Statement 6 of the Annual Financial Report details the General Fund budget versus actual operating results. A summary is presented below:

Budgeted change in fund balance		($70,000)
Actual revenue over (under) budgeted revenue:		
Property taxes	($9,957)	
Intergovernmental	13,176	
Investment income	34,639	
Permit escrow fees	(4,960)	
Stormwater impact payment	33,680	
Refunds, reimbursements and other	29,746	96,324
Actual expenditures (over) under budget:		
Engineering	40,591	
Salaries/payroll taxes/benefits	124,760	
Watershed programs	525,034	
All other - net	192,634	883,019
Net change in fund balance		$909,343

The significant expenditure budget variance for watershed programs is primarily the result of the project feasibility studies, research projects and lake studies/WRAPS/TMDL's being significantly under budget.

Intergovernmental Revenue

Intergovernmental grants and aids, and cost sharing agreement revenue (in all funds) in 2017 includes the following:

State of Minnesota - MVC	$29
State of Minnesota - BWSR:	
Competitive Grant Program	159,405
State of Minnesota - MPCA:	
Markham Pond	244,760
Stormwater BMP	7,546
Metropolitan Council - WOMP	13,916
Other	4,685
Total intergovernmental revenue cost share agreements and stormwater impact payment	$430,341

Pension Liability

In 2015, the District implemented GASB Statement No. 68, which required the reporting of the District's proportionate share of the PERA Net Pension Liability (NPL). During 2017, the District's share of PERA's NPL decreased. The schedule below presents the components of the change in NPL. During 2017, the District paid its required contribution to the Plan. The required contribution is a percentage of eligible wages.

	General Employees Plan
Change in net pension liability:	
Change in actuarial assumptions [1]	($79,999)
Change in proportion [2]	30,448
Experience difference [3]	26,299
Earnings difference [4]	(135,493)
The District's share of 2017 pension expense	42,817
Contributions to the plan by the District	(60,420)
Decrease in net pension liability	(176,348)
Beginning net pension liability	974,340
Ending net pension liability	$797,992

1. The assumed post-retirement benefit increase rate was changed from 1.0% per year for all years to 1.0% per year through 2044 and 2.5% per year thereafter. The assumed payroll growth remained at 3.25% and assumed inflation remained at 2.5%.
2. The District's proportionate share of the total NPL increased.
3. This is the change between expected and actual experience in the measurement of the pension liability.
4. This is the difference between projected and actual earnings on plan investments.

103.B Levy Authority

Beginning with the 1998 tax levy, the District levied under Minnesota Statutes 103B.241 authority. As such, the District's General Fund is not limited by the $250,000 tax levy authorized in Minnesota Statutes 103.D. The District no longer employs the Special Revenue Funds to account for maintenance and projects and instead levies for all non-CIB Fund projects out of the General Fund. Minnesota Statutes Section 103B.241 Subd.1 reads in part as follows:

> ***103B.241 LEVIES***
>
> *Subdivision 1.* ***Watershed plans and projects****. Notwithstanding chapter 103D, a local government unit or watershed management organization may levy a tax to pay the increased costs of preparing a plan under sections 103B.231 and 103B.235 or for projects identified in an approved and adopted plan necessary to implement the purposes of section 103B.201. The proceeds of any tax levied under this section shall be deposited in a separate fund and expended only for the purposes authorized by this section. Watershed management organizations and local government units may accumulate the proceeds of levies as an alternative to issuing bonds to finance improvements.*

In 1998, the District closed the Survey and Data Acquisition, Water Management Planning and Water Maintenance and Repair Special Revenue Funds and accounts for all non-CIB projects in the General Fund budget process.

The fund balance of the General Fund for the past ten years has been as follows:

		Amount	Increase (Decrease)
December 31, 2008		$2,265,714	$309,422
December 31, 2009		1,928,216	(337,498)
December 31, 2010		1,979,029	50,813
December 31, 2011		2,493,960	514,931
December 31, 2012	*	1,363,334	(1,130,626)
December 31, 2013		1,725,348	362,014
December 31, 2014		2,211,684	486,336
December 31, 2015		2,901,187	689,503
December 31, 2016		3,420,562	519,375
December 31, 2017		4,329,905	909,343

* Restated for prior period adjustment

In 1998, the District began levying for and expending all non-CIB Fund projects out of the General Fund. The District now sets the General Fund tax levy and budgeted expenditures at a level consistent with the District's reserve balance policy. In 2017, the District's final budget reflected a decrease of $70,000 in General Fund reserves. Actual reserves increased by $909,343 as detailed previously.

The District budget includes a higher level of program activity in the General Fund, and as such requires a levy. Schedules and completion of projects is variable and often results in carryover fund balances and unspent levy amounts. These program funds are generally spent in the following budget year if not spent in the current budget year. Excess budget balances are considered in the following year levy/budget process to reduce ensuing year tax levies by spending down available fund balances. Past management reports have discussed the purposes and benefits of maintaining adequate cash flow reserve balances. A summary of these purposes and benefits is as follows:

1. Cash flow reserve. The District receives revenue from property taxes primarily in December and July. The District, however, incurs expenditures throughout the entire twelve month operating period. Timing differences in the receipt of property taxes should be compensated for with adequate operating reserves. The District targets 50% of the ensuing year's expenditure budget as end of year minimum unassigned fund balance. The unassigned balance at December 31, 2017 was $4,318,398 or 108.60% of the ensuing year's expenditure budget.
2. Emergency and/or unanticipated expenditures. Operating budgets are estimates only. The District requires a surplus to finance unforeseen events. One method of measuring the amount of this type of surplus is to use a percent of the District's annual operating budget (i.e., 10% to 15% or more, depending upon the budget philosophy of the District).
3. Preliminary project funding. Feasibility studies of potential projects require financing. The District does receive such preliminary funding for certain projects upon County approval. Other minor projects may be more efficiently funded through available reserves.

CIB Authority

This fund was established to account for the Capital Improvement Budget (CIB) process of the District. A summary of financial activity of this fund from inception is presented in Exhibit 2 of the Annual Financial Report.

Beginning in 1993 with the removal of levy limits and under authorities provided by State Statute Section 103B.241, the District is authorized to levy ad valorem taxes for the purposes of financing the CIB projects. The District has levied the following amounts for the CIB projects over the past ten years:

Collectible Year	CIB Levy Certified
2008	$949,381
2009	1,380,481
2010	1,150,481
2011	859,379
2012	1,584,379
2013	2,268,479
2014	2,945,481
2015	3,513,200
2016	3,839,885
2017	3,205,383

These levies have financed the CIB projects detailed in Exhibit 2 of the Annual Financial Report. A summary of the District's ad valorem tax levies is presented in Exhibit 1 of the Annual Financial Report. Additionally, a breakdown of the District's CIB Fund levy by project is presented in Exhibit 2 of the Annual Financial Report.

Long-Term Debt

The District entered into five separate G.O. Bond/loan agreements in 1997, 1998, 2012, and 2016 that remain outstanding as follows:

- G.O. Bonds of 1997 – Public Facilities Authority (PFA) (matured in 2017)
- G.O. Bonds of 1998 – Public Facilities Authority (PFA)
- G.O. Bonds of 2012 – Public Facilities Authority (PFA)
- Certificates of Participation, Series 2012B
- G.O. Drainage Bonds of 2016A

Detail and descriptions of the above G.O. Bonds/loans is presented in Note 7 to the financial statements. The schedule of indebtedness and deferred tax levies associated are presented in Exhibits 3 and 4 of the Annual Financial Report.

Debt Service Funds

The District's official resolution authorizing the issuance of the 1997 and 1998 General Obligation Bonds requires the District to establish a Debt Service Fund on the financial records of the District. The bond resolution(s) reads in part as follows:

SECTION 4. **SECURITY PROVISIONS**

4.01. Bond Fund. So long as the Bond is outstanding and any principal of or interest thereon unpaid, the Treasurer shall maintain a separate debt service fund on the official books and records of the District to be known as the General Obligation Bond, Series 1998 Sinking Fund (the "Bond Fund"), and the principal of and interest on the Bond shall be payable from the Bond Fund. The District irrevocably appropriates to the Bond Fund (i) all taxes levied and collected in accordance with this Resolution; and (ii) all other monies as shall be appropriated by the Board of Managers to the Bond Fund from time to time. If the balance in the Bond Fund is at any time insufficient to pay all interest and principal then due on the Bond payable therefrom, the payment shall be made from any fund of the District which is available for that purpose, subject to reimbursement from the Bond Fund when the balance therein is sufficient, and the Board of

Managers covenants and agrees that it will each year levy a sufficient amount of ad valorem taxes to take care of any accumulated or anticipated deficiency, which levy is not subject to any constitutional or statutory limitation.

The District has established a Debt Service Fund for the $540,835 G.O. Bonds of 1997, the $711,431 G.O. Bonds of 1998, the $1,177,217 G.O. Bonds of 2012 and the $3,860,000 G.O. Drainage Bonds of 2016A. The District established a Debt Service Fund for the $2,440,000 Certificates of Participation during 2005 (called for early redemption during 2013), which now includes the Refunding Certificates of Participation, 2012B.

COMMUNICATION WITH THOSE CHARGED WITH GOVERNANCE

We have audited the financial statements of the governmental activities and each major fund of Ramsey-Washington Metro Watershed District for the year ended December 31, 2017. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated January 2, 2018. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Matters

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Ramsey-Washington Metro Watershed District are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2017. We noted no transactions entered into by Ramsey-Washington Metro Watershed District during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the Governmental Activities financial statements are management's estimates of the net pension liability, the pension related deferred outflows

and inflows of resources and pension expense. Management's estimates relating to the net pension liability, pension related deferred outflows and inflows of resources and pension expense are based on actuarial studies. We evaluated the key factors and assumptions used to develop the estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. Determining sensitivity is subjective, however, we believe the disclosure most likely to be considered sensitive is Note 5 – Defined Benefit Pension Plans.

The financial statement disclosures are neutral, consistent and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. There were no uncorrected misstatements that have an effect on our opinion on the financial statements. There were no corrected misstatements identified during the audit.

Disagreements with Management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated April 19, 2018.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the District's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the District's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to the budgetary comparison schedule and pension information which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the individual fund financial statements and supplementary financial information, which accompany the financial statements but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

We were not engaged to report on the introductory and other information sections, which accompany the financial statements but are not RSI. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reports

Various reports on compliance and internal controls are contained in the Other Required Reports section of the audited financial statements document.

Restriction on Use

This information is intended solely for the information and use of management and Ramsey-Washington Metro Watershed District's Board, and is not intended to be, and should not be, used by anyone other than these specified parties.

RAMSEY-WASHINGTON METRO
WATERSHED DISTRICT

ANNUAL FINANCIAL REPORT

December 31, 2017

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RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
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INTRODUCTORY SECTION

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RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
ORGANIZATION
December 31, 2017

	Term Expires
Managers:	
Marj Ebensteiner - President	February 23, 2018
Clifton Aichinger - Vice President	February 23, 2019
Pamela Skinner - Secretary	February 23, 2018
Jen Oknich - Treasurer	February 23, 2020
Dianne Ward - Manager	February 23, 2020
Administrator:	
Tina Carstens	Appointed

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FINANCIAL SECTION

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REDPATH AND COMPANY

INDEPENDENT AUDITOR'S REPORT

To the Honorable Managers of the
Ramsey-Washington Metro Watershed District
Little Canada, Minnesota

We have audited the accompanying financial statements of the governmental activities and each major fund of the Ramsey-Washington Metro Watershed District, as of and for the year ended December 31, 2017, and the related notes to the financial statements, which collectively comprise the Ramsey-Washington Metro Watershed District's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of Ramsey-Washington Metro Watershed District, as of December 31, 2017, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Report on Summarized Comparative Information

We have previously audited Ramsey-Washington Metro Watershed District's 2016 financial statements, and we expressed an unmodified audit opinion on the respective financial statements of the governmental activities and each major fund in our report dated April 5, 2017. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2016 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Matters

Required Supplementary Information

Management has omitted the management's discussion and analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

Accounting principles generally accepted in the United States of America require that the budgetary comparison information and the pension information on pages 40 through 44, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Ramsey-Washington Metro Watershed District's basic financial statements. The introductory section, individual fund financial statements, supplementary financial information, and other information are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The individual fund financial statements and the supplementary financial information are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the individual fund financial statements and supplementary financial information are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory and other information sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Redpath and Company, Ltd.

REDPATH AND COMPANY, LTD.
St. Paul, Minnesota

April 19, 2018

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BASIC FINANCIAL STATEMENTS

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
STATEMENT OF NET POSITION **Statement 1**
December 31, 2017
With Comparative Totals For December 31, 2016

	Primary Government	
	Governmental Activities	
	2017	2016
Assets:		
Cash and investments	$13,676,812	$13,819,669
Cash and investments with escrow	123,186	123,186
Property taxes receivable:		
Delinquent	77,383	83,942
Due from county	75,881	98,618
Accounts receivable	3,732	261
Due from other governmental units	172,386	14,640
Prepaid items	450,212	194,069
Capital assets - net:		
Depreciable	12,441,518	12,882,033
Nondepreciable	421,581	421,581
Total assets	27,442,691	27,637,999
Deferred outflows of resources:		
Related to pensions	217,441	406,724
Liabilities:		
Accounts payable	97,338	85,098
Accrued expenses	13,581	11,710
Due to other governmental units	19,951	27,137
Escrow deposits payable	909,875	875,085
Accrued interest payable	13,786	18,261
Contracts payable	37,149	-
Retainage payable	179,909	21,863
Unearned revenue	74,679	85,552
Unamortized bond premiums	74,088	79,349
Compensated absences payable:		
Due within one year	76,936	71,097
Due in more than one year	9,130	15,897
Bonds payable:		
Due within one year	521,692	346,998
Due in more than one year	4,729,000	5,250,692
Net pension liability:		
Due in more than one year	797,992	974,340
Total liabilities	7,555,106	7,863,079
Deferred inflows of resources:		
Related to pensions	186,698	173,054
Net position:		
Net investment in capital assets	11,398,319	11,565,924
Restricted for:		
Debt service	132,904	26,865
Unrestricted	8,387,105	8,415,801
Total net position	$19,918,328	$20,008,590

The accompanying notes are an integral part of these financial statements.

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
STATEMENT OF ACTIVITIES
For The Year Ended December 31, 2017
With Comparative Totals For The Year Ended December 31, 2016

Statement 2

Functions/Programs	Expenses	Program Revenues: Charges For Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net (Expense) Revenue and Changes in Net Position Primary Government Totals: 2017	Net (Expense) Revenue and Changes in Net Position Primary Government Totals: 2016
Primary government:						
Governmental activities:						
General government	$1,966,944	$178,440	$290	$ -	($1,788,214)	($1,738,220)
Programs	480,118	-	451,098	-	(29,020)	(297,337)
Projects	4,893,508	-	67,478	-	(4,826,030)	(2,274,382)
Interest on long-term debt	79,302	-	-	-	(79,302)	(39,713)
Total governmental activities	$7,419,872	$178,440	$518,866	$0	(6,722,566)	(4,349,652)
General revenues:						
Property taxes					6,538,357	6,598,916
Grants and contributions not restricted to specific programs					29	178
Unrestricted investment earnings					81,958	16,047
Miscellaneous other					11,960	7,788
Total general revenues					6,632,304	6,622,929
Change in net position					(90,262)	2,273,277
Net position - January 1					20,008,590	17,735,313
Net position - December 31					$19,918,328	$20,008,590

The accompanying notes are an integral part of these financial statements.

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
BALANCE SHEET
GOVERNMENTAL FUNDS
December 31, 2017
With Comparative Totals For December 31, 2016

Statement 3

	General Fund	General Obligation Bonds	Certificates of Participation	Capital Projects CIB	Intra-Activity Eliminations	Total Governmental Funds 2017	Total Governmental Funds 2016
Assets							
Cash and investments	$5,044,853	$112,050	$ -	$8,519,909	$ -	$13,676,812	$13,819,669
Cash and investments with escrow	-	-	123,186	-	-	123,186	123,186
Accounts receivable	732	-	-	3,000	-	3,732	261
Due from other governmental units	138,405	-	-	33,981	-	172,386	14,640
Due from other funds	185,075	-	-	-	(185,075)	-	-
Property taxes receivable:							
Delinquent	35,445	2,443	2,230	37,265	-	77,383	83,942
Due from county	36,074	2,097	2,252	35,458	-	75,881	98,618
Prepaid items	11,507	245,431	193,274	-	-	450,212	194,069
Total assets	$5,452,091	$362,021	$320,942	$8,629,613	($185,075)	$14,579,592	$14,334,385
Liabilities, deferred inflows of resources, and fund balance							
Liabilities:							
Accounts payable	$21,095	$ -	$ -	$76,243	$ -	$97,338	$85,098
Accrued expenses	13,581	-	-	-	-	13,581	11,710
Due to other governmental units	7,470	-	-	12,481	-	19,951	27,137
Due to other funds	-	-	185,075	-	(185,075)	-	-
Escrow deposits payable	909,875	-	-	-	-	909,875	875,085
Contracts payable	-	-	-	37,149	-	37,149	-
Retainage payable	-	-	-	179,909	-	179,909	21,863
Unearned revenue	-	-	-	74,679	-	74,679	85,552
Total liabilities	952,021	0	185,075	380,461	(185,075)	1,332,482	1,106,445
Deferred inflows of resources:							
Unavailable revenue	170,165	2,443	2,230	37,265	-	212,103	83,942
Fund balance:							
Nonspendable	11,507	245,431	193,274	-	-	450,212	194,069
Restricted	-	114,147	-	-	-	114,147	114,726
Committed	-	-	-	1,676,114	-	1,676,114	3,730,430
Assigned	-	-	-	6,535,773	-	6,535,773	5,744,042
Unassigned	4,318,398	-	(59,637)	-	-	4,258,761	3,360,731
Total fund balance	4,329,905	359,578	133,637	8,211,887	0	13,035,007	13,143,998
Total liabilities, deferred inflows of resources, and fund balance	$5,452,091	$362,021	$320,942	$8,629,613	($185,075)	$14,579,592	$14,334,385
Fund balance reported above						$13,035,007	$13,143,998
Amounts reported for governmental activities in the statement of net position are different because:							
Capital assets used in governmental activities are not financial resources and, therefore, are not reported in the funds.						12,863,099	13,303,614
Other long-term assets are not available to pay for current period expenditures and, therefore, are reported as unavailable revenue in the funds.						212,103	83,942
Deferred outflows of resources - pension related are not current financial resources and, therefore, are not reported in the funds.						217,441	406,724
Long-term liabilities, including bonds payable, are not due and payable in the current period and, therefore, are not reported in the funds.						(6,222,624)	(6,756,634)
Deferred inflows of resources - pension related are associated with long-term liabilities that are not due and payable in the current period and, therefore, are not reported in the funds.						(186,698)	(173,054)
Net position of governmental activities						$19,918,328	$20,008,590

The accompanying notes are an integral part of these financial statements.

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
GOVERNMENTAL FUNDS
For The Year Ended December 31, 2017
With Comparative Totals For The Year Ended December 31, 2016

Statement 4

	General Fund	General Obligation Bonds	Certificates of Participation	Capital Projects CIB	Total Governmental Funds	
Revenues:					2017	2016
General property taxes	$3,111,543	$180,896	$194,263	$3,058,214	$6,544,916	$6,603,781
Intergovernmental:						
Market value credit	29	-	-	-	29	178
Grants	26,147	-	-	404,165	430,312	276,399
Stormwater impact payment	33,680	-	-	-	33,680	125,400
Investment income	54,639	-	-	27,319	81,958	16,047
Permit escrow fees	10,040	-	-	-	10,040	12,960
Refunds and reimbursements	20,786	-	-	70,478	91,264	134,186
Other	8,960	-	-	-	8,960	7,788
Total revenues	3,265,824	180,896	194,263	3,560,176	7,201,159	7,176,739
Expenditures:						
Current:						
General government	1,879,515	-	-	-	1,879,515	1,772,270
Programs	476,966	-	-	-	476,966	617,601
Capital outlay	-	-	-	-	-	39,592
Construction/projects	-	-	-	4,517,633	4,517,633	1,934,568
Debt service:						
Principal	-	161,998	185,000	-	346,998	342,055
Interest and fiscal agent fees	-	19,477	9,864	59,697	89,038	35,472
Issuance costs	-	-	-	-	-	81,362
Total expenditures	2,356,481	181,475	194,864	4,577,330	7,310,150	4,822,920
Revenues over (under) expenditures	909,343	(579)	(601)	(1,017,154)	(108,991)	2,353,819
Other financing sources (uses):						
Bond issued	-	-	-	-	-	3,860,000
Bond premium	-	-	-	-	-	80,007
Transfers in	-	245,431	-	210,980	456,411	-
Transfers out	-	-	-	(456,411)	(456,411)	-
Total other financing sources (uses)	0	245,431	0	(245,431)	0	3,940,007
Net change in fund balance	909,343	244,852	(601)	(1,262,585)	(108,991)	6,293,826
Fund balance - January 1	3,420,562	114,726	134,238	9,474,472	13,143,998	6,850,172
Fund balance - December 31	$4,329,905	$359,578	$133,637	$8,211,887	$13,035,007	$13,143,998

The accompanying notes are an integral part of these financial statements.

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE OF GOVERNMENTAL FUNDS
For The Year Ended December 31, 2017
With Comparative Totals For The Year Ended December 31, 2016

Statement 5

		2017	2016
Amounts reported for governmental activities in the statement of activities (Statement 2) are different because:			
Net changes in fund balances - total governmental funds (Statement 4)		($108,991)	$6,293,826
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense. This is the amount by which depreciation exceeded capital outlays in the current period.		(440,515)	(365,902)
Revenues in the statement of activities that do not provide current financial resources are not reported as revenues in the funds.		128,161	(4,865)
The issuance of long-term debt (e.g., bonds, leases) provides current financial resources to governmental funds, while the repayment of the principal of long-term debt consumes the current financial resources of governmental funds. Neither transaction, however, has any effect on net position. This amount is the net effect of these differences in the treatment of long-term debt and related items.		346,998	(3,517,945)
Some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in governmental funds.		10,664	(89,213)
Governmental funds report pension contributions as expenditures, however, pension expense is reported in the statement of activities. This is the amount by which pension expense exceeded pension contributions in the current period:			
Pension contributions	$60,595		
Pension expense	(87,174)	(26,579)	(42,624)
Change in net position of governmental activities (Statement 2)		($90,262)	$2,273,277

The accompanying notes are an integral part of these financial statements.

Note 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accounting policies of the Ramsey-Washington Metro Watershed District (the District) conform to accounting principles generally accepted in the United States of America applicable to governmental units. The following is a summary of significant accounting policies.

A. FINANCIAL REPORTING ENTITY

The Ramsey-Washington Metro Watershed District was created in 1975 by the Minnesota Water Resources Board as provided in Minnesota Statutes Chapter 112. The District is operated by a five member Board of Managers appointed by the Ramsey and Washington County Boards of Commissioners for three year terms. In accordance with Governmental Accounting Standards Board (GASB) pronouncements and generally accepted accounting principles, the financial statements of the reporting entity should include the primary government and its component units. The District (primary government) does not have any component units.

B. GOVERNMENT-WIDE AND FUND FINANCIAL STATEMENTS

The government-wide financial statements (i.e., the statement of net position and the statement of activities) report information on all of the non-fiduciary activities of the primary government. For the most part, the effect of inter-fund activity has been removed from these statements. *Governmental activities,* which normally are supported by taxes and intergovernmental revenues, are reported separately from *business-type activities*. There are no *business-type activities*, which rely to a significant extent on fees and charges for support.

The statement of activities demonstrates the degree to which the direct expenses of a given function are offset by program revenues. *Direct expenses* are those that are clearly identifiable with a specific function. *Program revenues* include 1) charges to customers or applicants who purchase, use or directly benefit from goods, services or privileges provided by a given function and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function. Taxes and other items not included among program revenues are reported instead as *general revenues*.

Separate financial statements are provided for governmental funds. Major individual governmental funds are reported as separate columns in the fund financial statements.

C. MEASUREMENT FOCUS, BASIS OF ACCOUNTING AND FINANCIAL STATEMENT PRESENTATION

The government-wide financial statements are reported using the *economic resources measurement focus* and the *accrual basis of accounting*. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Property taxes are recognized as revenues in the year for which they are levied. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

Governmental fund financial statements are reported using the *current financial resources measurement focus* and the *modified accrual basis of accounting*. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be *available* when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the District considers all revenues, except reimbursement grants, to be available if they are collected within 60 days of the end of the current fiscal period. Reimbursement grants are considered available if they are

collected within one year of the end of the current fiscal period. Expenditures generally are recorded when a liability is incurred, as under accrual accounting. However, debt service expenditures are recorded only when payment is due.

Property taxes, intergovernmental revenues and interest associated with the current fiscal period are all considered to be susceptible to accrual and so have been recognized as revenues of the current fiscal period. All other revenue items are considered to be measurable and available only when cash is received by the District.

The District reports the following major governmental funds:

General Fund is the general operating fund of the District. It is used to account for financial resources to be used for general administrative expenses and for the construction and maintenance of projects of common benefit to the District.

General Obligation Bonds Debt Service is established to account for accumulation of resources for, and the payment of, long-term debt principal, interest and related costs.

Certificates of Participation Debt Service is established to account for accumulation of resources for, and the payment of long-term debt principal, interest and costs related to the 2005 Certificates of Participation.

Capital Project CIB Fund is established to account for the capital improvement program as a part of the Watershed Management Plan. The fund is financed by an ad valorem tax levy. This fund was established pursuant to Minnesota Statutes, Chapter 473.

As a general rule the effect of inter-fund activity has been eliminated from the government-wide financial statements. Exceptions to this general rule are transactions that would be treated as revenues, expenditures or expenses if they involved external organizations, such as buying goods and services or payments in lieu of taxes, are similarly treated when they involve other funds of the District. Elimination of these charges would distort the direct costs and program revenues reported for the various functions concerned.

Amounts reported as *program revenues* include 1) charges to customers or applicants for goods, services, or privileges provided, 2) operating grants and contributions, and 3) capital grants and contributions. Internally dedicated resources are reported as *general revenues* rather than as program revenues. Likewise, general revenues include all taxes.

When both restricted and unrestricted resources are available for an allowable use, it is the District's policy to use restricted resources first, then unrestricted resources as they are needed.

D. BUDGETS

The Board of Managers prepares annual revenue and expenditure budgets for the District's General Fund. The District monitors budget performance on the fund basis. All amounts over budget have been approved by the Board through the disbursement approval process. The modified accrual basis of accounting is used by the District for budgeting data. All appropriations end with the fiscal year for which they were made. Encumbrance accounting, under which purchase orders, contracts and other commitments of monies are recorded in order to reserve that portion of the applicable appropriation, is not employed by the District.

E. CASH AND INVESTMENTS

Cash and investment balances from all funds are pooled and invested to the extent available in authorized investments. Investment income is allocated to individual funds on the basis of the fund's equity in the cash and investment pool.

Investments are stated at fair value, except for investments in external investment pools that meet GASB 79 requirement, which are stated at amortized cost. Investment income is accrued at the balance sheet date.

Cash and investments with escrow represent money market accounts held by an escrow agent as the reserve account for the Certificates of Participation 2012B.

F. PROPERTY TAX REVENUE RECOGNITION

The Board of Managers annually adopts a tax levy and certifies it to the County in October (levy/assessment date) of each year for collection in the following year. The County is responsible for billing and collecting all property taxes for itself, the City, the local School District and other taxing authorities. Such taxes become a lien on January 1 and are recorded as receivables by the District at that date. Real property taxes are payable (by property owners) on May 15 and October 15 of each calendar year. Personal property taxes are payable by taxpayers on February 28 and June 30 of each year. These taxes are collected by the County and remitted to the District on or before July 7 and December 2 of the same year. Delinquent collections for November and December are received the following January. The District has no ability to enforce payment of property taxes by property owners. The County possesses this authority.

GOVERNMENT-WIDE FINANCIAL STATEMENTS
The District recognizes property tax revenue in the period for which the taxes were levied. Uncollectible property taxes are not material and have not been reported.

GOVERNMENTAL FUND FINANCIAL STATEMENTS
The District recognizes property tax revenue when it becomes both measurable and available to finance expenditures of the current period. In practice, current and delinquent taxes and State credits received by the City in July, December and January are recognized as revenue for the current year. Taxes collected by the County by December 31 (remitted to the District the following January) and taxes and credits not received at year end are classified as delinquent and due from County taxes receivable. The portion of delinquent taxes not collected by the District in January are fully offset by deferred inflow of resources because they are not available to finance current expenditures.

PROPERTY TAX LEVY

103B Levy Authority
Beginning with the 1998 tax levy, the District levied under Minnesota Statutes 103B.241 authority. As such, the District's General Fund and the Capital Projects CIB Funds are not limited by the tax levy authorized in Minnesota Statutes 103D. The District no longer employs the Special Revenue Funds to account for maintenance and projects and instead levies for all such projects out of the General and CIB Funds. Minnesota Statutes Section 103B.241 Subd.1 reads in part as follows:

103B.241 LEVIES

Subdivision 1. ***Watershed plans and projects.*** *Notwithstanding chapter 103D, a local government unit or watershed management organization may levy a tax to pay the increased costs of preparing a plan under sections 103B.231 and 103B.235 or for projects identified in an approved and adopted plan necessary to implement the purposes of section 103B.201. The proceeds of any tax levied under this section shall be deposited in a separate fund and expended only for the purposes authorized by this section. Watershed management organizations and local government units may accumulate the proceeds of levies as an alternative to issuing bonds to finance improvements.*

G. INVENTORIES

The original cost of materials and supplies has been recorded as expenditures at the time of purchase. The District does not maintain material amounts of inventories.

H. PREPAID ITEMS

Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid items in both government-wide and fund financial statements. Prepaid items are reported using the consumption method and recorded as expenditures/expenses at the time of consumption.

I. CAPITAL ASSETS

Capital assets, which include property, plant, equipment and infrastructure assets and intangible assets such as easements and computer software, are reported in the governmental activities columns in the government-wide financial statements. Capital assets (including intangible assets) are defined by the District as assets with an initial, individual cost of more than $5,000 (amount not rounded) and an estimated useful life in excess of one year. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation.

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend asset lives are not capitalized.

GASB Statement No. 34 required the District to report and depreciate new infrastructure assets effective with the beginning of the 2004 calendar year. Infrastructure assets include lake improvements, dams and drainage systems. Neither their historical cost nor related depreciation has historically been reported in the financial statements. For governmental entities with total annual revenues of less than $10 million for the fiscal year ended December 31, 1999, the retroactive reporting of infrastructure is not required under the provisions of GASB Statement No. 34. The District has elected to report infrastructure assets acquired since 1980.

The District implemented GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets* effective January 1, 2010, which required the District to capitalize and amortize intangible assets. For governmental entities with total annual revenues of less than $10 million for the fiscal year ended December 31, 1999, the retroactive reporting of intangible assets is not required under the provision of GASB Statement No. 51. The District has elected not to report intangible assets acquired in years prior to 2010. The District did not acquire any intangible assets since implementing GASB No. 51.

Property, plant and equipment of the District is depreciated using the straight-line method over the following estimated useful lives:

Equipment	5 years
Vehicles	5 years
Infrastructure	50 – 100 years

J. LONG-TERM OBLIGATIONS

In the government-wide financial statements long-term debt is reported as a liability in the applicable governmental activities statement of net position. Material bond premiums and discounts are amortized over the life of the bonds.

In the fund financial statements, governmental fund types recognize bond premiums and discounts during the current period. The face amount of debt issued is reported as other financing sources. Premiums received on debt issuances are reported as other financing sources while discounts on debt issuances are reported as other financing uses.

K. COMPENSATED ABSENCES

It is the District's policy to permit employees to accumulate earned but unused vacation and sick pay benefits. A liability for these amounts is reported in governmental funds only if they have matured, for example, as a result of employee resignations and retirements. All vacation pay and accumulated sick leave benefits that are vested as severance pay are accrued when incurred in the government-wide financial statements.

L. FUND BALANCE CLASSIFICATIONS

In the fund financial statements, governmental funds report fund balance in classifications that disclose constraints for which amounts in those funds can be spent. These classifications are as follows:

Nonspendable - consists of amounts that are not in spendable form, such as prepaid items.

Restricted - consists of amounts related to externally imposed constraints established by creditors, grantors or contributors; or constraints imposed by state statutory provisions.

Committed - consists of internally imposed constraints. These constraints are established by Resolution of the Board.

Assigned - consists of internally imposed constraints. These constraints reflect the specific purpose for which it is the Board's intended use. These constraints are established by the Board and/or management. Pursuant to Board Resolution, the Board's District Administrator and/or Treasurer is authorized to establish assignments of fund balance.

Unassigned - is the residual classification for the general fund and also reflects negative residual amounts in other funds.

When both restricted and unrestricted resources are available for use, it is the District's policy to first use restricted resources, and then use unrestricted resources as they are needed.

When committed, assigned or unassigned resources are available for use, it is the District's policy to use resources in the following order: 1) committed 2) assigned and 3) unassigned.

M. INTERFUND TRANSACTIONS

Interfund services provided and used are accounted for as revenues, expenditures or expenses. Transactions that constitute reimbursements to a fund for expenditures/expenses initially made from it that are properly applicable to another fund, are recorded as expenditures/expenses in the reimbursing fund and as reductions of expenditures/expenses in the fund that is reimbursed. Interfund loans are reported as an interfund loan receivable or payable which offsets the movement of cash between funds. All other interfund transactions are reported as transfers.

N. USE OF ESTIMATES

The preparation of financial statements in accordance with generally accepted accounting principles in the United States of America (GAAP) requires management to make estimates that affect amounts reported in the financial statements during the reporting period. Actual results could differ from such estimates.

O. RECLASSIFICATIONS

Certain reclassifications were made to prior year amounts to conform to the current year presentation.

P. COMPARATIVE TOTALS

The basic financial statements, individual fund financial statements, required supplementary information, and supplementary financial information include certain prior-year summarized comparative information in total but not at the level of detail required for presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the District's financial statements for the year ended December 31, 2016 from which the summarized information was derived.

Q. DEFERRED OUTFLOWS/INFLOWS OF RESOURCES

In addition to assets, the statement of financial position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, *deferred outflows of resources*, represents a consumption of net position that applies to a future period(s) and so will *not* be recognized as an outflow of resources (expense/expenditure) until then. The District has one item that qualifies for reporting in this category. It is the pension related deferred outflows reported in the government-wide Statement of Net Position.

In addition to liabilities, the statement of financial position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, *deferred inflows of resources*, represents an acquisition of net position that applies to a future period(s) and so will *not* be recognized as an inflow of resources (revenue) until that time. The District has pension related deferred inflows of resources reported in the government-wide Statement of Net Position. The District also has an item, which arises only under a modified accrual basis of accounting, that qualifies for reporting in this category. Accordingly, the item, unavailable revenue, is reported only in the governmental fund balance sheet. The governmental funds report unavailable revenues from property taxes.

R. DEFINED BENEFIT PENSION PLANS

Pensions. For purposes of measuring the net pension liability, deferred outflows/inflows of resources, and pension expense, information about the fiduciary net position of the Public Employees Retirement Association (PERA) and additions to/deductions from PERA's fiduciary net position have been determined on the same basis as they are reported by PERA except that PERA's fiscal year end is June 30. For this purpose, plan contributions are recognized as of employer payroll paid dates and benefit payments and refunds are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

S. RECONCILIATION OF GOVERNMENT-WIDE AND FUND FINANCIAL STATEMENTS

1. EXPLANATION OF CERTAIN DIFFERENCES BETWEEN THE GOVERNMENTAL FUND BALANCE SHEET AND THE GOVERNMENT-WIDE STATEMENT OF NET POSITION

The governmental fund balance sheet includes a reconciliation between *fund balance – total governmental funds* and *net position – governmental activities* as reported in the government-wide statement of net position. One element of that reconciliation explains that "long-term liabilities, including bonds payable, are not due and payable in the current period and therefore are not reported in the funds." The details of this ($6,222,624) difference are as follows:

Unamortized loan premium	($74,088)
Compensated absences payable	(86,066)
Bonds payable	(5,250,692)
Accrued interest payable	(13,786)
Net pension liability	(797,992)
Net adjustment to decrease fund balance - total governmental funds to arrive at net position - governmental activities.	($6,222,624)

2. EXPLANATION OF CERTAIN DIFFERENCES BETWEEN THE GOVERNMENTAL FUND STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE AND THE GOVERNMENT-WIDE STATEMENT OF ACTIVITIES

The governmental fund statement of revenues, expenditures and changes in fund balance includes a reconciliation between *net changes in fund balances – total governmental funds* and *changes in net position of governmental activities* as reported in the government-wide statement of activities. One element of that reconciliation explains that "governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense." The details of this ($440,515) difference are as follows:

Depreciation expense	($440,515)
Net adjustment to decrease net changes in fund balances - total governmental funds to arrive at changes in net position of governmental activities.	($440,515)

Another element of that reconciliation states that "revenues in the statement of activities that do not provide current financial resources are not reported as revenues in the funds." The details of this $128,161 difference are as follows:

Unavailable revenue - general property taxes:	
At December 31, 2016	($83,942)
At December 31, 2017	77,383
Unavailable revenue - stormwater impact payment at December 31, 2017	134,720
Net adjustments to increase net changes in fund balances - total governmental funds to arrive at changes in net position of governmental activities.	$128,161

Another element of that reconciliation states that "the issuance of long-term debt (e.g., bonds, leases) provides current financial resources to governmental funds, while the repayment of the principal of long-term debt consumes the current financial resources of governmental funds. Neither transaction, however, has any effect on net position." The details of this $346,998 difference are as follows:

Principal repayments:	
General obligation debt issuance	$161,998
Certificates of participation	185,000
Net adjustment to increase net changes in fund balances - total governmental funds to arrive at changes in net position of governmental activities.	$346,998

Another element of that reconciliation states that "some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in governmental funds." The details of this $10,664 difference are as follows:

Amortization of debt premium	$5,261
Compensated absences	928
Accrued interest	4,475
Net adjustment to increase net changes in fund balances - total governmental funds to arrive at changes in net position of governmental activities.	$10,664

Note 2 DEPOSITS AND INVESTMENTS

A. DEPOSITS

In accordance with Minnesota Statutes, the District maintains deposits at those depository banks authorized by the District, all of which are members of the Federal Reserve System.

Minnesota Statutes require that all District deposits be protected by insurance, surety bond, or collateral. The market value of collateral pledged must equal 110% of the deposits not covered by insurance or bonds.

Minnesota Statutes require that securities pledged as collateral be held in safekeeping by the District or in a financial institution other than that furnishing the collateral. Authorized collateral includes the following:

a) United States government treasury bills, treasury notes and treasury bonds;

b) Issues of United States government agencies and instrumentalities as quoted by a recognized industry quotation service available to the government entity;

c) General obligation securities of any state or local government with taxing powers which is rated "A" or better by a national bond rating service, or revenue obligation securities of any state or local government with taxing powers which is rated "AA" or better by a national bond rating service;

d) General obligation securities of a local government with taxing powers may be pledged as collateral against funds deposited by that same local government entity;

e) Irrevocable standby letters of credit issued by Federal Home Loan Banks to a municipality accompanied by written evidence that the bank's public debt is rated "AA" or better by Moody's Investors Service, Inc. or Standard & Poor's Corporation; and

f) Time deposits that are fully insured by any federal agency.

The District did not have deposits at December 31, 2017.

B. INVESTMENTS

Minnesota Statutes authorize the District to invest in the following:

a) Direct obligations or obligations guaranteed by the United States or its agencies, its instrumentalities or organizations created by an act of Congress, excluding mortgage-backed securities defined as high risk.

b) Shares of investment companies registered under the Federal Investment Company Act of 1940 and whose only investments are in securities described in (a) above, general obligation tax-exempt securities, or repurchase or reverse repurchase agreements.

c) Obligations of the State of Minnesota or any of its municipalities as follows:
   1) any security which is a general obligation of any state or local government with taxing powers which is rated "A" or better by a national bond rating service;
   2) any security which is a revenue obligation of any state or local government with taxing powers which is rated "AA" or better by a national bond rating service; and
   3) a general obligation of the Minnesota Housing Finance Agency which is a moral obligation of the State of Minnesota and is rated "A" or better by a national bond rating agency.

d) Bankers acceptances of United States banks.

e) Commercial paper issued by United States corporations or their Canadian subsidiaries, of the highest quality, and maturing in 270 days or less.

f) Repurchase or reverse repurchase agreements with banks that are members of the Federal Reserve System with capitalization exceeding $10,000,000; a primary reporting dealer in U.S. government securities to the Federal Reserve Bank of New York; certain Minnesota securities broker-dealers; or, a bank qualified as a depositor.

g) General obligation temporary bonds of the same governmental entity issued under section 429.091, subdivision 7; 469.178, subdivision 5; or 475.61, subdivision 6.

As of December 31, 2017, the District had the following investments and maturities:

Investment Type	Rating	Fair Value	Investment Maturities (in Years) Less Than 1
Money market fund	NR	$123,186	$123,186
External investment pool - 4M Fund	NR	13,676,812	13,676,812
Total investments		$13,799,998	$13,799,998

NR = Not Rated

A reconciliation of cash and investments as shown on the statement of net position is as follows:

Cash and investments	$13,676,812
Cash and investments with escrow	123,186
Total	$13,799,998

The District categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs to measure the fair value of the asset. The hierarchy has three levels. Level 1 investments are valued using inputs that are based on quoted prices in active markets for identical assets. Level 2 investments are valued using inputs that are based on quoted prices for similar assets or inputs that are observable, either directly or indirectly. Level 3 investments are valued using inputs that are unobservable. Pooled investments and mutual funds are not required to be categorized.

Investment Type	12/31/2017
Investments not categorized:	
External investment pool - 4M Fund	$ 13,676,812
Money Market Fund	123,186
Total	$13,799,998

C. INVESTMENT RISKS

Credit Risk. Credit risk is the risk that an issuer or other counterparty to an investment will be unable to fulfill its obligation to the holder of the investment. State law limits investments to commercial paper to those rated in the highest quality category by at least two nationally recognized rating agencies; in any security of the State of Minnesota or any of its municipalities which is rated "A" or better by a national bond rating service for general obligation and rated "AA" or better for a revenue obligation; a general obligation of the Minnesota Housing Finance Agency to those rated "A" or better by a national bond rating agency; mutual funds or money market funds whose investments are restricted to securities described in MS 118A.04. The District follows State Statutes in regards to credit risk of investments. The District does not have an investment policy which further limits its investment choices.

The District's external investment pool investment is with the 4M Fund which is regulated by Minnesota Statutes and the Board of Directors of the League of Minnesota Cities. The 4M fund is an unrated pool and the value of the position in the pool is the same as the value of pool shares. The pool is managed to maintain a portfolio weighted average maturity of no greater than 60 days and seeks to maintain a constant net asset value (NAV) per share of $1. The pool measures their investments in accordance with Government Accounting Standards Board Statement No. 79, at amortized cost.

The 4M Liquid Asset Fund has no redemption requirements.

Interest Rate Risk. Interest rate risk is the risk that changes in the interest rates of debt investments could adversely affect the fair value of an investment. The District does not have an investment policy which limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Concentration of Credit Risk. Concentration of credit risk is the risk of loss that may be attributed to the magnitude of the District's investment in a single issuer. The District does not have an investment policy which addresses the concentration of credit risk.

Custodial Credit Risk. For investments in securities, custodial credit risk is the risk that in the event of a failure of the counterparty, the District will not be able to recover the value of its investment securities that is in the possession of an outside party. Investments in investment pools and money markets are not evidenced by securities that exist in physical or book entry form, and therefore are not subject to custodial credit risk disclosures. The District does not have an investment policy which addresses custodial credit risk.

Note 3 RECEIVABLES

Significant receivable balances not expected to be collected within one year of December 31, 2017 are as follows:

	Major Funds		
	General	Capital Projects CIB	Total
Delinquent property taxes	$31,100	$32,700	$63,800

Note 4 UNAVAILABLE REVENUES

Governmental funds report deferred inflows of resources in connection with receivables for revenues that are not considered to be available to liquidate liabilities of the current period. At the end of the current fiscal year, the various components of unavailable revenue reported in the governmental funds were as follows:

	Property Taxes	Stormwater Impact Payment
General Fund	$35,445	$134,720
General Obligation Bonds	2,443	-
Certificates of Participation	2,230	-
Capital Projects CIB	37,265	-
Total unavailable revenue	$77,383	$134,720

Note 5 DEFINED BENEFIT PENSION PLANS

A. PLAN DESCRIPTION

The District participates in the following cost-sharing multiple-employer defined benefit pension plans administered by the Public Employees Retirement Association of Minnesota (PERA). PERA's defined benefit pension plans are established and administered in accordance with Minnesota Statutes, Chapters 353 and 356. PERA's defined benefit pension plans are tax qualified plans under Section 401 (a) of the Internal Revenue Code.

General Employees Retirement Fund (GERF)

All full-time and certain part-time employees of the District are covered by the General Employees Retirement Fund (GERF). GERF members belong to either the Coordinated Plan or the Basic Plan. Coordinated Plan members are covered by Social Security and Basic Plan members are not. The Basic Plan was closed to new members in 1967. All new members must participate in the Coordinated Plan.

B. BENEFITS PROVIDED

PERA provides retirement, disability, and death benefits. Benefit provisions are established by state statute and can only be modified by the state legislature.

Benefit increases are provided to benefit recipients each January. Increases are related to the funding ratio of the plan. Members in plans that are at least 90% funded for two consecutive years are given 2.5% increases. Members in plans that have not exceeded 90% funded, or have fallen below 80%, are given 1% increases.

The benefit provisions stated in the following paragraphs of this section are current provisions and apply to active plan participants. Vested, terminated employees who are entitled to benefits but are not receiving them yet are bound by the provisions in effect at the time they last terminated their public service.

GERF Benefits

Benefits are based on a member's highest average salary for any five successive years of allowable service, age, and years of credit at termination of service. Two methods are used to compute benefits for PERA's Coordinated and Basic Plan members. The retiring member receives the higher of a step-rate benefit accrual formula (Method 1) or a level accrual formula (Method 2). Under Method 1, the annuity accrual rate for a Basic Plan member is 2.2% of average salary for each of the first ten years of service and 2.7% for each remaining year. The annuity accrual rate for a Coordinated Plan member is 1.2% of average salary for each of the first ten years and 1.7% for each remaining year. Under Method 2, the annuity accrual rate is 2.7% of average salary for Basic Plan members and 1.7% for Coordinated Plan members for each year of service. For members hired prior to July 1, 1989, a full annuity is available when age plus years of service equal 90 and normal retirement age is 65. For members hired on or after July 1, 1989, normal retirement age is the age for unreduced Social Security benefits capped at 66.

C. CONTRIBUTIONS

Minnesota Statutes Chapter 353 sets the rates for employer and employee contributions. Contribution rates can only be modified by the state legislature.

GERF Contributions

Basic Plan members and Coordinated Plan members were required to contribute 9.1% and 6.50%, respectively, of their annual covered salary in calendar year 2017. The District was required to contribute 11.78% of pay for Basic Plan members and 7.50% for Coordinated Plan members in calendar year 2017. The District's contributions to the GERF for the year ended December 31, 2017, were $60,595. The District's contributions were equal to the required contributions as set by state statute.

D. PENSION COSTS

GERF Pension Costs

At December 31, 2017, the District reported a liability of $797,992 for its proportionate share of the GERF's net pension liability. The Districts' net pension liability reflected a reduction due to the State of Minnesota's contribution of $6 million to the fund in 2017. The State of Minnesota is considered a non-employer contributing entity and the state's contribution meets the definition of a special funding situation. The State of Minnesota's proportionate share of the net pension liability associated with the District totaled $10,038. The net pension liability was measured as of June 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The District's proportion of the net pension liability was based on the District's contributions received by PERA during the measurement period for employer payroll paid dates from July 1, 2016, through June 30, 2017, relative to the total employer contributions received from all of PERA's participating employers. At June 30, 2017, the District's proportion was .0125% which was an increase of .0005% from its proportion measured as of June 30, 2016.

For the year ended December 31, 2017, the District recognized pension expense of $87,174 for its proportionate share of the GERF's pension expense. In addition, the District recognized an additional $290 as pension expense (and grant revenue) for its proportionate share of the State of Minnesota's contribution of $6 million to the GERF.

At December 31, 2017, the District reported its proportionate share of the GERF's deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual economic experience	$26,299	$51,553
Changes in actuarial assumptions	132,484	79,999
Difference between projected and actual investment earnings	5,563	-
Changes in proportion	21,908	55,146
Contributions paid to PERA subsequent to the measurement date	31,187	-
Total	$217,441	$186,698

$31,187 reported as deferred outflows of resources related to pensions resulting from District contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended December 31, 2018. Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended December 31,	Pension Expense Amount
2018	$2,739
2019	38,501
2020	(7,810)
2021	(33,874)
Thereafter	-

E. ACTUARIAL ASSUMPTIONS

The total pension liability in the June 30, 2017, actuarial valuation was determined using the following actuarial assumptions:

Inflation	2.50% per year
Active Member Payroll Growth	3.25% per year
Investment Rate of Return	7.50%

Salary increases were based on a service-related table. Mortality rates for active members, retirees, survivors and disabilitants were based on RP-2014 tables for males or females, as appropriate, with slight adjustments to fit PERA's experience. Cost of living benefit increases for retirees are assumed to be 1% per year through 2044 and then 2.5% thereafter.

Actuarial assumptions used in the June 30, 2017, valuation were based on the results of actuarial experience studies. The most recent four-year experience study in the GERF was completed in 2015.

The following changes in actuarial assumptions occurred in 2017:

General Employees Fund

- The Combined Service Annuity (CSA) loads were changed from 0.8 percent for active members and 60 percent for vested and non-vested deferred members. The revised CSA loads are now 0.0 percent for active member liability, 15.0 percent for vested deferred member liability and 3.0 percent for non-vested deferred member liability.
- The assumed post-retirement benefit increase rate was changed from 1.0 percent per year for all years to 1.0 percent per year through 2044 and 2.5 percent per year thereafter.

The long-term expected rate of return on pension plan investments is 7.5%. The State Board of Investment, which manages the investments of PERA, prepares an analysis of the reasonableness on a regular basis of the long-term expected rate of return using a building-block method in which best-estimate ranges of expected future rates of return are developed for each major asset class. These ranges are combined to produce an expected long-term rate of return by weighting the expected future rates of return by the target asset allocation percentages. The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Stocks	39%	5.10%
International Stocks	19%	5.30%
Bonds	20%	0.75%
Alternative Assets	20%	5.90%
Cash	2%	0.00%
Total	100%	

F. DISCOUNT RATE

The discount rate used to measure the total pension liability in 2017 was 7.5%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and employers will be made at rates set in Minnesota statute. Based on that assumption, the fiduciary net position of the GERF was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

G. PENSION LIABILITY SENSITIVITY

The following presents the District's proportionate share of the net pension liability for all plans it participates in, calculated using the discount rate disclosed in the preceding paragraph, as well as what the District's proportionate share of the net pension liability would be if it were calculated using a discount rate 1 percentage point lower or 1 percentage point higher than the current discount rate:

	1% Decrease in Discount Rate (6.5%)	Discount Rate (7.5%)	1% Increase in Discount Rate (8.5%)
District's proportionate share of the GERF net pension liability	$1,237,745	$797,992	$437,974

H. PENSION PLAN FIDUCIARY NET POSITION

Detailed information about each pension plan's fiduciary net position is available in a separately-issued PERA financial report that includes financial statements and required supplementary information. That report may be obtained on the Internet at www.mnpera.org.

Note 6 CAPITAL ASSETS

Capital asset activity for the year ended December 31, 2017 was as follows:

	Beginning Balance	Increases	Decreases	Ending Balance
Governmental activities:				
Capital assets, not being depreciated:				
Land	$421,581	$ -	$ -	$421,581
Total capital assets, not being depreciated	$421,581	0	0	421,581
Capital assets, being depreciated:				
Building	2,126,849	-	-	2,126,849
Furniture and fixtures	102,063	-	-	102,063
Equipment	136,223	-	(5,292)	130,931
Vehicles	78,981	-	-	78,981
Infrastructure	20,085,279	-	-	20,085,279
Total capital assets, being depreciated	22,529,395	0	(5,292)	22,524,103
Less accumulated depreciation for:				
Building	575,881	53,171	-	629,052
Furniture and fixtures	102,063	-	-	102,063
Equipment	122,039	3,152	(5,292)	119,899
Vehicles	42,722	8,317	-	51,039
Infrastructure	8,804,657	375,875	-	9,180,532
Total accumulated depreciation	9,647,362	440,515	(5,292)	10,082,585
Total capital assets being depreciated - net	12,882,033	(440,515)	-	12,441,518
Governmental activities capital assets - net	$13,303,614	($440,515)	$0	$12,863,099

Depreciation expense was charged to function/programs of the primary government as follows:

Governmental activities:	
General government	$61,488
Programs	3,152
Projects	375,875
Total depreciation expense - governmental activities	$440,515

Note 7 LONG-TERM DEBT

Annual debt service requirements to maturity for general obligation bonds are as follows:

	Governmental Activities									
	G.O. Bonds of 1998		Certificates of Participation		G.O. Bonds of 2012		G.O. Drainage Bonds			
Year Ending	PFA Bond		Series 2012B		PFA Bond		2016A		Totals	
December 31,	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
2018	$48,692	$1,223	$190,000	$5,923	$78,000	$14,272	$205,000	$78,813	$521,692	$100,231
2019	-	-	190,000	3,357	79,000	12,950	230,000	74,463	499,000	90,770
2020	-	-	120,000	990	81,000	11,611	235,000	69,813	436,000	82,414
2021	-	-	-	-	82,000	10,238	240,000	65,063	322,000	75,301
2022	-	-	-	-	83,000	8,848	240,000	60,263	323,000	69,111
2023	-	-	-	-	85,000	7,441	245,000	55,413	330,000	62,854
2024	-	-	-	-	86,000	6,000	250,000	50,463	336,000	56,463
2025	-	-	-	-	88,000	4,543	255,000	45,413	343,000	49,956
2026	-	-	-	-	89,000	3,051	260,000	40,263	349,000	43,314
2027	-	-	-	-	91,000	1,542	270,000	34,963	361,000	36,505
2028	-	-	-	-	-	-	275,000	29,513	275,000	29,513
2029	-	-	-	-	-	-	280,000	23,963	280,000	23,963
2030	-	-	-	-	-	-	285,000	17,956	285,000	17,956
2031	-	-	-	-	-	-	290,000	11,125	290,000	11,125
2032	-	-	-	-	-	-	300,000	3,750	300,000	3,750
Total	$48,692	$1,223	$500,000	$10,270	$842,000	$80,496	$3,860,000	$661,237	$5,250,692	$753,226

The following is a schedule of changes in the District's indebtedness for the year ended December 31, 2017:

	Balance 12/31/16	Additions	Deletions	Balance 12/31/17	Due Within One Year
Governmental activities:					
Bonded debt:					
General Obligation Bonds of 1997, PFA Bond	$37,892	$ -	($37,892)	$ -	$ -
General Obligation Bonds of 1998, PFA Bond	95,798	-	(47,106)	48,692	48,692
General Obligation Bonds of 2012, PFA Bond	919,000	-	(77,000)	842,000	78,000
Certificates of Participation, Series 2012B	685,000	-	(185,000)	500,000	190,000
General Obligation Drainage Bonds of 2016A	3,860,000	-	-	3,860,000	205,000
Unamortized bond premiums	79,349	-	(5,261)	74,088	-
Compensated absences	86,994	103,829	(104,757)	86,066	76,936
Total governmental activities	$5,764,033	$103,829	($457,016)	$5,410,846	$598,628

For the governmental activities, compensated absences are generally liquidated by the General Fund. All long-term bonded indebtedness outstanding at December 31, 2017 is backed by the full faith and credit of the District.

1998 G.O. BOND/MINNESOTA PUBLIC FACILITIES AUTHORITY (PFA) BOND

The District entered into a loan agreement with the Minnesota Public Facilities Authority (PFA) on August 5, 1998. The agreement calls for the PFA to lend $800,000 from the Water Pollution Control Revolving Fund to the District for the purpose of funding the eligible project cost of the 1997-1998 repairs to the Old Beltline Interceptor. In connection therewith, the District issued the 1998 General Obligation Bonds in the amount of $800,000 for the purposes of repaying the loan to the PFA. The term of the loan is 20 years, at an interest rate of 3.34% per annum. The District received $711,431 of the loan on February 25, 1999. This was the full price of the project, and as such, the remaining $88,569 will not be received. The District's payment schedule to the PFA was adjusted accordingly to effect this change in principal amount received.

2012 MINNESOTA PUBLIC FACILITIES AUTHORITY (PFA) BOND

The District entered into a loan agreement with the Minnesota Public Facilities Authority (PFA) on May 5, 2012. The agreement calls for the PFA to lend $1,569,623 from the Clean Water Revolving Fund Principal Forgiveness – Green Project, to the District for the purpose of funding the eligible costs related to the Maplewood Mall project. Of this amount, $1,177,217 (the "Loan") has a final maturity date of August 20, 2027 and carries an interest rate of 1.695% per annum. The remaining $392,406 (the "Green Principal Forgiveness"), is not required to be repaid except as otherwise provided per the terms of the agreement. The District's management has indicated that the terms of the "Green Principal Forgiveness" will be met.

$1,230,000 REFUNDING CERTIFICATES OF PARTICIPATION, SERIES 2012B

The District entered into an agreement with U.S. Bank National Association for $2,440,000 of Certificates of Participation, Series 2005A in a lease – purchase agreement. The agreement was for the District to construct an administrative building to serve as the District headquarters. The District had requested the trustee to serve both as lessor under a lease purchase agreement and trustee. The $1,230,000 Refunding Certificates of Participation refunded the Series 2005A Certificates of Participation.

$3,860,000 GENERAL OBLIGATION DRAINAGE BONDS, SERIES 2016A

The District sold the $3,860,000 2016A Bonds on November 15, 2016 for the purpose of funding eligible ongoing maintenance and repairs for the Beltline and Battle Creek Tunnel repair project. The term of the bond is 15 years, at an interest rate of 2.0% - 2.5% per annum.

PLEDGED REVENUE

Future revenue pledged for the payment of long-term debt is as follows:

		Revenue Pledged				Current Year	
Bond Issue	Use of Proceeds	Type	Percent of Total Debt Service	Term of Pledge	Remaining Principal and Interest	Principal and Interest Paid	Pledged Revenue Received
1998 G.O./PFA Bond	Old Beltline Interceptor Repair	Property Taxes	100%	1998 - 2018	$49,915	$49,916	$38,694
2016A Bond	Beltline and Battle Creek Tunnel Repair	Property Taxes	100%	2016 - 2031	$4,521,237	$59,697	$57,077

Note 8 CONTINGENCIES

The District's management has indicated that there are no pending lawsuits or other actions in which the District is a defendant.

Note 9 COMMITTED CONTRACTS

At December 31, 2017, the District had committed contracts of $1,500,488 for construction/repair projects.

Note 10 FUND BALANCE

A. CLASSIFICATIONS

At December 31, 2017, a summary of the governmental fund balance classifications are as follows:

	General Fund	General Obligation Bonds	Certificates of Participation	Capital Projects CIB	Total
Nonspendable:					
Prepaid items	$11,507	$245,431	$193,274	$ -	$450,212
Restricted for:					
Debt service	-	114,147	-	-	114,147
Committed to:					
Construction/projects	-	-	-	1,676,114	1,676,114
Assigned to:					
Construction/projects	-	-	-	6,535,773	6,535,773
Unassigned	4,318,398	-	(59,637)	-	4,258,761
Total	$4,329,905	$359,578	$133,637	$8,211,887	$13,035,007

B. MINIMUM UNASSIGNED FUND BALANCE POLICY

The Board has formally adopted a policy regarding the minimum unassigned fund balance for the General Fund. The most significant revenue source of the General Fund is property taxes. This revenue source is received in two installments during the year – June and December. As such, it is the District's goal to begin each fiscal year with sufficient working capital to fund operations between each semi-annual receipt of property taxes.

The policy establishes a year end targeted unassigned fund balance amount for cash-flow timing needs, emergencies/contingencies and compensated absences of 50% of the subsequent year's budgeted expenditures. At December 31, 2017, the unassigned fund balance of the General Fund was 108.60% of the subsequent year's budgeted expenditures.

Note 11 INTERFUND ACTIVITY

Individual fund interfund receivable and payable balances at December 31, 2017 are as follows:

Fund	Receivable	Payable
General Fund	$185,075	$ -
General Obligation Bonds	-	185,075
Total	$185,075	$185,075

Interfund receivables and payables are representative of lending/borrowing arrangements to cover deficit cash balances at the end of the fiscal year.

Individual interfund transfers for the year ended December 31, 2017 are as follows:

Fund	Transfer In	Transfer Out
General Obligation Bonds	$245,431	$ -
Capital Projects - Contingency	210,980	-
Capital Projects - Casey Lake	-	210,980
Capital Projects - Contingency	-	245,431
Total	$456,411	$456,411

The interfund transfers were made to provide funding for debt service transactions and to close out completed projects to the contingency account.

Note 12 RISK MANAGEMENT

The District is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters.

Workers compensation coverage for District employees and council members is provided through a pooled self-insurance program through the League of Minnesota Cities Insurance Trust (LMCIT). The District pays an annual premium to LMCIT. The District is subject to supplemental assessments if deemed necessary by the LMCIT. The LMCIT reinsures through Workers Compensation Reinsurance Association (WCRA) as required by law. For workers compensation, the District is not subject to a deductible. The District workers compensation coverage is retrospectively rated. With this type of coverage, final premiums are determined after loss experience is known. The amount of premium adjustment, if any, is considered immaterial and not recorded until received or paid.

Other insurance coverage is provided through a pooled self-insurance program through the LMCIT. The District pays an annual premium to the LMCIT. The District is subject to supplemental assessments if deemed necessary by the LMCIT. The LMCIT reinsures through commercial companies for claims in excess of various amounts. The District retains risk for the deductible portions of the insurance policies. The amount of these deductibles is considered immaterial to the financial statements.

There were no significant reductions in insurance from the previous year or settlements in excess of insurance coverage for any of the past three fiscal years.

Note 13 RECENTLY ISSUED ACCOUNTING STANDARDS

The Governmental Accounting Standards Boards (GASB) recently approved the following statements which were not implemented for these financial statements:

Statement No. 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The provisions in Statement 75 are effective for fiscal years beginning after June 15, 2017.

Statement No. 83 *Certain Asset Retirement Obligations.* The provisions of this Statement are effective for reporting periods beginning after June 15, 2018.

Statement No. 84 *Fiduciary Activities.* The provisions of this Statement are effective for reporting periods beginning after December 15, 2018.

Statement No. 85 *Omnibus 2017.* The provisions of this Statement are effective for reporting periods beginning after June 15, 2017.

Statement No. 86 *Certain Debt Extinguishment Issues.* The provisions of this Statement are effective for reporting periods beginning after June 15, 2017.

Statement No. 87 *Leases.* The provisions of this Statement are effective for reporting periods beginning after December 15, 2019.

Statement No. 88 *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements.* The provisions of this Statement are effective for reporting periods beginning after June 15, 2018.

The effect these standards may have on future financial statements is not determinable at this time.

REQUIRED SUPPLEMENTARY INFORMATION

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
BUDGETARY COMPARISON SCHEDULE - GENERAL FUND
For The Year Ended December 31, 2017
With Comparative Actual Amounts For The Year Ended December 31, 2016

	2017				
	Budgeted Amounts		Actual	Variance with Final Budget - Positive	2016 Actual
	Original	Final	Amounts	(Negative)	Amounts
Revenues:					
General property taxes:					
Current and delinquent	$3,121,500	$3,121,500	$3,111,543	($9,957)	$2,625,530
Intergovernmental:					
Market value homestead credit	-	-	29	29	178
Grants	13,000	13,000	26,147	13,147	122,439
Total intergovernmental	13,000	13,000	26,176	13,176	122,617
Stormwater impact payment	-	-	33,680	33,680	125,400
Investment income	20,000	20,000	54,639	34,639	8,452
Permit escrow fees	15,000	15,000	10,040	(4,960)	12,960
Refunds and reimbursements	-	-	20,786	20,786	46,091
Other	-	-	8,960	8,960	7,788
Total revenues	3,169,500	3,169,500	3,265,824	96,324	2,948,838
Expenditures:					
General government:					
Engineering:					
Administration	89,000	89,000	67,402	21,598	93,369
Permit review	50,000	50,000	41,721	8,279	49,965
Engineer review	65,000	65,000	54,286	10,714	42,974
Subtotal engineering	204,000	204,000	163,409	40,591	186,308
Consulting	40,000	40,000	32,560	7,440	57,629
District training	25,000	25,000	15,187	9,813	22,184
Dues	9,000	9,000	6,735	2,265	7,671
Employee expenses	10,000	10,000	9,401	599	6,166
Insurance	35,000	35,000	30,542	4,458	29,044
Legal and audit	100,000	100,000	81,933	18,067	81,429
Manager's per diem and expenses	10,000	10,000	5,035	4,965	7,658
Miscellaneous	10,000	10,000	1,664	8,336	40
Office equipment and maintenance	60,000	60,000	40,061	19,939	35,502
Office supplies and postage	10,000	10,000	8,178	1,822	6,717
Printing	10,000	10,000	6,487	3,513	5,964
Salaries/payroll taxes/benefits	1,250,000	1,250,000	1,125,240	124,760	1,048,541
Telephone	10,000	10,000	4,415	5,585	4,282
Utilities	23,000	23,000	10,838	12,162	6,438
Vehicle lease and maintenance	65,000	65,000	32,284	32,716	45,049
Water quality monitoring	133,000	133,000	138,591	(5,591)	64,715
GIS system maintenance and equipment	35,000	35,000	8,464	26,536	17,960
Internet/website	55,000	55,000	31,651	23,349	29,571
Project operations	140,000	140,000	122,921	17,079	146,342
Committee expenditures	3,500	3,500	3,919	(419)	2,652
Total general government	2,237,500	2,237,500	1,879,515	357,985	1,811,862

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
BUDGETARY COMPARISON SCHEDULE - GENERAL FUND
For The Year Ended December 31, 2017
With Comparative Actual Amounts For The Year Ended December 31, 2016

	2017				
	Budgeted Amounts		Actual	Variance with Final Budget - Positive	2016 Actual
	Original	Final	Amounts	(Negative)	Amounts
Watershed programs:					
Project feasibility studies	$300,000	$300,000	$89,525	$210,475	$185,410
Watershed management plan update	20,000	20,000	20,357	(357)	104,746
Education programming	60,000	60,000	41,247	18,753	51,178
Natural resources program	90,000	90,000	119,977	(29,977)	57,352
Research projects	235,000	235,000	111,177	123,823	82,039
Waterfest	40,000	40,000	40,080	(80)	36,445
NPDES Phase II	20,000	20,000	4,851	15,149	14,627
Health and safety program	2,000	2,000	1,965	35	2,187
Lake Studies/WRAPS/TMDL	125,000	125,000	4,134	120,866	44,663
Outside programs	110,000	110,000	43,653	66,347	38,954
Total watershed programs	1,002,000	1,002,000	476,966	525,034	617,601
Total expenditures	3,239,500	3,239,500	2,356,481	883,019	2,429,463
Revenues over (under) expenditures	($70,000)	($70,000)	909,343	$979,343	519,375
Fund balance - January 1			3,420,562		2,901,187
Fund balance - December 31			$4,329,905		$3,420,562

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF PROPORTIONATE SHARE OF NET PENSION LIABILITY* -
GENERAL EMPLOYEES RETIREMENT FUND
For The Year Ended December 31, 2017

Statement 7

Measurement Date June 30	Fiscal Year Ending December 31	District's Proportionate Share (Percentage) of the Net Pension Liability	District's Proportionate Share (Amount) of the Net Pension Liability (a)	State's Proportionate Share (Amount) of the Net Pension Liability Associated with District (b)	District's Proportionate Share of the Net Pension Liability and the State's Proportionate Share of the Net Pension Liability Associated with District (a+b)	Covered Payroll (c)	District's Proportionate Share of the Net Pension Liability as a Percentage of its Covered Payroll ((a+b)/c)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
2015	2015	0.0132%	$684,093	$ -	$684,093	$773,820	88.4%	78.2%
2016	2016	0.0120%	974,340	12,771	987,111	747,482	132.1%	68.9%
2017	2017	0.0125%	797,992	10,038	808,030	805,604	100.3%	75.9%

* The schedule is provided prospectively beginning with the District's fiscal year ended December 31, 2015 and is intended to show a ten year trend. Additional years will be reported as they become available.

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION **Statement 8**
SCHEDULE OF PENSION CONTRIBUTIONS* - GENERAL EMPLOYEES RETIREMENT FUND
For The Year Ended December 31, 2017

Fiscal Year Ending	Statutorily Required Contribution (a)	Contributions in Relation to the Statutorily Required Contribution (b)	Contribution Deficiency (Excess) (a-b)	Covered Payroll (c)	Contributions as a Percentage of Covered Payroll (b/c)
December 31, 2015	$57,121	$57,121	$ -	$761,606	7.5%
December 31, 2016	57,310	57,310	-	764,138	7.5%
December 31, 2017	60,595	60,595	-	807,938	7.5%

* The schedule is provided prospectively beginning with the District's fiscal year ended December 31, 2015 and is intended to show a ten year trend. Additional years will be reported as they become available.

Note A LEGAL COMPLIANCE – BUDGETS

The General Fund budget is legally adopted on a basis consistent with accounting principles generally accepted in the United States of America. The legal level of budgetary control is at the fund level for the General Fund.

Note B PENSION INFORMATION

PERA – General Employees Retirement Fund

2017 Changes
Changes in Actuarial Assumptions
- The Combined Service Annuity (CSA) loads were changed from 0.8 percent for active members and 60 percent for vested and non-vested deferred members. The revised CSA loads are 0.0 percent for active member liability, 15.0 percent for vested deferred member liability and 3.0 percent for non-vested deferred member liability.

- The assumed post-retirement benefit increase rate was changed from 1.0 percent per year for all years to 1.0 percent per year through 2044 and 2.5 percent per year thereafter.

2016 Changes
Changes in Actuarial Assumptions:
- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2035 and 2.5% per year thereafter to 1.0% per year for all future years.

- The assumed investment return was changed from 7.9% to 7.5%. The single discount rate was changed from 7.9% to 7.5%.

- Other assumptions were changed pursuant to the experience study dated June 30, 2015. The assumed future salary increases, payroll growth, and inflation were decreased by 0.25% to 3.25% for payroll growth and 2.50% for inflation.

INDIVIDUAL FUND FINANCIAL STATEMENTS

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
COMPARATIVE BALANCE SHEET **Statement 9**
GENERAL FUND
December 31, 2017
With Comparative Totals For December 31, 2016

Assets	2017	2016
Cash and investments	$5,044,853	$4,135,419
Accounts receivable	732	261
Due from other governmental units	138,405	14,640
Due from other funds	185,075	181,308
Taxes receivable:		
Delinquent	35,445	36,097
Due from county	36,074	39,208
Prepaid items	11,507	4,589
Total assets	$5,452,091	$4,411,522
Liabilities, deferred inflows of resources, and fund balance		
Liabilities:		
Accounts payable	$21,095	$55,000
Accrued expenses	13,581	11,710
Due to other governmental units	7,470	13,068
Escrow deposits payable	909,875	875,085
Total liabilities	952,021	954,863
Deferred inflows of resources:		
Unavailable revenue	170,165	36,097
Fund balance:		
Nonspendable	11,507	4,589
Unassigned	4,318,398	3,415,973
Total fund balance	4,329,905	3,420,562
Total liabilities, deferred inflows of resources, and fund balance	$5,452,091	$4,411,522

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
COMPARATIVE STATEMENT OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCE
GENERAL FUND
For The Year Ended December 31, 2017
With Comparative Totals For The Year Ended December 31, 2016

Statement 10

	2017	2016
Revenues:		
General property taxes:		
Current and delinquent	$3,111,543	$2,625,530
Intergovernmental:		
Market value credit	29	178
Grants	26,147	122,439
Total intergovernmental	26,176	122,617
Stormwater impact payment	33,680	125,400
Investment income	54,639	8,452
Permit escrow fees	10,040	12,960
Refunds and reimbursements	20,786	46,091
Other	8,960	7,788
Total revenues	3,265,824	2,948,838
Expenditures:		
Current:		
General government	1,879,515	1,772,270
Programs	476,966	617,601
Capital outlay	-	39,592
Total expenditures	2,356,481	2,429,463
Revenues over (under) expenditures	909,343	519,375
Fund balance - January 1	3,420,562	2,901,187
Fund balance - December 31	$4,329,905	$3,420,562

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SUPPLEMENTARY FINANCIAL INFORMATION

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
SCHEDULE OF EXPENDITURES - ALL FUNDS **Schedule 1**
For The Year Ended December 31, 2017
With Comparative Totals For The Year Ended December 31, 2016

Expenditures:	General Fund	General Obligation Bonds	Certificates of Participation	Capital Projects CIB Fund	Totals 2017	Totals 2016
Current:						
General government:						
Engineering	$163,409	$ -	$ -	$ -	$163,409	$186,308
Consulting services	32,560	-	-	-	32,560	57,629
District training	15,187	-	-	-	15,187	22,184
Dues	6,735	-	-	-	6,735	7,671
Employee expenses	9,401	-	-	-	9,401	6,166
Insurance	30,542	-	-	-	30,542	29,044
Legal and audit	81,933	-	-	-	81,933	81,429
Manager's per diem and expenses	5,035	-	-	-	5,035	7,658
Miscellaneous	1,664	-	-	-	1,664	40
Office equipment and maintenance	40,061	-	-	-	40,061	35,502
Office supplies and postage	8,178	-	-	-	8,178	6,717
Printing	6,487	-	-	-	6,487	5,964
Salaries/payroll taxes/benefits	1,125,240	-	-	-	1,125,240	1,048,541
Telephone	4,415	-	-	-	4,415	4,282
Utilities	10,838	-	-	-	10,838	6,438
Vehicle lease and maintenance	32,284	-	-	-	32,284	5,457
Water quality monitoring	138,591	-	-	-	138,591	64,715
GIS system and maintenance	8,464	-	-	-	8,464	17,960
Internet/webset	31,651	-	-	-	31,651	29,571
Project operations	122,921	-	-	-	122,921	146,342
Committee expenditures	3,919	-	-	-	3,919	2,652
Total general government	1,879,515	0	0	0	1,879,515	1,772,270
Programs	476,966	-	-	-	476,966	617,601
Total current	2,356,481	0	0	0	2,356,481	2,389,871
Capital outlay	-	-	-	-	-	39,592
Construction/projects	-	-	-	4,517,633	4,517,633	1,934,568
Debt service	-	181,475	194,864	59,697	436,036	458,889
Total expenditures	$2,356,481	$181,475	$194,864	$4,577,330	$7,310,150	$4,822,920

OTHER INFORMATION - UNAUDITED

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RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
TAXABLE VALUATIONS, TAX LEVIES AND TAX RATES - UNAUDITED **Exhibit 1**

	2017/18 Tax Capacity Values	2016/17 Tax Capacity Values	2015/16 Tax Capacity Values	2014/15 Tax Capacity Values
Taxable valuations:				
Washington County	$35,953,519	$33,577,746	$31,911,162	$31,225,626
Ramsey County	142,027,646	131,503,926	123,130,134	120,010,031
Total	$177,981,165	$165,081,672	$155,041,296	$151,235,657

Tax levies extended:								
Extended in year	2017		2016		2015		2014	
Collectible in year	2018		2017		2016		2015	
	Levy	Tax Capacity Rate	Levy	Tax Capacity Rate	Levy	Tax Capacity Rate	Levy	Tax Capacity Rate
General Fund	$2,562,550	1.453	$3,121,500	1.934	$2,653,500	1.773	$2,844,500	1.955
Debt levy	448,951	.255	238,977	.148	180,746	.121	181,000	.124
CIB Fund	3,859,885	2.189	3,205,383	1.985	3,839,885	2.566	3,513,200	2.415
Total	$6,871,386	3.897	$6,565,860	4.067	$6,674,131	4.460	$6,538,700	4.494

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
CIB FUND - UNAUDITED
SCHEDULE OF FINANCIAL ACTIVITY FROM INCEPTION

Project	CIB Year	Expenditures			Revenue
		Prior Years	2017	Total	Prior Years Revenue
Completed projects:					
Subtotal - completed projects	1987-2007	$20,062,112	$ -	$20,062,112	$20,102,495
Projects recently closed:					
561 - York Pond Improvement	2008	39,071	-	39,071	39,071
562 - Kohlman TMDL	2008	487,670	-	487,670	487,670
560 - Hwy 36/61 Treatment	2008	672,496	-	672,496	672,496
564 - Living Streets Demo	2010	1,048,092	-	1,048,092	1,048,092
568 - Maplewood Mall Project	2009-2013	7,222,238	-	7,222,238	7,222,238
530 - District Office Property expansion/improvement	2013	282,415	-	282,415	282,415
527 - Casey Lake Watershed Infiltration Project	2013	242,731	-	242,731	453,711
Current CIB projects:					
516 - Project Maintenance and Repair	1992-2015	8,972,934	615,202	9,588,136	9,437,932
529 - BMP Incentive Grant Program	2007-2015	2,742,275	616,602	3,358,877	3,715,918
528 - Faith Based Volume Reduction	2013	414,527	7,850	422,377	150,000
531 - Volume Reduction Opportunity Fund	2014	-	-	-	1,484,215
518 - School/Commercial Site Retrofit	2015	582,498	296,383	878,881	944,572
520 - Flood Damage	2015	20	509,879	509,899	841,168
519 - District Office Retrofit	2015	2,022	16,996	19,018	148,641
549 - Beltline/Battle Creek	2016	209,577	2,114,013	2,323,590	4,731,574
550 - Frost/Kennard Project	2016	91,186	13,592	104,778	138,657
551 - Markham Pond Project	2016	74,427	386,813	461,240	277,049
553 - Wakefield Project	2017	-	-	-	-
Subtotal		23,084,179	4,577,330	27,661,509	32,075,419
580 - CIB contingency account		266,879	-	266,879	709,728

Exhibit 2

Revenue							Revenue
2017 CIB Levy	Investment Income	Bond Issuance	Transfers/ Reallocation	Project Closeout	Grant/Project Reimbursement	Total Revenue	Over/(Under) Expenditures
$ -	$ -	$ -	$ -	$ -	$ -	$20,102,495	$40,383
-	-	-	-	-	-	39,071	-
-	-	-	-	-	-	487,670	-
-	-	-	-	-	-	672,496	-
-	-	-	-	-	-	1,048,092	-
-	-	-	-	-	-	7,222,238	-
-	-	-	-	-	-	282,415	-
-	-	-	(210,980)	-	-	242,731	-
697,767	-	-	-	-	67,478	10,203,177	615,041
199,362	-	-	-	-	3,000	3,918,280	559,403
199,362	-	-	-	-	75,000	424,362	1,985
-	-	-	-	-	-	1,484,215	1,484,215
697,767	-	-	-	-	73,531	1,715,870	836,989
787,480	-	-	-	-	-	1,628,648	1,118,749
-	-	-	-	-	-	148,641	129,623
-	-	-	-	-	-	4,731,574	2,407,984
74,761	-	-	-	-	10,873	224,291	119,513
49,841	-	-	-	-	244,761	571,651	110,411
351,874	-	-	-	-	-	351,874	351,874
3,058,214	0	0	(210,980)	0	474,643	35,397,296	7,735,787
-	27,319	-	(34,451)	-	-	702,596	435,717
			Fund balance - December 31, 2017				$8,211,887

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
COMBINED SCHEDULE OF INDEBTEDNESS - UNAUDITED
December 31, 2017

	Dated	Final Due Date	Net Interest Rate
Bonded indebtedness:			
General Obligation Debt:			
G.O. Bonds of 1997 - PFA Bond	6/13/1997	8/20/2017	3.82%
G.O. Bonds of 1998 - PFA Bond	8/5/1998	8/20/2018	3.34%
G.O. Bonds of 2012 - PFA Bond	5/5/2012	8/20/2027	1.70%
Refunding Certificates of Participation, Series 2012B	12/5/2012	2/1/2020	1.22%
G.O. Drainage Bonds of 2016A	11/15/2016	2/1/2032	2.09%
Total bonded indebtedness			
Unamortized bond premiums			
Compensated absences			
Total indebtedness			

Exhibit 3

Authorized and Issued	Retired	Outstanding 12/31/17	Due in 2018 Principal	Due in 2018 Interest
$540,835	$540,835	$ -	$ -	$ -
711,431	662,739	48,692	48,692	1,223
1,177,217	335,217	842,000	78,000	14,272
1,230,000	730,000	500,000	190,000	5,923
3,860,000	-	3,860,000	205,000	78,812
7,519,483	2,268,791	5,250,692	521,692	100,230
		74,088	-	-
		86,066	76,936	-
$7,519,483	$2,268,791	$5,410,846	$598,628	$100,230

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
DEFERRED TAX LEVIES - PER BOARD RESOLUTIONS - UNAUDITED **Exhibit 4**
December 31, 2017

Year of Levy/ Collection	G.O. Bonds of 1998	G.O. Drainage Bonds of 2016A	Total
2017/2018	$49,915	$322,101	$372,016
2018/2019	-	322,521	322,521
2019/2020	-	322,836	322,836
2020/2021	-	317,796	317,796
2021/2022	-	318,006	318,006
2022/2023	-	318,111	318,111
2023/2024	-	318,111	318,111
2024/2025	-	318,006	318,006
2025/2026	-	323,046	323,046
2026/2027	-	322,626	322,626
2027/2028	-	322,101	322,101
2028/2029	-	321,471	321,471
2029/2030	-	319,988	319,988
2030/2031	-	322,875	322,875
Totals	$49,915	$4,489,595	$4,539,510

OTHER REQUIRED REPORTS

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REDPATH AND COMPANY

REPORT ON INTERNAL CONTROL

To the Honorable Managers and Management of the
Ramsey-Washington Metro Watershed District
Little Canada, Minnesota

In planning and performing our audit of the financial statements of the governmental activities and each major fund of Ramsey-Washington Metro Watershed District as of and for the year ended December 31, 2017, in accordance with auditing standards generally accepted in the United States of America, we considered the Ramsey-Washington Metro Watershed District's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Ramsey-Washington Metro Watershed District's internal control. Accordingly, we do not express an opinion on the effectiveness of Ramsey-Washington Metro Watershed District's internal control.

A *deficiency* in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis.

Our consideration of internal control was for the limited purpose described in the first paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses. Given these limitations during our audit, we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

This communication is intended solely for the information and use of management, Ramsey-Washington Metro Watershed District's Board of Managers, and others within the organization, and is not intended to be, and should not be, used by anyone other than these specified parties.

Redpath and Company, Ltd.

REDPATH AND COMPANY, LTD.
St. Paul, Minnesota

April 19, 2018

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REDPATH AND COMPANY

MINNESOTA LEGAL COMPLIANCE REPORT

To the Honorable Managers of the
Ramsey-Washington Metro Watershed District
Little Canada, Minnesota

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the governmental activities and each major fund of the Ramsey-Washington Metro Watershed District, as of and for the year ended December 31, 2017, and the related notes to the financial statements which collectively comprise the Ramsey-Washington Metro Watershed District's basic financial statements, and have issued our report thereon dated April 19, 2018.

The *Minnesota Legal Compliance Audit Guide for Other Political Subdivisions*, promulgated by the State Auditor pursuant to Minn. Stat. § 6.65, contains six categories of compliance to be tested: contracting and bidding, deposits and investments, conflicts of interest, claims and disbursements, miscellaneous provisions and tax increment financing. Our audit considered all of the listed categories except we did not test for compliance with the provisions for tax increment financing because it is not applicable to the Ramsey-Washington Metro Watershed District.

In connection with our audit, nothing came to our attention that caused us to believe that Ramsey-Washington Metro Watershed District failed to comply with the provisions of the *Minnesota Legal Compliance Audit Guide for Other Political Subdivisions*. However, our audit was not directed primarily toward obtaining knowledge of such noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding the Ramsey-Washington Metro Watershed District's noncompliance with the above referenced provisions.

This report is intended solely for the information and use of those charged with governance and management of Ramsey-Washington Metro Watershed District and the State Auditor and is not intended to be and should not be used by anyone other than these specified parties.

Redpath and Company, Ltd.

REDPATH AND COMPANY, LTD.
St. Paul, Minnesota

April 19, 2018

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Request for Board Action

Board Meeting Date: May 2, 2018 **Agenda Item No:** 8C

Preparer: Tina Carstens, Administrator

Item Description: Grant agreement with the Minnesota Department of Natural Resources (MnDNR) for improved floodplain modeling and mapping.

Background:
As you may recall, the District has been in conversations with the MnDNR regarding collaborating on modeling and mapping for the FEMA Flood Insurance Rate Maps (FIRM). The FIRM within the district show inundation areas that were compiled from several data sources, including lakes and water bodies that have been modeled with the district hydrologic and hydraulic model. In 2014, the district updated its model to incorporate the Atlas 14 rainfall depths as well as recent redevelopment and BMPs that have been constructed throughout the District. The model update resulted in changes to the 100-year water surface elevations that are not currently characterized on the effective FEMA FIRMs. The updated district model will be used as the starting point for the scope of work to do the FEMA model update.

Attached is a grant agreement, scope of work, and resolution that must be accepted by the board in order to proceed. The grant is in the amount of $109,720.00 and does not require any district match.

Applicable District Goal and Action Item:

Goal: Manage organization effectively – Operate in a manner that achieves the District's mission while adhering to its core principles.

Action Item: Coordinate management efforts and collaborate with local and state agencies and governments to promote the efficient use of resources.

Staff Recommendation:
Approve the grant agreement and Resolution 18-01.

Financial Implications:
None.

Board Action Requested:
Approve the grant agreement and Resolution 18-01.

RESOLUTION 18-01

RESOLUTION AUTHORIZING ACCEPTANCE OF A GRANT FROM THE MINNESOTA DEPARTMENT OF NATURAL RESOURCES FOR IMPROVED FLOOD RISK MAPPING.

WHEREAS, Ramsey-Washington Metro Watershed District, hereinafter referred to as the "Applicant", will act as legal sponsor for entering into an agreement with the Minnesota Department of Natural Resources for a collaborative effort to improve flood risk identification and mapping within its jurisdiction and that the Administrator is hereby authorized to collaborate with the Minnesota Department of Natural Resources for securing funding of a project on behalf of the Applicant; and

WHEREAS, the Applicant has the legal authority to request financial assistance, and the institutional, administrative, technical and managerial capability to ensure satisfactory completion of the project described in the grant agreement attached herein; and

WHEREAS, the Applicant understands that funding provided through the Minnesota Department of Natural Resources requires no monetary match; and

WHEREAS, the Applicant hereby pledges to complete the project per the approved scope and budget if it exceeds the total funding provided by the Department of Natural Resources grant; and

WHEREAS, the Applicant has not incurred any reimbursable project expenses prior to the full execution of a grant agreement; and

WHEREAS, the Applicant has not violated any Federal, State or local laws pertaining to fraud, bribery, graft, kickbacks, collusion, conflict of interest or other unlawful or corrupt practice; and

WHEREAS, upon approval of its request to the state, the Applicant may enter into an agreement with the State of Minnesota, and the Applicant certifies that it will comply with all the applicable laws and regulations as stated in the contract agreement;

NOW, THEREFORE, BE IT RESOLVED by the Board of Managers of the Ramsey-Washington Metro Watershed District that the Administrator is hereby authorized to execute such agreements as are necessary to implement the project on behalf of the Applicant.

Adopted by the Board of Managers of the Ramsey-Washington Metro Watershed District this 2nd day of May, 2018.

_____

Marj Ebensteiner, President

Attest:

_____

Dr. Pam Skinner, Secretary

STATE OF MINNESOTA GRANT CONTRACT WITH THE RAMSEY-WASHINGTON METRO WATERSHED DISTRICT FOR IMPROVED FLOODPLAIN MODELING AND MAPPING

This grant contract is between the State of Minnesota, acting through its Commissioner of Natural Resources, ("State") and the Ramsey-Washington Metro Watershed District, 2665 Noel Drive, Little Canada, Minnesota 55117 ("Grantee").

Recitals

1. Under Minn. Stat. Section 84.026, Subdivision 2, the State is empowered to enter into this grant agreement.
2. The State agrees that updating and improving floodplain data is in the interest of the State.
3. The Grantee represents that it is duly qualified and agrees to perform all services described in this grant contract to the satisfaction of the State. Pursuant to Minnesota Statutes §16B.98 Subdivision 1, the Grantee agrees to minimize administrative costs as a condition of this grant contract.

Grant Contract

1 Term of Grant Contract

1.1 ***Effective date*:** May 15, 2018, or the date the State obtains all required signatures under Minnesota Statutes §16C.05, subdivision 2, whichever is later. Per Minn.Stat.§16B.98 Subd. 7, no payments will be made to the Grantee until this grant contract is fully executed. **The Grantee must not begin work under this grant contract until this contract is fully executed and the Grantee has been notified by the State's Authorized Representative to begin the work.**

1.2 ***Expiration date*:** April 30, 2020, or until all obligations have been satisfactorily fulfilled, whichever occurs first.

1.3 ***Survival of Terms*.** The following clauses survive the expiration or cancellation of this grant contract: 8. Liability; 9. State Audits; 10. Government Data Practices and Intellectual Property; 13. Publicity and Endorsement; 14. Governing Law, Jurisdiction, and Venue; and 16. Data Disclosure.

2 Grantee's Duties

The Grantee, who is not a state employee, will be responsible for tasks generalized below, consistent with the details included for Work Tasks one through six included in Attachment A – *FEMA Modeling Updates for the Twin Cities HUC8 Watershed - Ramsey-Washington Metro Watershed District Scope,* dated March 12, 2018, attached and incorporated hereto:

- Submit updated XP-SWMM hydrology modeling for the watershed
- Submit updated XP-SWMM model including hydraulic results for approximate and detailed study areas
- Create and submit floodplain, floodway and cross-section shapefiles
- Create and submit depth grids
- Participate in two flood risk review meetings
- Submit project narrative summarizing hydrology, hydraulics, and mapping methods and results

All work shall comply with required grants management policies and procedures set forth in Minn.Stat.§16B.97, Subd. 4 (a)(1).

3 Time

The Grantee must comply with all the time requirements described in this grant contract. In the performance of this grant contract, time is of the essence.

4 Consideration and Payment

4.1 ***Consideration***. The State will reimburse Grantee for all eligible products received and services performed by the Grantee under this grant contract as follows:

(a) Compensation. The Grantee will be reimbursed 100% for eligible project expenses, not to exceed $109,720.00. This grant does not require a local match.

(b) Travel Expenses. Grantee shall not be reimbursed for travel and subsistence expenses incurred as a result of this grant contract.

(c) Total Obligation

The total obligation of the State for all compensation and reimbursements to the Grantee under this grant contract will not exceed $109,720.00.

4.2. ***Payment***

(a) Invoices/Deliverables

The State will pay the Grantee after the Grantee submits itemized invoices for deliverables produced or the services actually performed and the State's Authorized Representative accepts the invoices. Invoices must include the billing period of work performed and be submitted timely and with project deliverables. Reimbursement will be made in accordance with the following schedule:

- upon receipt and acceptance of Grantee's hydrologic model and technical memorandum describing assumptions and methods used.
- upon receipt and acceptance of Grantee's hydraulic model and documentation for detailed and approximate study areas.
- upon receipt and acceptance of depth grids, shapefiles for flood innundation areas, and cross-sections.
- upon documentation of meeting participation and invoice for time.
- upon receipt and acceptance of completed project reporting.
- final financial reconciliation for any outstanding eligible project reimburseables.

Requested reimbursement amounts for each work task shall not exceed 120% of the amount identified for each work task in the estimated budget contained in Attachment A of this agreement. Upon project completion, financial reconciliation will be done to ensure Grantee is reimbursed for all actual costs of services and deliverables, not to exceed $109,720.00.

(*b*) *Federal funds*

Payments under this grant contract will be made from federal funds obtained by the State through FEMA Cooperating Technical Partners Program, CFDA number 97.045. The Grantee is responsible for compliance with all federal requirements imposed on these funds and accepts full financial responsibility for any requirements imposed by the Grantee's failure to comply with federal requirements.

(*c*) *Unexpended Funds*

The Grantee must promptly return to the State any unexpended funds that have not been accounted for annually in a financial report to the State due at grant closeout.

4.3 ***Contracting and Bidding Requirements***

Grantees that are municipalities as defined in state statute must comply with the contracting provisions of Minn. Stat.§471.345.

5 Conditions of Payment

All services provided by the Grantee under this grant contract must be performed to the State's satisfaction, as determined at the sole discretion of the State's Authorized Representative and in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations. The Grantee will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, state, or local law.

6 Authorized Representative

The State's Authorized Representative is Patrick Lynch, Floodplain Hydrologist, Department of Natural Resources, 500 Lafayette Road, St. Paul, Minnesota, 55155, 651-259-5691, pat.lynch@state.mn.us , or his/her successor, and has the responsibility to monitor the Grantee's performance and the authority to accept or reject the services provided under this grant contract. If the services are satisfactory, the State's Authorized Representative will certify acceptance on each invoice submitted for payment.

The Grantee's Authorized Representative is Tina Carstens, Administrator, Ramsey-Washington Metro Watershe d District, 2665 Noel Drive, Little Canada, Minnesota 55117, (651)792-7950, tina.carstens@rwmwd.org . If the Grantee's Authorized Representative changes at any time during this grant contract, the Grantee must immediately notify the State.

7 Assignment, Amendments, Waiver, and Grant Contract Complete

7.1 ***Assignment.*** The Grantee shall neither assign nor transfer any rights or obligations under this grant contract without the prior written consent of the State, approved by the same parties who executed and approved this grant contract, or their successors in office.

7.2 ***Amendments.*** Any amendments to this grant contract must be in writing and will not be effective until it has been executed and approved by the same parties who executed and approved the original grant contract, or their successors in office.

7.3 ***Waiver.*** If the State fails to enforce any provision of this grant contract, that failure does not waive the provision or the State's right to enforce it.

7.4 ***Grant Contract Complete.*** This grant contract contains all negotiations and agreements between the State and the Grantee. No other understanding regarding this grant contract, whether written or oral, may be used to bind either party.

8 Liability

The Grantee must indemnify, save, and hold the State, its agents, and employees harmless from any claims or causes of action, including attorney's fees incurred by the State, arising from the performance of this grant contract by the Grantee or the Grantee's agents or employees. This clause will not be construed to bar any legal remedies the Grantee may have for the State's failure to fulfill its obligations under this grant contract.

9 State Audits

Under Minn. Stat. §16B.98, Subd.8, the Grantee's books, records, documents, and accounting procedures and practices of the Grantee or other party relevant to this grant agreement or transaction are subject to examination by the State and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this grant agreement, receipt and approval of all final reports, or the required period of time to satisfy all state and program retention requirements, whichever is later.

10 Government Data Practices

The Grantee and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, as it applies to all data provided by the State under this grant contract, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Grantee under this grant contract. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data referred to in this clause by either the Grantee or the State.

If the Grantee receives a request to release the data referred to in this Clause, the Grantee must immediately notify the State. The State will give the Grantee instructions concerning the release of the data to the requesting party before the data is released. The Grantee's response to the request shall comply with applicable law.

11 Workers' Compensation

The Grantee certifies that it is in compliance with Minn. Stat. § 176.181, subd. 2, pertaining to workers' compensation insurance coverage. The Grantee's employees and agents will not be considered State employees. Any claims that may arise under the Minnesota Workers' Compensation Act on behalf of these employees and any claims made by any third party as a consequence of any act or omission on the part of these employees are in no way the State's obligation or responsibility.

12 Prevailing Wages

Grantee agrees to comply with all of the applicable provisions contained in Chapter 177 of the Minnesota Statutes, and specifically those provisions contained in Minn. Stat. §§ 177.41 through 177.435, as they may be amended, modified or replaced from time to time with respect to the Project.

13 Publicity and Endorsement

12.1 *Publicity*

Any publicity regarding the subject matter of this grant contract must identify the State as the sponsoring agency and must not be released without prior written approval from the State's Authorized Representative. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Grantee individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this grant contract. All projects primarily funded by state grant appropriation must publicly credit the State of Minnesota, including on the grantee's website when practicable.

12.2 ***Endorsement***

The Grantee must not claim that the State endorses its products or services.

14 Governing Law, Jurisdiction, and Venue

Minnesota law, without regard to its choice-of-law provisions, governs this grant contract. Venue for all legal proceedings out of this grant contract, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

15 Termination

15.1 ***Termination by the State.*** The State may immediately terminate this grant contract with or without cause, upon 30 days' written notice to the Grantee. Upon termination, the Grantee will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed.

15.2 ***Termination for Cause.*** The State may immediately terminate this grant contract if the State finds that there has been a failure to comply with the provisions of this grant contract, that reasonable progress has not been made or that the purposes for which the funds were granted have not been or will not be fulfilled. The State may take action to protect the interests of the State of Minnesota, including the refusal to disburse additional funds and requiring the return of all or part of the funds already disbursed.

16 Data Disclosure

Under Minn. Stat. § 270C.65, Subd. 3, and other applicable law, the Grantee consents to disclosure of its social security number, federal employer tax identification number, and/or Minnesota tax identification number, already provided to the State, to federal and state tax agencies and state personnel involved in the payment of state obligations. These identification numbers may be used in the enforcement of federal and state tax laws which could result in action requiring the Grantee to file state tax returns and pay delinquent state tax liabilities, if any.

1. STATE ENCUMBRANCE VERIFICATION
*Individual certifies that funds have been encumbered as required by Minn. Stat. §§*16A.15 and 16C.05.

Signed: Felicia Barnes
(with delegated authority)

Date: 4/24/2018

SWIFT Contract/PO No(s). 140931/3000130822

3. STATE AGENCY
Individual certifies the applicable provisions of Minn. Stat. §16C.08, subdivisions 2 and 3 are reaffirmed.

By: _____

Title Director, Ecological & Water Resources

Date: _____

2. GRANTEE

The Grantee certifies that the appropriate person(s) have executed the grant contract on behalf of the Grantee as required by applicable articles, bylaws, resolutions, or ordinances.

By: _____

Title: _____

Date: _____

By: _____

Title: _____

Date: _____

Distribution:
Agency
Grantee
State's Authorized Representative - Photo Copy

ATTACHMENT A
RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

resourceful. naturally.
engineering and environmental consultants

BARR

March 12, 2018

Ms. Rita Weaver, PE, CFM
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155

Re: FEMA Modeling Updates for the Twin Cities HUC8 Watershed – Ramsey-Washington Metro Watershed District Scope

Dear Ms. Weaver:

On behalf of the Ramsey-Washington Metro Watershed District (RWMWD), we submit the following scope and cost estimate for updating the Federal Emergency Management Agency (FEMA) hydrologic and hydraulic models, developing supporting GIS files, and work maps for RWMWD.

Introduction

The effective FEMA Flood Insurance Rate Maps (FIRM) within RWMWD show inundation areas that were compiled from several data sources, including lakes and water bodies that have been modeled with the RWMWD hydrologic and hydraulic model. In 2014, RWMWD updated the hydrologic and hydraulic model to incorporate Atlas 14 rainfall depths as well as recent redevelopment and BMPs that have been constructed throughout the District. The model update resulted in changes to the 100-year water surface elevations that are not currently characterized on the effective FEMA FIRMs. The updated RWMWD model will be the starting point for the anticipated scope of work for the FEMA model update, based on the scoping document provided by Minnesota Department of Natural Resources (MnDNR) staff on November 6, 2017 and follow-up meetings and communications with MnDNR staff.

Scope of Services

Work Task 1: Hydrologic Analysis

Barr will utilize the RWMWD XP-SWMM model to calculate peak discharges for the Atlas 14 10%, 4%, 2%, 1%, and 0.2% annual chance events.

The District's stormwater model was originally developed in the mid-1990s. Since that time, the model has been updated as needed to characterize redevelopment and flood-risk projects within the District. While the model has been used to simulate Atlas 14 rainfall depths, the District is currently in the process of updating the model to simulate larger flood events such as the 0.2% annual chance event and verify that the model accurately simulates observed water surface elevation in select lakes and ponds throughout the District. Following the updates to the model that are currently in-progress, the completed model will be used to calculate peak discharges for the requested rainfall events.

Additionally, we will develop a brief project hydrology narrative that describes hydrologic inputs, model development methodology, and results of the model validation.

We will submit the models and the hydrology narrative to the Interagency Hydrology Review Committee (IAHRC) for review and approval. We will resolve any IAHRC comments before final submittal.

Assumptions

- Model validation will be limited to measured data that is readily available and currently being used by RWMWD.
- Collection of additional data for the purposes of model validation will not be complete.
- Hydrologic methodology used in the RWMWD model are acceptable, and the IAHRC will not require global modifications to the methodology.
- No modifications to XP-SWMM hydraulic parameters will be required to address IAHRC comments.
- All IAHRC comments will be provided at one time.
- Peak discharges will be submitted to the IAHRC via an approved hydrologic model in electronic format and do not need to be tabulated or summarized in a separate document for individual flood-risk areas.
- Submittal to the IAHRC will occur concurrently with the draft submittal of the hydraulic model to the MnDNR (Task 2). However, we will provide a brief narrative summarizing the approach for developing hydrologic parameters in advance of the IAHRC submittal.
- All hydrology will be calculated using a nested 4-day duration rainfall event.
- There are some land locked water bodies within RWMWD. For land locked water bodies, an elevation frequency curve will be developed. A continuous model will not be developed.

Deliverables

- Draft IAHRC submittal consisting of:
    - Brief project narrative describing model inputs, calculation methodology, and validation results.
    - Documentation of internal model QAQC.
    - IAHRC-approved hydrologic models, submitted in electronic format.
- Final IAHRC submittal incorporating IAHRC comment.

Work Task 2: Hydraulic Analysis

The data used to develop the RWMWD model is a mix of as-built plans, survey data, and GIS storm sewer data and plans provided by cities within the District. Much of the data utilized does not have the level of documentation required to meet FEMA review standards.

We understand that the MnDNR will be contacting municipalities for as-built plans or coordinating collection of survey data. We further understand that the MnDNR will provide RWMWD with a single submittal of as-built plans and survey information with all documentation necessary to meet FEMA requirements. We will update the XP-SWMM model with the latest surveyed cross sections and crossing information (bridges, culverts, and other structures) as provided by the MnDNR.

Barr will then run the XP-SWMM model to evaluate the hydraulics for the Atlas 14 10%, 4%, 2%, 1%, and 0.2% annual chance events. After completion of the model runs, we will perform internal QAQC on the models and will provide documentation of the QAQC to the MnDNR.

In detailed study areas, we will model the regulatory floodway using the existing floodway extents as a first iteration. We understand that, the MnDNR will allow greater than the Minnesota maximum surcharge of 0.5 ft, and up to the Federal maximum surcharge of 1.0 ft maximum surcharge, due to the increased discharge associated with Atlas 14, as long as no additional structures will be affected by the larger surcharge depth. We also understand that the MnDNR will accept administrative floodways as part of this evaluation (i.e., the storage curve is adjusted in the model and the floodway is then delineated on the map to match), and that the MnDNR will accept a floodway that equals the floodplain as part of this evaluation.

Assumptions

- No survey will be completed or required for approximate study areas.
- MnDNR will perform (or contract for) the required survey data to update the model.. MnDNR will provide survey data to Barr, along with all required FEMA documentation.
- MnDNR will provide hydraulic models for detailed study areas not previously modeled by RWMWD. Alternatively, if the hydraulic model is not available, the MnDNR may provide survey data needed to incorporate into the hydraulic model.
- If additional survey is required for detailed study areas, the MnDNR will perform (or contract for) the collection of additional survey data.
- Locations in detailed study areas that are modeled as storage nodes will remain as storage nodes in the model update and no new cross-sections will be required in these areas.
- No additional validation will be needed after the model is updated with acquired as-built and survey data.
- If no structures are affected, the floodway will be defined as the floodplain.
- When determining the floodway we understand that the MnDNR will allow up to 1.0 feet of surcharge to maintain the existing floodway width, per conversations with MnDNR staff on January 2, 2018, as long as no additional structures will be affected.
- Development of floodway data tables, flood profiles, BFE lines, and other FIS tables are not included in this scope.
- In detailed study areas, cross sections added upstream and downstream of bridges, culverts, and other structures to meet FEMA model requirements may be copies of adjacent cross sections. The mapped inundation top width at these cross sections may not match the modeled top width; however, the MnDNR will accept the discrepancy to avoid additional survey. In approximate study areas, no additional cross sections (or links) will be added to the model.
- MnDNR will provide all comments on the hydraulic analysis at one time.
- The hydraulic model will not be reviewed by FEMA staff, FEMA reviewers, or other entities other than the MnDNR during this scope of work.
- RWMWD is not the local floodplain administrator. Typically, each municipality fills the role of local floodplain administrator. We have assumed that each municipality (or local floodplain administrator) will not review the hydraulic model or provide comments unless Optional Task 1 is approved. In addition, comments provided during the Flood Risk Review meetings will not be addressed as part of this scope unless a Change Order is approved by the MnDNR.
- Submittal of the draft hydraulic model will occur concurrently with the draft submittal of the hydrologic analysis to the IAHRC (Task 1).
- RWMWD will not be required to develop Duplicate Effective or Corrected Effective as part of the hydraulic evaluation.
- The hydraulic analysis does not include updates to the Mississippi River.

- No new special flood hazard areas will be delineated as part of this update.
- Flood area designations will not be updated as part of this update (i.e., approximate study areas will remain approximate study areas).

Deliverables

- Documentation of internal QAQC.
- Floodway surcharge summary table for detailed study areas.
- A XP-SWMM model for RWMWD that includes both results for both approximate and detailed study areas.
- A XP-SWMM model for RWMWD that includes the floodway evaluation for detailed study areas.
- Electronic compilation of available data (model cross sections, as-built, and survey data)

Work Task 3: Developing Floodplain, Floodway, and Cross-Section Shapefiles

Barr will delineate the 1-percent-annual-chance and 0.2-percent-annual-chance floodplains and the floodway for the detailed study areas. Barr will delineate the 1-percent-annual-chance floodplain for approximate study areas. We will generate inundation areas by linearly interpolating flood elevations between cross sections.

For water bodies mapped as approximate study areas, the RWMWMD model may not include the complete channel downstream of a water body, and in some instances, the overland flow is simulated using an overland channel. For approximate study areas for drainage courses, RWMWD will provide locations of information or crossings included in the model, based on the best information available. We assume that additional documentation for cross sections (other than cross section location) and culverts will not be required. We also assume that storage nodes in the RWMWD model will not need to be converted to cross sections in approximate study areas; in these locations only the location of the storage node will be provided.

Barr will provide shapefiles to the MnDNR in the format supplied by the MnDNR. We will perform internal QAQC on the shapefiles and will provide documentation of the QAQC.

Assumptions

- MnDNR will provide a blank shapefile to Barr for the *Special Flood Hazard Areas* and the cross-sections that will show the format required for submittal along with step-by-step guidance that the MnDNR uses for cleaning up the floodplain shapefile (removing holes, smoothing edges, etc.).
- Cross sections will not be provided adjacent to lakes or other still water flood hazards.
- GIS files will only be provided one time following MnDNR approval of the hydraulic models in Task 2.

Deliverables

- The 1-percent-annual-chance floodplain, 0.2-percent-annual-chance floodplain, and floodway boundaries for detailed study areas and the 1-percent-annual-chance floodplain for approximate study areas submitted as shapefiles in the example format provided by the MnDNR.
- Cross-section shapefile for detailed study areas submitted in the format provided by the MnDNR.

- Cross-section shapefile for approximate study areas for locations not modeled as storage nodes submitted in the format provided by the MnDNR.
- QAQC documentation will be submitted.

Work Task 4: Developing Depth Grids

Barr will develop depth grids for the 10%, 4%, 2%, 1%, and 0.2% annual chance events in detailed study areas and for the 1-percent-annual-chance event in approximate study areas. We will perform internal QAQC on the grids and will provide documentation of the QAQC to the MnDNR.

Assumptions

- MnDNR will provide step-by-step guidance for formatting and cleaning up the depth grids.
- Depth grids will not be developed until the MnDNR provides final approval of the floodplain delineations developed in Task 3.
- Depth grids will be calculated using MnDNR provided LiDAR data. RWMWD will not be responsible for obtaining or using bathymetric data to develop depth grids.

Deliverables

- Final depth grids submitted as rasters.
- QAQC documentation.

Work Task 5: Support Development of Work Maps and Attend Community Meetings

Based on our January 4, 2018 conversation with you, we understand that the MnDNR has determined that they will produce Work Maps for the Flood Risk Review meetings. Barr will provide electronic GIS files developed in Task 1 through Task 4 to the MnDNR to develop the Work Maps. Barr will also provide subwatershed files.

Barr staff will attend up to two (2) Flood Risk Review meetings.

We anticipate that representatives from each municipality, who are the local floodplain administrators, will attend the Flood Risk Review meetings and ask questions and provide comments. Because it is unknown what types of comments and concerns will be identified at the Flood Risk Review meetings, this task does not include addressing comments and questions following the Flood Risk Review meetings. We understand that if comments are provided at the Flood Risk Review meetings that must be addressed a change order will be negotiated with the MnDNR to address the comments.

Assumptions

- One Barr staff member will attend up to two flood risk review meetings.
- MnDNR staff will schedule, coordinate, and facilitate the Flood Risk Review meetings that are up to 2-hours long.

Deliverables

- Participation in two (2) flood risk review meetings.

Work Task 6: Developing Project Narrative

Barr will provide a brief project narrative that describes the methodology used to develop the hydrologic and hydraulic model inputs for XP-SWMM. Per our discussion on February 16, 2018 we understand that the project narrative will be a brief 2-3 page memorandum that references previous documentation including the IAHRC submittal and QAQC documentation. The narrative will summarize results of model validation and QAQC documentation. The project narrative will also highlight some areas where further evaluation or modeling may be required under future studies.

Assumptions

- MnDNR will provide a folder structure and naming conventions for electronic documents.
- MnDNR will provide all comments on the project narrative at one time.
- Project considered complete upon MnDNR review and approval of models and deliverables; work tasks do not include response to FEMA comments at a future date or responses to local floodplain administrators (i.e. municipalities) comments.
- The Project Narrative will be a 2-3 page memorandum.

Deliverables

- Project Narrative submitted as a Word document. Figures will be submitted as PDFs.

Optional Work Task 1: Community Meetings

As part of this model update process, we anticipate two meetings with municipalities within RWMWD. We expect one meeting to review the results of the updated modeling (Task 2). At the second meeting, we will present the results of the floodway modeling and the impacts to the effective floodway (Task 3).

Additional meetings (up to four (4)) with individual cities will also be required.

Budget and Schedule

The following table outlines the estimated budget, hours, and schedule to complete the scope of work outlined above. The schedule assumes the MnDNR authorizes the work by March 2018. The schedule also assumes that MnDNR staff will coordinate and complete the spot-check survey and crossings/structure survey and that survey data will be provided to Barr by August 2018. If the start date is later or the survey data is received later than stated, the schedule will shift accordingly.

Work Task	Description	Estimated Hours	MnDNR Estimated Amount	RWMWD Estimated Amount	Estimated Amount	Anticipated Completion
Work Task 1	Hydrologic Analysis	157	$9,700	$7,550	$17,250	February 2019
Work Task 2	Hydraulic Analysis *Draft submittal* *Final submittal*	410	$39,000	$4,500	$43,500	February 2019 June 2019
Work Task 3	Developing Floodplain, Floodway, and Cross-Section Shapefiles	160	$15,000	$870	$15,870	August 2019
Work Task 4	Developing Depth Grids	51	$4,300	$710	$5,010	September 2019
Work Task 5	Support Development of Work Maps and Attend Community Meetings	32	$1,100	$4,700	$5,800	October 2019
Work Task 6	Developing a Project Narrative *Draft submittal* *Final submittal*	209	$10,900	$11,390	$22,290	September 2019 March 2020
Project Subtotal (Work Tasks 1-6)		***1,019***	***$80,000***	***$29,720***	***$109,720***	***April 2020***
Optional Work Task	**Description**	**Estimated Hours**	**MnDNR Estimated Amount**	**RWMWD Estimated Amount**	**Estimated Amount**	**Anticipated Completion**
Optional Work Task 1	Task A: Attend one (1) meeting with municipalities (results and floodway modeling approach)	10	$1,380	$0	$1,380	February 2019
	Task B: Attend one (1) meeting with municipalities (floodway modeling results)	10	$1,380	$0	$1,380	August 2019
	Task C: Attend up to four (4) Individual Follow-up Meetings with municipalities	48	$7,840	$0	$7,840	October 2019

The anticipated schedule is based on the following assumptions:

1. The RWMWD will be submitting an XP-SWMM model. Therefore, the hydrology will not be complete until the hydraulics are finalized. We have assumed that the hydrology and hydraulics will be submitted to the IAHRC and MnDNR concurrently.
2. The IAHRC 60 day review of Task 1 and the MnDNR 60 day review of Task 2 will occur concurrently.
3. MnDNR will provide survey data by August 2018.
4. MnDNR will provide comments on draft project narrative within 30 days of draft submittal.

It is our understanding that the MnDNR will enter into an agreement with RWMWD if this proposal is acceptable to you.

We look forward to working with you on this project. If you have scope questions, please contact Brandon Barnes (952-832-2737 or bbarnes@barr.com) or me (952-832-2808 or blindaman@barr.com). If you have contracting questions, please contact Tina Carstens, RWMWD administrator (651-792-7960 or tina.carstens@rwmwd.org).

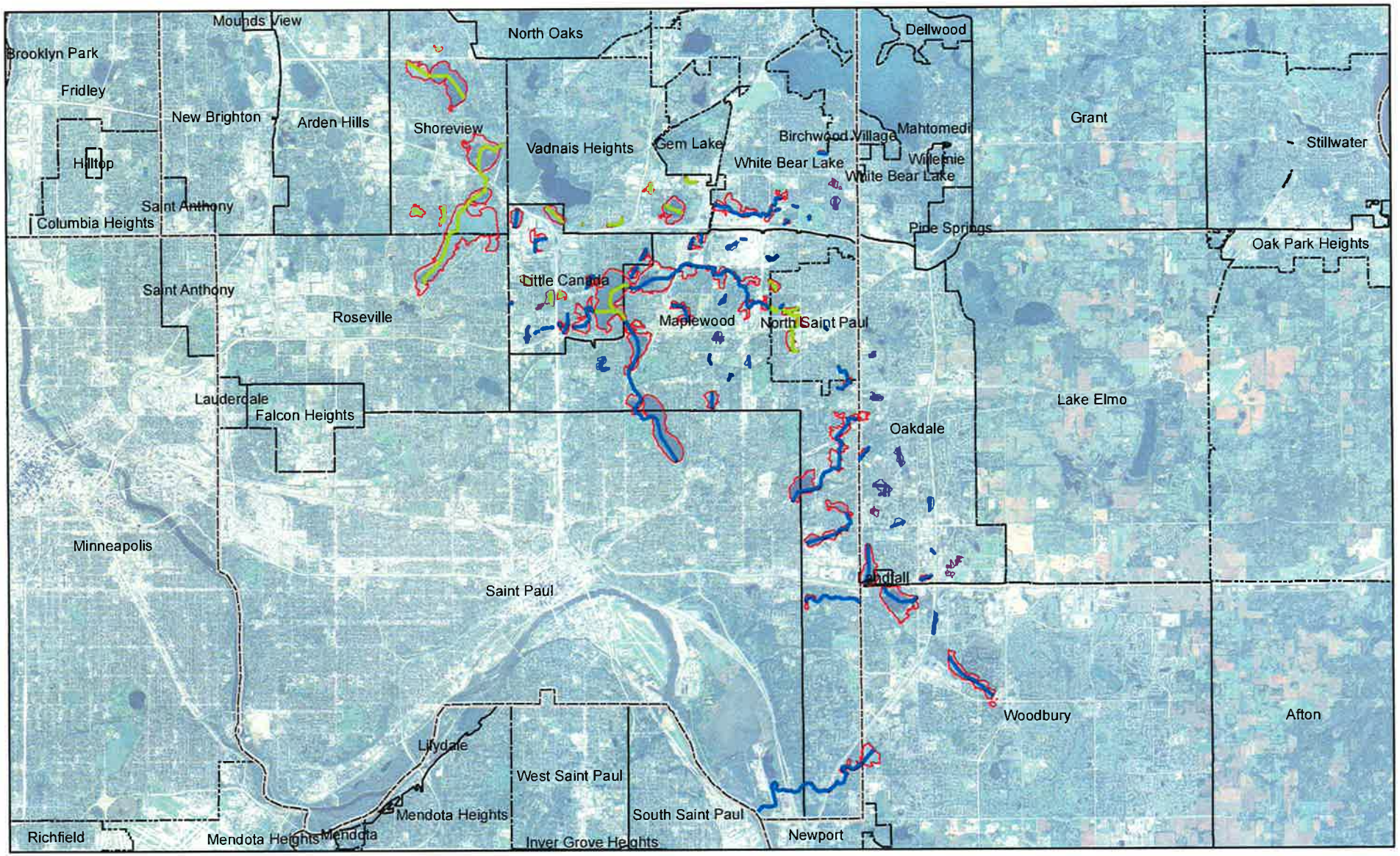
Sincerely,

Brad Lindaman, PE
Barr Engineering Co.
RWMWD District Engineer

Tina Carstens
Ramsey-Washington Metro Watershed District
Administrator

Attachments:

- Figure - FEMA Study Areas in RWMWD



FEMA Study Areas in the RWMWD Boundary

Twin Cities HUC 8 Flood Risk Project

Legend

- Zone A - approximate study area
- Zone AE - detailed study area
- Effective Special Flood Hazard Area
- City Boundaries

N

0 0.5 1 2 3 4 5 Miles

DEPARTMENT OF NATURAL RESOURCES

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Administrator's Report

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MEMO

TO: Board of Managers and Staff

FROM: Tina Carstens, Administrator

SUBJECT: May Administrator's Report

DATE: April 26, 2018

A. Meetings Attended

Monday, April 2	10:00 AM	Website update meeting
	12:00 PM	Staff training meeting
Tuesday, April 3	2:30 PM	Meet with Barr re: projects
Wednesday, April 4	9:00 AM	Adopt-A-Drain meeting
	1:00 PM	Meet with SPRWS
	2:30 PM	Monitoring stations planning
	6:30 PM	Board meeting
Monday, April 9	10:00 AM	Phalen Creek project meeting
Tuesday, April 10	8:00 AM	Meet with Cap Region
Thursday, April 12	9:30 AM	Washington County funding meeting
Thursday, April 19	9:00 AM	Audit exit meeting
	12:30 PM	Solar project meeting
	2:30 PM	Managing flood risk event at Barr
Friday, April 20	9:00 AM	Grass Lake/Snail Lake partner meeting
Tuesday, April 24	8:30 AM	Gold Line BRT coordination meeting
Wednesday, April 25	11:00 AM	Aldrich arena project coordination
Friday, April 27	8:30 AM	Ramsey County funding meeting

B. Upcoming Meetings and Dates

Washington County Meeting	Monday, May 21
WaterFest	Saturday, June 2
MAWD Summer Tour	June 20-22, 2018

C. Washington County and Watershed Joint Meeting – May 21, 2018

Washington County is inviting watershed managers and administrators, and Washington Conservation District Supervisors to attend this meeting to increase dialogue between elected and appointed water planning entities in the county. The meeting will feature light appetizers and refreshments, remarks, and ample time for networking and discussion. In discussions with county staff, they would like each watershed to have a "station" at the event that can be used to highlight our programs and projects in the county.

I plan to highlight our work that has been completed in Washington County by showing a map of our CIP, cost share, and targeted retrofit projects. I also plan to put together a poster to highlight a few of those projects, plus our work in flood control and groundwater recharge.

The Washington County administrators discussed having one board member in the county give remarks during the formal part of the evening. I believe a South Washington WD manager has agreed to do that. One of the county commissioners will also speak. There may be a short question and answer session and then time for networking and discussions.

Cliff has indicated to me that he is planning to attend. If any other board members are interested, please let me know and I can RSVP for the watershed.

D. MAWD Summer Tour – June 20-22, 2018

Attached is the information for the MAWD Summer Tour. Please let me know as soon as possible if you are interested in attending and if you'd like a hotel room for the tour. The tour is in the metro area, but is far enough away that I think hotel stays make sense due to the early morning start times on Thursday and Friday morning. Looks to be an interesting summer tour agenda.

Join us!
June 20-22

MAWD SUMMER TOUR - 2018

A MULTI-FACETED APPROACH TO MANAGING A BIG RIVER WITH SMALL WATERSHEDS

Come explore the Minnesota River, and the projects in the Carver County Water Management Organization and the Riley Purgatory Bluff Creek Watershed District.

Tentative agenda:

Wednesday

Watershed meetings at Country Inn + Suites, Chanhassen
9 a.m. MAWA Meeting
1 p.m. MAWD Board Meeting
5 p.m. Discover the Minnesota River by barge
See the Minnesota River in a new way from the deck of a barge. Presenters will interpret the landscape, past present and future as we travel from Shakopee all the way down to the confluence with the Mississippi River in St. Paul.

Thursday

8 a.m. Tour projects in CCWMO & RPBCWD
Board a bus for a tour of exciting projects ranging from a community stormwater reuse system, reducing sediment and nutrient pollution to best practices for managing a lake inside and out.

Friday

8 a.m. Learn technical & leadership skills

- Technical Session at Riley Purgatory Bluff Creek WD: Assessing your creeks: Pre-inspection and post evaluation of lower Lake Riley.
- Leadership Session at Nine Mile Creek WD: Bridging the Rural-Metro Divide: How two WDs use technology to find the best projects and Resolutions 101: How to write resolutions for maximum impact.

Register Online:
mnwatershed.org

Carver County Water Management Organization

LOWER MINNESOTA RIVER WATERSHED DISTRICT

Organized by:

MINNESOTA ASSOCIATION OF WATERSHED DISTRICTS, INC
Land and Water Shall be Preserved

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

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Project and Program Status Reports

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RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

resourceful. naturally. engineering and environmental consultants BARR

Memorandum

To:	Board of Managers and Staff
From:	Tina Carstens and Brad Lindaman
Subject:	Project and Program Status Report – May 2018
Date:	April 25, 2018

Project Feasibility Studies

System-wide evaluation of flood control options/Beltline resiliency study (Barr project manager: Erin Anderson Wenz; RWMWD project manager: Tina Carstens)

The purpose of this study is to evaluate system-level flood damage reduction options, including real time mechanical alteration of Lake Phalen and Keller Lake channel outlet structures, as well as other system critical infrastructure, to actively manage stormwater runoff from flood-prone areas tributary to the Beltline storm sewer in an effort to reduce flood levels that would otherwise impact homes. The evaluation will involve using the RWMWD stormwater model to simulate system-level modifications to evaluate how adjustments to outlet structures during a flood event may be able to optimize the existing system performance to reduce flooding impacts on homes adjacent to RWMWD-managed water bodies.

This period, Barr continued entering data in the model that represented optimizing outlet structures, modifying culvert diameters, and changing the stormwater infrastructure that would most likely produce desired results. The first phase focuses on the Gervais Creek watershed between Owasso Basin and Gervais Lake. Staff estimated the low structure elevation based on available topographic information and evaluated modifications to the system model that could potentially lower 100-year flood levels below those that impact habitable structures (i.e., homes and businesses). If the first phase of the study produces desired results staff will proceed to other parts of the district in a prioritized, sequential approach.

If the study proves successful, recommendations for actual field modifications will be offered for future capital improvement programming.

Beaver, Owasso, and Battle Creek Lake subwatershed feasibility studies (Barr project manager: Josh Phillips; RWMWD project manager: Paige Ahlborg)

The purpose of this project is to evaluate best management practice (BMP) opportunities throughout the at risk water body subwatersheds.

Barr kicked off these studies in early March and began reviewing background information, existing infrastructure and land use; evaluating potential BMP locations; and developing conceptual designs for BMPs.

Snail Lake/Grass Lake optimization study and berm raise project (Barr project manager: Brad Lindaman; RWMWD project manager: Tina Carstens)

The purpose of this study is to evaluate the potential for optimization of the existing Snail Lake/Grass Lake system (from Snail Lake to Grass Lake to Highway 694), with the goal of lowering flood levels in the system's water bodies in order to reduce the flood risk to habitable structures and lessen the impacts to surrounding properties.

Dredging near the outlet of Grass Lake between the lake and the path and between the path and the railroad berm is complete. The contractor has also partially completed the cleanout downstream of Rice Street at the discharge point into West Vadnais Lake.

During late March and early April, the contractor began mobilizing and hauling material for the work. Barr expects the contractor to begin construction soon after the local road restrictions are lifted. In April, we finished compiling and summarizing the multiple studies presented at previous board meetings into a memo and decision matrix. That memo and matrix are included in this board packet as an attachment. The information in the memo will be presented for consideration at the May 2 meeting.

Snail, Grass, and West Vadnais lakes outlet permitting with the Minnesota Department of Natural Resources (Barr project manager: Erin Anderson Wenz; RWMWD project manager: Tina Carstens)

The purpose of this project is to coordinate permitting efforts for the proposed Snail, Grass, and West Vadnais lakes outlets with the Minnesota Department of Natural Resources (DNR).

This period, Barr met with area hydrologist Jen Sorensen about the various flood control options being considered for water bodies in the Grass Lake area (addition of an outlet pipe from Snail Lake and lowering of the 15-inch West Vadnais Lake outlet under Highway 694). Given the regional scale and complexity of flood control options and limitations in the Grass Lake area, Jen suggested that a larger meeting of DNR and RWMWD staff be convened to discuss the projects and their potential impacts. The meeting is scheduled for May 1.

Modeling of 95-percent confidence limit Atlas 14 district-wide (climate change scenario): flood map generation for future outreach efforts (Barr project manager: Erin Anderson Wenz; RWMWD project manager: Tina Carstens)

The purpose of this project is to use measured water surface elevations to verify and fine-tune water surface elevations calculated by the RWMWD stormwater model. Following validation, the model will be used to simulate larger rainfall events, including the 95-percent confidence limit of the 100-year rainfall depth. The confidence limit (or uncertainty) associated with the 100-year flood elevation will be used to develop inundation maps that will allow for evaluation of how future climate change may affect flood inundation areas within the RWMWD, and be used for discussion with stakeholders when evaluating future flood-risk reduction projects within the RWMWD.

This period, Barr processed rainfall information for rainfall events on August 13, 2017, and September 29, 2017, and will simulate the rainfall events with the RWMWD stormwater model. We will compare simulation results to measured water surface elevations in water bodies throughout the RWMWD to

verify that the stormwater model may be used to simulate peak water surface elevations throughout the district.

Capital improvements

Wakefield Park/Frost Avenue stormwater project (Barr project managers: Erin Anderson Wenz and Fred Rozumalski; RWMWD project manager: Paige Ahlborg)

The purpose of this project is to work with the City of Maplewood and its consultants to develop a site plan that involves stormwater management features with associated educational elements for the northern portion of Wakefield Park.

Work on the design of the bioretention basin has begun with initial stormwater modeling to determine the size of the treatment system. Desirable size and location of the facility have been discussed with City of Maplewood park staff. Initial layout is beginning, keeping in mind park uses. Barr went to a well-attended City of Maplewood open house for the Frost Avenue improvement project to discuss the RWMWD's work to improve water quality in Wakefield Lake.

Targeted retrofit projects (Barr project manager: Matt Kumka; RWMWD project manager: Paige Ahlborg)

The purpose of this project is to design, provide bid assistance for, and oversee construction of BMP retrofits on previously identified commercial, school, and faith-based properties throughout the RWMWD.

Survey planning is underway on five sites throughout the RWMWD, including Cornerstone Montessori, Boys and Girls Club Eastside, and Roosevelt Community Center in St. Paul; New Horizon Day Care in Woodbury; and the Roseville School District office. These sites were identified with the BMP incentive fund program. When an agreement to proceed is reached with the property owners, the projects will move into design development under this project.

Phase 1 implementation from Owasso Basin improvements feasibility study (Barr project manager: Erin Anderson Wenz; RWMWD project manager: Tina Carstens)

The purpose of this project is to evaluate flood control options for Owasso Basin and the surrounding area.

This period, Barr continued evaluating alternatives for flood control in and around Owasso Basin. As described last month, we are using the RWMWD XP-SWMM hydrologic and hydraulic model of Grass Lake, Owasso Basin, and surrounding areas to evaluate how much additional storage would be required to keep the 100-year, 96-hour storm event (which was determined to be the critical event for the area) from overflowing the berm along the western edge of Owasso Basin, and from flooding the mobile-home park on the basin's south side. This period, efforts were focused on options that would divert flows to other locations without raising the potential for further flooding downstream. Barr will summarize results in a technical memorandum for RWMWD review in the coming weeks. This project is linked to the system-wide evaluation of flood control options/Beltline resiliency study, described above.

CIP project repair and maintenance

Beltline and Battle Creek tunnel repair construction services (Barr project manager: Nathan Campeau; RWMWD project manager: Dave Vlasin)

The purpose of this project is to perform ongoing maintenance and repairs of the Beltline tunnel system to significantly increase the service life of the tunnel.

During this period, PCiRoads achieved substantial completion of the project, finishing repairs in the Mississippi branch including drilling ports, conducting crack injection with chemical grout, chipping poor concrete in preparation for concrete surface repairs, and performing concrete surface repairs (shotcreting).

In the next period, PCiRoads will complete punch-list items, including patching the access hole in the Mississippi branch. Site restoration is scheduled to occur by May 15, 2018, per the contract documents.

CIP maintenance/repairs 2018 project (Barr project manager: Greg Nelson; RWMWD project manager: Dave Vlasin)

The purpose of this project is to maintain the existing systems and infrastructure owned and operated by the RWMWD and to assist and facilitate stormwater pond cleanouts to allow other public entities to meet their MS4 requirements.

Construction work in the past month was put on hold due to recent snow events and road restrictions. Fitzgerald Excavating & Trucking has already substantially completed work at several sites and will resume activities the week of April 23.

No payment application was processed this month.

Frost/Kennard enhanced water-quality treatment BMP (Barr project manager: Erin Anderson Wenz; RWMWD project manager: Tina Carstens/Paige Ahlborg)

The purpose of this project is to prepare plans and specifications, conduct project bidding, and observe construction for the water-quality BMP enhancement retrofit of the existing infiltration basin located on the parcel owned by the City of Maplewood. The parcel is located in the southwest quadrant of the intersection of Frost Avenue and Kennard Street.

Submittals have been processed, and construction is expected to begin during the week of April 23 now that weather has improved.

Willow Pond CMAC (Barr project manager: Erin Anderson Wenz; RWMWD project manager: Tina Carstens)

The purpose of this study is to evaluate the feasibility of using continuous monitoring and control (CMAC) technology in a project that involves diverting flows from Willow Pond to a filter that will remove dissolved and particulate phosphorus to benefit Bennett Lake.

This period, Barr met with the DNR's Jen Sorensen to discuss permitting requirements. The city has no reservations about the project at this time. Development of 95-percent plans and specifications for RWMWD review are expected to be completed by the end of April, and construction of the CMAC filtration system is expected to occur in late summer/fall 2018.

New-technology mini case studies

Pond and lake iron aggregate application for internal phosphorus loading control (Barr project manager: Matt Kumka; RWMWD project manager: Tina Carstens)

Innovative technology	Application of aggregate iron to ponds
Use	Iron aggregate added to the sediment of ponds and lakes has the potential to bind dissolved phosphorus in the sediment, preventing it from being released into the water column, contributing to eutrophication, or leaving the pond to downstream water bodies.
Benefits of technology	▪ Phosphorus capture may prevent ponds from becoming overloaded with algae, duckweed, and other indicators of eutrophication. ▪ Iron aggregate is a relatively cheap product and easy to obtain. ▪ Iron aggregate has been shown as effective in capturing phosphorus in both aboveground sand filters and in laboratory studies on lake sediments.
Drawbacks	▪ The applicability of aggregate iron addition to sediments in the field has not been studied, so it is unclear if the same effectiveness will be achieved as in the laboratory. ▪ Applying iron aggregate may be difficult (maintaining uniformity, preventing sinking of iron aggregate in sediments, etc.). ▪ It is unknown how iron aggregate performs against other chemical methods of capturing phosphorus (i.e., alum). ▪ The mechanism of the bond between iron and phosphorus in anoxic conditions is currently unknown, but is the subject of current research. ▪ Longevity of the treatment is unknown. ▪ Impacts on waterfowl, fish, and other aquatic biota is unknown.
Case studies/applications	▪ Field studies of iron application to ponds may take place in the next few years in several ponds in the Twin Cities metro area. ▪ "Lake Sediment Phosphorus Inactivation Using Iron Filings," Poornima Natarajan, John Gulliver, St. Anthony Falls Laboratory and the Department of Civil, Environmental, and Geo-Engineering, University of Minnesota. http://stormwater.safl.umn.edu/updates-newsletters/updates-february-2018
Conclusion	▪ Iron aggregate could be effective at capturing phosphorus, but may require certain environmental conditions (e.g., oxygenated water). ▪ Iron aggregate be another tool for treating many stormwater ponds. ▪ Upcoming studies will reveal more information about the short-term effectiveness of the treatment, but will not give long-term conclusions on longevity.

Technology description

Iron aggregate has been identified in the past as a phosphorus binding agent to help with high nutrient concentrations in runoff. One of the more popular applications has been using an iron-sand mixture in sand filters to treat stormwater (often referred to as iron-enhanced sand filtration).

The aggregate iron starts as zero-valent iron, which is oxidized over time. The oxidized iron has the ability to bind with phosphorus. The oxidized iron mainly binds dissolved phosphorus in the form of phosphate (PO43-) in water. This chemical mechanism is most effective with zero-valent, pure-iron species under oxygenated conditions. If the environment is anoxic (little to no oxygen present), the iron may be reduced, and the bond between iron and phosphate breaks and the phosphate can be released. By contrast, aluminum (applied as alum) does not undergo redox changes in lakes and ponds, and aluminum binding of phosphorus is therefore not sensitive to anoxic conditions.

The iron aggregate would most likely be applied to water bodies by spreading across the ice during the winter months to achieve a uniform application, and the aggregate would sink down to the sediment when the ice melts. Once in the sediment, the iron is expected to capture phosphorus in the sediment.

Figure 1: Iron aggregate (source: http://www.peerlessmetal.com/aggregate/)

Figure 2: Typical stormwater pond (source: Tyler Olsen, 2017)

Cost

Iron aggregate has been estimated to cost approximately $2,000 per acre (materials only, from Natarajan, 2017) based on laboratory dosing recommendations (within the range of an alum treatment, depending on the dose). Additional costs may be applicable depending on monitoring needs post-application on the water body and required maintenance or reapplication based on results of the initial application. Also, unlike alum, there is currently no longevity estimate for iron aggregate treatments, so the frequency of reapplication is unknown at this time.

Effectiveness

The effectiveness of iron aggregate as a solution to internal loading of phosphorus in water bodies has been proven in the laboratory setting (for a one-year duration). However, these results have not been confirmed in actual lakes or ponds. Field studies will be conducted in the next few years to understand if iron aggregate is effective in operating stormwater ponds.

Conclusion

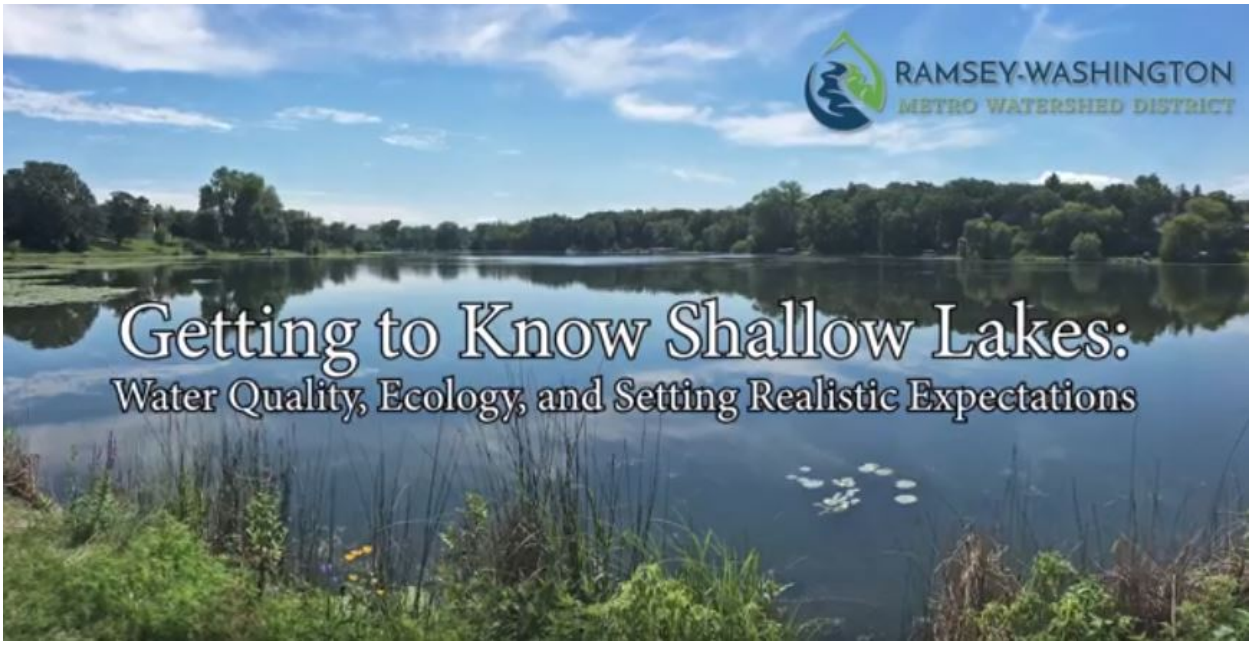
Iron aggregate has the potential to be a viable solution for phosphorus capture in sediments of water bodies, and has been shown to be so in the laboratory. More research is needed to understand if iron aggregate will be effective at capturing phosphorus in lakes and ponds, how iron aggregate compares to other treatment methods for controlling internal phosphorus loading, and how long iron aggregate will be effective after application in the field.

Natural Resources Update – Bill Bartodziej and Simba Blood

Shallow Lakes Video – final cut

We are very pleased to report that the shallow lakes video is completed. Staff and the Citizen Advisory Committee (CAC) had a chance to view the final cut of the video, and the responses were overwhelmingly positive. We will work with the videographer on a minor tweak with the volume on a segment, and then we will be ready to distribute in a week or so. A link to the video will be highlighted on our District website. We will email a link to managers once available. The CAC was involved with this project from start to finish, and their input definitely made the product better. We also had a staff-wide review meeting, and this open discussion led to numerous edits that really helped to effectively tell the story in this format.

Shallow Lakes Video Title Slide:



There were numerous ideas generated by the CAC and staff regarding ways to distribute the video. Here are selected approaches:

1. Begin circulating to select colleagues in the scientific and watershed community
2. Post publicly on YouTube and send link to Marie Steinberger (on-camera lakeshore owner) and lake association contacts
3. Promote video link in Ripple Effect email and social media posts
4. Send YouTube link individually to several reporters
5. Host viewing party outdoors at a lakeside residence or park

6. Show video at WaterFest and have a map of shallow lakes located in the District
7. Contact Bill Sherck – Due North Outdoors
8. District #2 Council might be interested in viewing
9. Distribute to nature centers
10. Mark Gernes, MPCA, will distribute to their lakes water quality group
11. Make available to sporting goods shops – e.g., Joe's, Gander Outdoors, Cabela's
12. The science museum might be interested
13. Possible display at the DNR building at the State Fair
14. Reach out to the Freshwater Society, U of MN

Shallow Lakes Video Credits (scrolling at the end):

Public Involvement and Education Program – Sage Passi

Winter's gone! The action begins!

It's been a month of dodging snow storms, getting our ducks in a row and warming up for our full-fledged May action plans…but last minute blizzards didn't stop us from getting our work done.

RWMWD drew in Rebuilding Together Twin Cities and Opus corporate volunteers last week to rebuild Maplewood Middle School's courtyard nature area that will be planted with native plants this spring.

Maplewood Middle School is reviving a long under-used courtyard nature study area with the help of community partners. Master Gardener Merlin Schlicting worked with Sage to help plan the renovation with Tony Sjogren from Better Together and Mary Dvorak, the science teacher. Seventh grade students in Mary Dvorak's science classes will replant the courtyard in May. This collaborative partnership was launched a few years ago when Better Together helped with a major outdoor classroom project at Parkway Middle Montessori School in St. Paul. The non-profit brings skilled labor, provides materials, technical expertise and recruits corporate volunteers to do projects on school grounds.

Later in May, 8th grade science classes will take on the maintenance of the school rain gardens outside the building that were planted in the fall of 2016. See this link for a new CleanwaterMN.org story about their rain gardens. https://tinyurl.com/yaqro2ph

Meanwhile in Woodbury…Stafford Library rain gardens are assessed

Left: *Master Water Stewards Stephanie Wang and Anna Barker met with Watershed and Barr staff at Central Park in Woodbury to assess four rain gardens and a swale in the parking lot adjacent to Stanford Library and discussed planting redesign options.*

Right: *Sage Passi and Master Water Stewards met with Stonecrest Residence seniors who live adjacent to the library to show them how land changes in the area have impacted run-off over time using aerial maps. They also used models to demonstrate how rain gardens filter run-off.*

Late April spring melt kicks off Adopt A Drain efforts in St. Paul

Farnsworth 4th graders reach out to Phalen neighbors and adopt nearby drains

Master Water Steward, Rachel Hanks worked with Sage Passi and Tracy Leavenworth to organize four 4th grade classes in storm drain clean-ups around the streets adjacent to Farnsworth School in St. Paul on April 19 and 20. The Farnsworth fourth graders are writing letters and enclosing artwork to send to 278 residents who live in the Lake Phalen area in a neighborhood targeted last year by Rachel and her Master Water Steward Team members Bill Cranford and Phyllis Webster.

Half of the storm drains in their target area of 700 homes have already been adopted. Farnsworth is reaching out to the rest of the community in this area in an outreach effort to get to 100% adoptions. Farnsworth students are also sending thank you letters and artwork to the 38 residents who have already signed up for the Adopt a Drain program in this area. Joy Cedarleaf's Century College biology students will assemble this mailing on April 27 when they come to assist Farnsworth School in doing the spring maintenance in their butterfly garden. It takes a village!

L'Etoile du Nord and Hamline University (CGEE) will target 1,650 St. Paul homes

Concurrently, plans are underway to launch an Adopt A Drain outreach campaign to reach Beaver Lake neighborhood residents in St. Paul. L'Etoile du Nord fourth grade classes will be distributing 500 door hangers to residences in the area to the east of their school on May 2. Hamline University will distribute the rest of the 1,150 door hangers.

Adopt A Drain door hanger messages will be translated into four languages in addition to English. These include Hmong, Spanish, Karen and Somali. RWMWD worked with a translation services company, INGCO International, and Hamline University to craft these messages which include 1) Sign Up online; 2) Sweep up leaves, grass clipping and trash from the storm drain year-round; 3) Post a sign in your yard; and 4)Tell us how much debris you collected.

Harmony Adult ESL Class Transplants Seedlings and Prepares for Field Trips

Sage Passi and Master Naturalists Cathy Troendle and Bev Blomgren worked with a Harmony Learning Center Adult ESL class in North St. Paul to prepare for several upcoming field trips by transplanting native seedlings that the students will plant during May at Southwood Nature Preserve in North St Paul. The class also learned about water quality using several demonstration models to help them understand how rain gardens and storm drains work. The group will also tend the school's large rain garden in early May, then take a field trip to nearby Casey Lake, neighborhood rain gardens and Maplewood Mall to see BMPs installed at these sites. Carp puppets and cloth props were used to help explain the fishes' impact on water quality, run-off, algae and sediment and other pollutants that threaten local lakes and ponds.

Duluth-Case Neighborhood Clean-Up

Master Water Stewards Michelle Natarajan, Melissa Peck, Rachel Hanks and Phil Plumbo coordinated a neighborhood street and park clean up on April 21. They worked with community center staff and other neighborhood volunteers and passed out educational literature and prizes for participants. Michelle and Melissa will continue to work on plans with RCD and the Watershed District for a BMP capstone project.

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Informational Items

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MINNESOTA ASSOCIATION OF WATERSHED DISTRICTS, INC
Land and Water Shall Be Preserved

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MN Association of Watershed Districts
LEGISLATIVE UPDATE: April 23, 2018

All committee deadlines have now come and gone. Bills are now being grouped together in larger omnibus bills. We have made progress on several initiatives but as Yogi Berra said, "It ain't over till it's over." Here are a few highlights:

Watershed Planning and Management. We have made significant progress on legislation that will reduce the duplicative efforts between the Total Maximum Daily Load (TMDL) studies, the Watershed Restoration and Protection Strategy (WRAPS) reports and One Watershed One Plan (1W1P) efforts. This is a joint effort between the Association of MN Counties (AMC), the MN Association of Soil and Water Conservation Districts (MASWCD), and the state agencies. Several other bills have been introduced by others with varying potential impacts to authorities of watershed districts, but those bills failed to get hearings and are now considered dead.

Levy Authorities. Although there has been little interest from legislators to sponsor a bill that would increase the general levy cap for rural watershed districts, there is movement on improving the flexibility of how the project tax levy authority can be used to match more types of grants, such as from the Clean Water Fund.

Drainage. We introduced two pieces of legislation this session. The first piece of legislation would remove impediments, identified by the drainage work group, that are standing in the way of getting buffers established on public ditches. The second piece of legislation would allow drainage authorities to use an optional "Runoff and Sediment Delivery" method to calculate how repair costs could be apportioned without doing a full redetermination of benefits. This second piece of legislation ran into political problems and will likely be revisited this summer by the drainage work group. If it moves ahead, outreach will be needed to correct misinformation that has spread about the bill.

Appropriations. Funding recommendations for the Clean Water Fund and the Lessard Sams Outdoor Heritage Council are moving through the legislature with money being allocated to several watershed district programs and projects.

Bonding. We are still waiting for some word on the progress of development of a capital investment (bonding) bill in both bodies. The Senate began hearing some bonding proposals last week and we view that as a good sign. There is much work yet to be done with these bills as they move through the process once they are laid on the table for all to see.

Water Resource Programs. Legislation providing limited liability protection to certified commercial salt applicators is still moving through the House and our efforts to be included in the stakeholder process on stormwater reuse was heard.

Electronic Meeting Attendance. Although we decided to pull our legislation that brought more clarification for allowing managers to attend meetings electronically, we will continue to provide the needed clarification administratively now rather than legislatively.

Lastly, although we have made every effort to provide the most accurate information as possible, this legislative update may already be out-of-date by the time you read this. Please give us a call if you have questions or concerns. And a big thanks to everyone who has helped advance our legislative priorities this session!

Watershed Planning and Management

COORDINATED WATERSHED MANAGEMENT **LEADING THIS EFFORT with AMC, MASWCD, BWSR, MPCA**

MAWD Resolution 2017-01: Advocate for coordination and integration of state watershed programs with local watershed implementation.

- HF 3908 Clean Water Legacy Act modified, and coordinated watershed management provided (Fischer, Torkelson)
  - 4/17/18 – HF3908 was included in the **Environment & Natural Resources Policy & Finance Committee**'s Omnibus bill (HF3502DE2 Article 2 Sections 28, 29, 31-32, 39-52, and 103)
  - 4/19/18 – Section 29 was amended and sent to the **Ways and Means** Committee.
- SF 3647 Clean Water Legacy Act modified, and coordinated watershed management provided (M. Johnson, Ruud)
  - 4/17/18 – SF3647 was included in the **Environment & Natural Resources Finance Committee**'s Omnibus bill
  - 4/18/18 – SF3141 2nd Engrossment (Article 2 Sections 33-34, 36-37, 49-62, and 105) was sent to the **Finance** Committee

METRO "SLOW THE FLOW" **PROPOSED BY OTHERS → MONITOR & ACT WHEN NECESSARY**

MAWD Board Direction: Monitor and act on proposed changes to 103B.

Description: This bill would **require** metro watershed management programs to slow the movement of water to improve water quality and increase groundwater recharge, as well as protect and enhance surface water and groundwater used for drinking water.

- HF 2989 Watershed management organization planning requirements modified, and WD purpose modified (Wagenius, Hoppe, Hansen, Gunther, Bly, Anselmo)
  - 2/22/18 – Referred to **Environment and Natural Resources Policy and Finance** committee
  - No action, bill is dead for this session.
- SF 3407 Watershed management organization planning requirements and district purposes modifications (Dibble, Carlson, Cwodzinki, Hawj)
  - 3/15/18 – Referred to **Environment and Natural Resources Policy and Legacy Finance** committee
  - No action, bill is dead for this session.

DISTRICT PROVISIONS MODIFIED **PROPOSED BY OTHERS → MONITOR & ACT WHEN NECESSARY**

MAWD Board Direction: Monitor and act on proposed changes to 103D.

Description: This bill would make significant changes to the rule-making procedures and authorities of WDs.

- HF 3805 Watershed district provisions modified (Heintzeman)
  - 3/14/18 – referred to **Environment and Natural Resources Policy and Finance** committee
  - No action, bill is dead for this session.
- SF 3379 Watershed districts provisions modification (Draheim)
  - 3/15/18 – referred to **Environment and Natural Resources Policy and Legacy Finance** committee
  - No action, bill is dead for this session.

UPDATE: These bills did not meet committee deadlines, so they should be dead for this session. MAWD has met with the developer pushing this legislation and have agreed to continue discussions to see if any resolutions can be found.

DISTRICT PLANNING REQUIREMENTS MODIFIED **PROPOSED BY OTHERS → MONITOR & ACT WHEN NECESSARY**

MAWD Board Direction: Monitor and act on proposed changes to 103D.

Description: This bill recognizes that municipalities and counties affected by watershed management plans may make recommendations on the plan to the WD and notify affected property owners.

- HF3603 Watershed district planning requirements modified (Loon)
  - 3/12/18 - referred to **Environment and Natural Resources Policy and Finance** committee
  - Not heard in committee… bill is dead for this session (and no senate file was ever introduced.)

WATERSHED MANAGEMENT IN MN RIVER BASIN **PROPOSED BY OTHERS → MONITOR & ACT WHEN NECESSARY**

2015 MAWD Resolution: Support establishment of watershed-based water management organizations in the MN River basin

Description: This bill would convene a technical stakeholder group to design a comprehensive nutrient reduction strategy for point and nonpoint sources in the MN River basin.

- HF 3940 Funding to reduce nutrients in the MN River basin, money appropriated (C. Johnson, Considine)
  - 3/15/18 – referred to **Environment and Natural Resources Policy and Finance** committee
  - No action, bill dead for session
- SF 3620 Minnesota River basin nutrient reduction strategy appropriation (Frentz, Marty, Eaton)
  - 3/19/18 – referred to **Environment and Natural Resources Policy and Legacy Finance** committee
  - No action, bill dead for session

District Levy Authorities

PROJECT LEVY STATUTE MODIFICATION **LEADING THIS EFFORT**

2016 MAWD Resolution: Advocate for a statutory clarification to allow broader use of levy funds with new state sources of project funding. (Modify 103D.905, subd. 9 to allow the project tax levy to be used as match for more types of grants.)

- HF 2456 Watershed district levy authority modified (Baker, Marquart, Kunesh-Podein)
  - 2/21/18 – Referred to **Property Tax and Local Government Finance Division** committee
  - Committee hearing requested. Tax committee has no deadlines.
- SF 3077 Watershed districts levy authority modification (Lang, Sparks, Weber, Eken, Johnson)
  - 3/08/18 – Referred to **Taxes** committee
  - 4/25/18 – Bill will be heard in the **Taxes** Committee. Margaret Johnson, Middle Fork Crow River WD will testify on behalf of watershed districts. Thank you, Margaret!

GENERAL LEVY INCREASE **LEADING THIS EFFORT**

MAWD Resolutions: Modify/increase the general fund levy limit for all non-metro watershed districts to $500,000 (2016) Support increasing the general fund levy limit for the Middle Fork Crow River Watershed District. (2017-05)

UPDATE: We discussed the general levy increase with several legislators. One suggested an inflationary increase to $350k, but there was no real interest in authoring the tax increase legislation this year.

Drainage (MN Statute 103E)

DRAINAGE WORK GROUP LEGISLATION

MAWD Board Direction: Promote consensus legislation put forth by the drainage work group (DWG).

Description: There were two pieces of legislation brought forward this year – see details below.

DWG 1 – RECOMMENDATIONS FOR ASSISTING WITH DITCH BUFFER IMPLEMENTATION **LEAD w/ AMC, MASWCD**

Description: The legislation introduced was directly related to the report the drainage work group sent to the legislature on February 1, 2018: "Recommendations for Accelerating Public Drainage System Acquisition and Establishment of Buffer Strips and Alternative Practices" (See Recommendations F1, S1, S2, S3, S6, and P4.)

- HF 3835 Cost-sharing funding provided to implement riparian buffer strips or alternative practices along public drainage ditches and outreach to landowners, drainage authorities, and their advisors; and money appropriated (Torkelson)
  - Additional funding placed in legislation through the Clean Water Fund ($5M)
- HF 3836 (Article 1) Agricultural best management practice loan conditions modified to include environmental service providers, and drainage law modified to accelerate ditch buffer implementation (Torkelson)
  - 4/17/18 – 3 provisions from HF3838 Article 1 were included in the **Environment & Natural Resources Policy & Finance Committee**'s Omnibus bill (HF3502DE2 Sections 33, 34, 106) and sent to the **Ways and Means** Committee on 4/19/18

- Three sections of Article 1 that would allow drainage authorities to access larger loans from the Ag BMP Loan Program on behalf of multiple landowners was not included but may show up in another omnibus bill.

- SF 3410 (Article 1) Agricultural best management practice loan conditions modifications to include environmental service providers; drainage law modification to accelerate ditch buffer strip implementation (Weber, Sparks)
  - 4/17/18 – SF3410 was included in the **Environment & Natural Resources Finance Committee**'s Omnibus bill
  - 4/18/18 – SF3141 2nd Engrossment (Article 3) was sent to the **Finance** Committee

DWG 2 – RUNOFF AND SEDIMENT DELIVERY OPTION (FOR REPAIR COST APPORTIONMENT) **LEADING w/ AMC**

Consensus was reached after the session began and the language was placed on HF3836 & SF3410 as Article 2 of both bills. This legislation has typically been noncontroversial, but due to the lingering controversy surrounding the buffer law, it has become a point of contention politically with some misinformation being spread about any bill dealing with water and especially drainage. The drainage work group will likely revisit over the summer and make sure everyone is on the same page before moving forward again.

- HF 3836 (Article 2) Agricultural best management practice loan conditions modified to include environmental service providers, and drainage law modified to accelerate ditch buffer implementation (Torkelson)
  - 3/15/18 – referred to **Agriculture Policy** committee
  - 3/20/18 – Heard in committee and passed on to the ENR Finance & Policy Committee. Agreed to work with author and several legislators on language.
  - Article 2 was dropped and did not move forward to the **Environment and Natural Resources Policy and Finance Committee**'s Omnibus bill
- SF 3410 (Article 2) Agricultural best management practice loan conditions modifications to include environmental service providers; drainage law modification to accelerate ditch buffer strip implementation (Weber, Sparks)
  - 4/17/18 – SF3410 was included in the **Environment & Natural Resources Finance Committee**'s Omnibus bill
  - 4/18/18 – SF3141 2nd Engrossment (Article 4) was sent to the **Finance** Committee, but we have been told it will be taken out

DNR PERMITS FOR 103E PROJECTS **PROPOSED BY OTHERS → MONITOR & ACT WHEN NECESSARY**

MAWD Board Direction: Monitor and act on any changes to the 103E.

Description: This bill would clarify when DNR permits are required for ditch system repair projects.

- HF 2687 Public waters and public drainage system laws clarified (Fabian, Hamilton, Poppe, Green, P. Anderson, Grossell, Torkelson, Dettmer)
  - 5/18/17 – Referred to **Environment and Natural Resources Policy and Finance** committee
  - No action in committee, bill is dead for the session
- SF 2419 Public waters and public drainage system laws clarification (Westrom, Weber, Eken, Sparks, Ingebrigtsen)
  - 5/21/17 Referred to **Environment and Natural Resources Policy and Legacy Finance** committee
  - No action in committee, bill is dead for the session

NOTE: The DNR has issued a Guidance Memo on this topic. See March 23rd Leg update for more details.

DRAINAGE LIEN PRINCIPAL INTEREST RATE MODIFICATION **PROPOSED BY OTHERS → MONITOR / ACT**

MAWD Board Direction: Monitor and act on any changes to the 103E.

Description: This bill would remove the interest rate cap set by the state court.

- HF 3512 Drainage lien principal interest rate modified, definitions modified, and code references updated (Davids)
  - 3/08/18 – referred to **Environment and Natural Resources Policy and Finance** committee
  - 3/15/18 – removed from hearing agenda

- SF 3097 Drainage lien principle interest rate modification (Chamberlain)
  - 3/08/18 – referred to **Taxes** committee
  - 3/15/18 – withdrawn and re-referred to **Judiciary and Public Safety Finance and Policy** committee
  - 3/20/18 – Heard by committee and amended and re-referred to Taxes

ALLOW BENEFITS TO BE UPDATED BASED ON MARKET VALUES FOR REPAIR PROJECTS **MONITOR/ACT**

MAWD Board Direction: Monitor and act on any changes to the 103E.

- HF 2876 Drainage system repair procedures modified (Backer)
  - 2/20/18 – referred to **Environment and Natural Resources Policy and Finance** committee
  - No action, bill dead for session
- SF 3181 Drain System repair procedures modicication
  - 3/12/18 – referred to **Agriculture, Rural Development, and Housing Policy** committee
  - 3/20/18 – Heard in committee, amended and re-referred to **ENR Policy & Legacy Finance** Committee
  - No further action on this bill

NOTE: BWSR sent a letter to Bois de Sioux WD on 3/16/18 explaining how they can do this without any changes to law.

Appropriations

CLEAN WATER FUND **SUPPORT/MONITOR/ACT**

This bill specifies how the nearly $26M extra Clean Water Funds are to be spent in FY 2019. There is currently $3.67M for additional One Watershed One Plan "Fund the Plan" grants and $3.5M for competitive grants.

- HF 4269 Clean water fund money appropriated (Torkelson)
  - 4/19/18 – Bill was included in the Legacy Funding Finance omnibus bill (HF4167DE1_1 Article 2)
- There is currently no senate file with language for Clean Water Fund appropriations.

UPDATE: MAWD sent a letter to legislators and the Governor in support of the recommendations of the Clean Water Council and although this legislation differs from what was proposed, the new appropriations are in line with general watershed priorities.

OUTDOOR HERITAGE FUND **SUPPORT/MONITOR/ACT**

Description: These bills specify how $113.9M is to be spent in FY 2019 with projects identified in the Shell Rock River, Buffalo-Red River, and Minnehaha Creek WDs.

- HF2789 Outdoor heritage fund appropriations, and notice to local government required before acquiring land in fee (Fabian, Hansen, Gunther, Lillie)
  - 4/19/18 – Bill was included in the Legacy Funding Finance omnibus bill (HF4167DE1_1 Article 2)
- SF 2688 Outdoor heritage fund appropriations (Lang, Tomassoni, Ingebrigtsen)
  - 4/19/18 – Last action was a second reading in the **Finance** Committee

Bonding

FLOOD HAZARD PROGRAMS / BONDING **SUPPORT/MONITOR/ACT**

MAWD Resolution 2017-06: Support stable funding for the DNR's Flood Damage Reduction Grant Program.
Support bonding requests from watershed districts for the Flood Hazard Mitigation Program (2016)
Support a $500,000 request for flood water retention engineering in the Lac qui Parle Yellow Bank watershed (2013)

- HF 3742 Cedar River WD funding provided, bonds issues, and money appropriated (Poppe)
  - 3/14/18 – referred to **Environment and Natural Resources Policy and** Finance committee
- SF 3347 Cedar River WD bond issue and appropriation (Sparks)
  - 3/14/18 – referred to **Capital Investment** committee
- HF 2818 Buffalo-Red River WD flood hazard mitigation funding provided, bonds issued, $ appropriated (Backer)
  - 2/20/18 – referred to **Environment and Natural Resources Policy and Finance** committee

- SF 2509 Buffalo-Red River WD flood hazard mitigation bond issue and appropriation (Westrom)
  - 2/20/18 – referred to **Capital Investment** committee
- HF 1230 Lac qui Parle Yellow Bank WD funding provided, bonds issues, and money appropriated (Swedzinski)
  - 2/15/17 – referred to **Environment and Natural Resources Policy and Finance** committee
- SF 761 Lac qui Parle Yellow Bank WD grant bond issue and appropriation (Dahms)
  - 2/09/17 – referred to **Capital Investment** committee

UPDATE: All capital investment bills will be sent directly to the bonding committees for their consideration. The Capital Investment committee in the House has begun to hear bills, the Senate side has not. We really don't know when to expect this bill to be made public.

Water Resource Programs

LIMITED LIABILITY FOR COMMERCIAL SALT APPLICATION **SUPPORT/MONITOR/ACT**

MAWD Resolution 2017-04: Support limited liability protections for certified commercial salt applicators (17)

- HF 3577 Certified salt applicator program established, and liability limited (Anselmo, R. Barr, Haley, Smith, Fenton, Loon, Jurgens, Pugh, Metsa, Fischer, Poston, Heintzeman)
  - 4/17/18 – HF3908 was included in the **Environment & Natural Resources Policy & Finance** Committee's Omnibus bill (HF3502DE2: Article 1 Section 2 appropriates $199k to the MPCA to administer the program and Article 2 Section 80 contains the policy language.)
  - 4/19/18 – Section 80 subdivision 3 was amended and sent to the **Ways and Means** Committee.
- SF 3199 Certified salt applicator program establishment (Ruud, Ingebrigtsen, P. Anderson, Hall, Tomassoni)
  - 3/22/18 – Last action was to refer this to the **Judiciary and Public Safety Finance and Policy** Committee

STORMWATER REUSE TASK FORCE **LEADING THIS EFFORT**

MAWD Resolution 2017-07: Create a Stormwater Reuse Task Force that consists of local and state officials involved in water management.

UPDATE: The MN Department of Health released a report that have led us to conclude that our concerns have been heard to the degree we will continue to work with them in an administrative capacity instead of using legislative action at this time.

CRP in FARM BILL **SUPPORT/MONITOR/ACT**

MAWD Resolution 2017-03: Support a strong Conservation Reserve Program (CRP) in the 2018 Federal Farm Bill

- Senator Tina Smith is holding listening sessions and asking for feedback on what Minnesotans want to see in the next Farm Bill. Contact your administrator for more information on how you can send feedback to the Senator. MAWD provided details through an email on how to submit comments.

Board Meetings and Manager Per Diems

ELECTRONIC MEETING ATTENDANCE **LEADING THIS EFFORT**

MAWD Resolution: Amend the Open Meeting Law to allow electronic meeting participation by WD managers & outside of WD boundaries. (16)

- HF 3834 WD board meeting requirements clarified for meetings conducted by interactive television (Dettmer, Fischer, Torkelson)
  - 3/15/18 – referred to **Environment and Natural Resources Policy and Finance** committee
- SF 3499 WD board meeting requirements for meetings conducted by interactive television (Johnson, Sparks, Lang)
  - 3/15/18 – referred to **Environment and Natural Resources Policy and Legacy Finance** committee

NOTE: This legislative effort has been somewhat confusing because the League of MN Cities and some LGU's are presently interpreting the law that they can conduct meetings via interactive TV outside of their geographical boundary legally already. Those groups have asked us not to pursue the legislation and work with them to get the law clarified administratively over the summer and fall. We were scheduled to have a hearing on Monday, March 26th but have decided to pull the legislation at this time to work with LGUs to attain guidance from BWSR and the Attorney General's office on this law (13D).

MANAGER PER DIEMS **LEADING THIS EFFORT**

2015 MAWD Resolution: Increase per diems for managers to $100 per day.

- No action taken on this initiative. MASWCD has a similar resolution to increase per diems to $150 per day. They have also elected not to pursue the issue this year.

Miscellaneous

AGENCY PERMITTING, WATERSHED TRADING CREDIT **MONITOR/ACT**

- HF 3120 Environmental agency permitting, rulemaking, and fees modified; watershed credit exchange program provided; compliance requirements modified; and money appropriated (Fabian, Heintzeman, Lueck, Ecklund)
  - 2/26/19 – Referred to House ENR Policy & Finance Committee
  - 3/27/18 – Heard in committee and referred to the floor.
- SF 2705 Environmental agencies permitting, rulemaking, and fees modifications; watershed credit exchange program establishment; effluent limitation compliance, appropriation (Ingebrigtsen, Tomassoni, Ruud, Weber, Mathews)
  - 2/26/18 – Referred to Environmental and Natural Resources (ENR) Policy & Legacy Finance committee
  - 3/15/18 – Committee passed and re-referred to ENR Finance committee
  - Language placed in ENR Omnibus Bill SF3141

CONSERVATION EASEMENT TAX RELIEF **MONITOR/ACT**

MAWD Resolution: Advocate for allowing more favorable tax treatment of conservations easements (2016)

- HF 3512 Agricultural classification of land converted from agricultural use for environmental purposes allowed (Davids)
  - 3/16/18 - Referred by Chair to **Property Tax and Local Government Finance Division** committee
  - No action, AMC opposes legislation
- SF 3097 Agricultural classification of land converted from agricultural use to environmental purposes authorization (Chamberlain)
  - 3/15/18 – referred to **Taxes** committee, re-referred to ENR Finance, amended, re-referred back to Taxes.
  - No action, AMC opposes legislation

AQUATIC INVASIVE SPECIES QUARANTINE

MAWD Resolution 2017-02: Support temporary quarantine authority to control the spread of aquatic invasive species.

- No action taken on this initiative

CLEAN WATER COUNCIL APPOINTMENTS

2015 MAWD Resolution: Protect the integrity of Clean Water Council appointments from undue influence by state agencies

- No action taken on this initiative