RAMSEY-WASHINGTON
METRO WATERSHED DISTRICT

July 2019
Board Packet

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Agenda

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RAMSEY-WASHINGTON
METRO WATERSHED DISTRICT

Regular Board Meeting Agenda

Wednesday, July 3, 2019
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 June 5, 2019
4. **Treasurer's Report and Bill List**
5. Visitor Comments (limited to 4 minutes each)
6. Permit Program
    A. Applications
        i. **19-30 White Bear Lake Apartments, White Bear Lake**
        ii. **19-31 3108 W Owasso Boulevard, Roseville**
        iii. **19-32 St. Paul Urban Tennis Courts, St. Paul**
    B. Enforcement Action Report
7. Stewardship Grant Program
    A. Applications
        i. **19-16 CS Marquardt, porous driveway**
        ii. **19-17 CS Warner, native habitat restoration**
    B. Budget Status Update
8. Action Items - NONE
9. Administrator's Report
    A. Meetings Attended
    B. Upcoming Meetings and Dates
    C. My Vacation
    D. 2018 District Water Quality Summary Presentation
    E. MAWD Summer Tour
    F. Board and CAC Tour
    G. CAC Meeting Update

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H. Master Water Steward Program

I. 2020 Budget Discussions

J. Boundary Change with Vadnais Lake Area Watershed Management Organization (VLAWMO)

10. Project and Program Status Reports

A. Ongoing Project and Program Updates

i. Twin Lake Emergency Response Management 2019

ii. Beltline Resiliency Study

iii. FEMA Flood Mapping

iv. Snail, Grass, and West Vadnais Lakes Outlet Permitting

v. 500-Year Atlas 14 Modeling

vi. Auto Lake Monitoring Systems

vii. Maplewood Mall Monitoring

viii. Spent-Lime Pond Research Project

ix. Kohlman Basin Test Weirs

x. Wakefield Park/Frost Avenue Project

xi. School, Commercial, and Faith-Based BMP Retrofit Projects

xii. Willow Pond CMAC

xiii. Cottage Place Wetland Restoration

xiv. Aldrich Arena Site Design

xv. CIP Maintenance and Repair 2019 Project

xvi. New Technology Review – Bio Clean: Watergate Automatic Retractable Screen

xvii. Natural Resources Program

xviii. 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
June 5, 2019

The Regular Meeting of June 5, 2019, 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
Dianne Ward, Treasurer
Dr. Pam Skinner, Secretary
Lawrence Swope, Manager

ABSENT:

ALSO PRESENT:
Tina Carstens, District Administrator
Amanda Staple, Recording Secretary
Erin Anderson Wenz, Barr Engineering
Bill Bartodziej, Natural Resource Specialist
Kyra Newburg, Water Quality Intern
Bruce Copley, Crestview Addition
Gus Blumer, Ramsey County Parks
Kyle Wahlstrom, Twin Lake
Mary & Terry Telega, 253 Twin Lake Trail
Mike McGraw, City of Little Canada Council
Unreadable
Unreadable
Rick Connelly, 3327 Twin Lake Court
Jesse Farrell, City of Vadnais Heights
Andrea Carley, Floral Drive
Steve Bertrand, Twin Lake
Joe & Willie Pralutsky, Twin Lake
Jamie Becker-Finn, State Representative
Bill & Lynn Bonkowske
Cynthia Callais, Senator Jason Isaacson
Helen Larson, 185 Twin Lake Trail
Bill Dircks, City of Little Canada
Paige Ahlborg, Project Manager
Tracey Galowitz, Attorney for District
Nicole Soderholm, Permit Inspector
Dave Vlasin, Water Quality Technician
Stan & Becky Martin, 289 Twin Lake Trail
Greg Windsperger, Crestview Addition
Val Eisele, Twin Lake
Laurann Kirschner, Galowitz Olson
John Keis, City of Little Canada Mayor
Rick Montour, City of Little Canada Council
Sheila Otto, Crestview Addition
Marta Chandra, Twin Lake
Chris Lund
Brent Johnson, City of Maplewood
Jennifer Wellner, Floral Drive
Steve LaBerge, Crestview Addition
Burt Johnson, Twin Lake
Mark Kasma, Bolton & Menk/Little Canada
Cheryl LeClair-Sommer, 285 Twin Lake Trail
Matt Gray, Crestview Addition
Christian Torkelson, City of Little Canada Council
Tom Fischer, City of Little Canada Council

1. CALL TO ORDER

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

2. APPROVAL OF AGENDA

Tracey Galowitz provided additional details on the format for the meeting tonight, including visitor presentations. She explained that the visitor presentation portion of the meeting is the time for residents to provide their input and the agenda item will be only for the Managers to provide input.

Tina Carstens requested to add to two items as Items 9C, Change Order No. 2 and 9D, Change Order No. 1.

Manager Ward noted that Item 8 would be moved to follow visitor presentations.

Lawrence Swope suggested moving the permits to occur prior to visitor presentations.

Motion: Cliff Aichinger moved, Dr. Pam Skinner seconded, to approve the agenda as amended. Motion carried unanimously.

3. CONSENT AGENDA

A. Approval of Minutes from May 1, 2019

Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve the consent agenda as presented. Motion carried unanimously.

4. TREASURER'S REPORT AND BILL LIST

Motion: Dianne Ward moved, Cliff Aichinger seconded, to approve the June 5, 2019, bill list as submitted. Motion carried unanimously.

5. PERMIT PROGRAM (Previously Agenda Item 6)

A. Applications

Permit #19-19: Roseville Middle School Addition – Little Canada

Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-19. Motion carried unanimously.

Permit #19-20: Buerkle Road Drainage Improvements – Vadnais Heights

Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-20. Motion carried unanimously.

Permit #19-21: Meadowood Berm – Woodbury

Manager Skinner asked if building the berm would contribute to a decrease in water quality, as the water will bypass the wetland and go directly into the storm sewer.

Nicole Soderholm stated that the berm will only move the overflow and would not impact active storage or flow.

Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-21. Motion carried unanimously.

Permit #19-22: Sterling Street Bridge Replacement – Maplewood

Manager Skinner referenced the language stating that there will be fill of low land areas, which could possibly store water and asked if there would be impacts from filling those areas.

Nicole Soderholm provided additional details on the elements of the permit and recommended conditions. She stated that there are not any at risk structures in the floodplain.

Manager Aichinger noted that there will be a culvert and there will not be restriction of the stream.

Brent Johnson, Bolton & Menk, stated that the culvert will actually be better than the existing bridge structure.

Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-22. Motion carried unanimously.

Permit #19-23: Granada Access Road Maintenance – Oakdale
Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-23. Motion carried unanimously.

Permit #19-24: Woodbury Middle School Parking Lot – Woodbury
Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-24. Motion carried unanimously.

Permit #19-25: Indian Mounds Regional Park Trail – St. Paul
Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-25. Motion carried unanimously.

Permit #19-26: Aldrich Arena Stormwater Retrofit – Maplewood
Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-26. Motion carried unanimously.

Permit #19-27: Shoreview Commons – Shoreview
Manager Ward asked why the District is permitting this project rather than Rice Creek. Nicole stated that part of this site is in our District and all hydrologically flows back to Snail Lake.

Manager Skinner asked if this area could be investigated for additional flood storage.

Nicole Soderholm stated that the stormwater reuse pond and iron enhanced basin already go above and beyond the District requirements. She stated that given the site plan and the City's goals for development, she did not believe that there would be additional space for flood storage above the stormwater pond and basin.

Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-27. Motion carried unanimously.

Permit #19-28: Maplewood Moose Lodge – Maplewood
Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-28. Motion carried unanimously.

Permit #19-29: North Owasso Boulevard – Shoreview
Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-29. Motion carried unanimously.

B. Monthly Enforcement Report
During May, 14 notices were sent to address: install/maintain perimeter control (5), install/maintain construction entrance (3), stabilize exposed soils (2), contain liquid/solid wastes (2), protect/maintain permanent BMPs (1), and install/maintain energy dissipation (1).

6. VISITOR PRESENTATIONS (Previously Agenda Item 5)
Stan Martin, 289 Twin Lake Trail, stated that he was told when he purchased his home that ditch 16 was a guaranteed flood control measure. He was unsure how MnDOT installed the pond without knowing the culvert

was there. He stated that he is concerned that everyone is losing trees. He noted that he has already lost grass and landscaping. He asked if the emergency plan would provide relief to hauling the dead wood. He asked that the ditch be restored as that was a guarantee that the lake would not flood. He stated that pumping is desperately needed.

Bruce Copley stated that he has been before the Board many times since 2016 representing property owners in Shoreview due to concerns about Grass Lake flooding. He stated that the pedestrian tunnel is flooded, the Gray home is flooded and there are additional flooding concerns. He stated that he would like a great sense of urgency to address the flooding and also a larger scale focus to move water south of 694. He stated that only the Watershed District has the resources to ensure that all entities work together to get this done. He reviewed the three strategies that have been proposed by the Watershed District and cannot point to any progress on the strategies thus far. He stated that the delays and nonaction have resulted in missed opportunities and additional problems. He stated that modeling should be done on the smaller and more intense rain events, as those are the incidents causing problems. He reviewed details on the previous modeling that was done by Barr Engineering and stated that only shows the impacts on the properties east of Rice Street. He stated that there was no modeling showing how long it would take for the flood to recede. He stated that there needs to be intense and swift action to ensure that all government entities can come together to get this done.

Greg Windsperger, 455 Suzanne Avenue, stated that he lives within the Crestview Addition. He stated that they are very worried that the water continues to encroach on his property. He stated that he is present tonight to speak for his neighbors Matt and Kerry Gray. He stated that in the four minutes he is speaking tonight, the Grays will pump 33 gallons of water and a total of 12,000 gallons today, which requires a DNR permit. He stated that the Grays have worked with the Watershed District for the past several years and appreciate the cooperation. He noted that three years later the Grays are at a severe threat of flooding as the groundwater level is now two feet above their basement flood. He stated that the 2017 plan to install a pipe at Gramsie Road is still being considered and could possibly be installed the next year. He stated that the previous night the Suzanne pond pumps failed, and alarms sounded throughout the night. He stated that the Grays are frustrated and anxious. They asked for the vigorous leadership of the Watershed District to help coordinate the other government agencies.

Val Eisele, Twin Lake resident, stated that his neighborhood is scared as the lake has risen four feet since November. He stated that the lake continues to rise at .7 inches per day since April. He stated that they need action and the current MnDOT action plan is unacceptable. He explained that June is typically the wettest month of the year and the residents are anxious. He stated that there are many unclear issues and they need a plan. He stated that although they appreciate the communication, they would like answers. They would like the Watershed District to provide an emergency plan for the city to follow and would like the District to create a long-term plan and timeline to restore and maintain the lake at a level that does not threaten homes. He stated that the residents have been working together to sandbag and protect homes. He stated that they would like action and a plan.

Kyle Wahlstrom, 3343 Twin Lake Court, provided updated lake elevation information, noting that the lake is nine inches from the overflow. He noted that one home is under water and another is about to go underwater. He stated that there is a culvert under the berm from the previous drainage system, which could help to drain the lake to a lower level. He stated that there are measures from the past that could be used to help. He stated that there is continual inflow to the lake without a method to drain out. He noted that every body of water downstream from the lake has an outflow, while Twin Lake is taking in water from upstream but cannot let it flow out.

Sheila Otto, 444 Suzanne Avenue, stated that they are the next lowest home following the Gray home. She stated that following the rain and pump fail, the pond rose 14 inches in one night. They are in fear of their home flooding as well. She stated that currently their backyard is a muddy mess, noting that the backyard structures have been raised to prevent water damage. She stated that the biggest concern is their home and was unsure how much more rain they can handle. She stated that they need help now and cannot wait for a dry summer. She stated that water needs to be prevented from entering Grass Lake, as there is no where for that water to go once it gets to the

lake and it simply causes additional issues. She stated that she has letters from 1988 to the City of Shoreview about flooding issues. She stated that they have been patient, but they need action now. She does not believe that the homes of residents is the right place for water storage to occur. She asked the Watershed District to help.

Marta Chandra, 3331 Twin Lake Court, stated that her home is the second lowest level on the lake. She stated that watching this happen over the past two to three weeks has been difficult as the water continues to creep closer to their basement walkout door and has surpassed their landscaping and outdoor amenities. She asked that the Watershed District use its coordinating efforts to help do something now.

Andrea Carley, 370 West Floral Drive, stated that wetland A is substantial, and her concern is that the neighborhood has suffered dramatically and has been very patient. She stated that they purchased their home and remained because of the trail system, which is now not accessible. She believed that property values are suffering from this issue and she is amazed at the slowness of the pumping that is occurring. She stated that this has impacted quality of life and property values.

Jennifer Wellner, Floral Drive, stated that she was here two or three years ago and cannot believe that the Watershed District cannot do anything to solve this problem. She stated that it appears that the Twin Lakes residents could take legal action as their homes are being taken by the water. She could not believe that the Watershed District could not improve the problem over the past three years.

Steve Bertrand, 154 Twin Lake Boulevard, stated that he is the lowest home on the lake. He stated that he spent Memorial Day weekend sandbagging and stayed up last night manning pumps as the water is at his doorstep. He stated that 20-foot trees are falling down in yards without warning. He stated that the residents need something to help. He stated that his family has lived on the lake for 64 years and there has never been a problem of this nature.

Steve LaBerge, 464 Dudley Avenue, stated that from May 1, 2018 to November 6, 2018 there were 26 water gauge reading reports on the DNR website, noting that all levels exceeded the flood elevation. He stated that the effects of the Grass Lake elevations have impacted surrounding properties. He stated that in 2017 the District undertook a large study of the Grass Lake and Snail Lake areas. He stated that it is imperative that the project recommended by that study be approved and occur this year. He noted that the District website states that the EAW would be complete by July and reviewed the timeline that would follow for approval. He stated that there is no resiliency to complete that project this summer. He noted that it appears that VLAWMO sees no incentive in the change. He stated that it seems illogical to have part of this watershed under VLAWMO control.

Mary Telega provided a photograph of the deck in their yard, which is under water. She stated that her shed is sandbagged, and they are pumping. She noted that even though the structures are not homes, they are of value and these properties are losing values. She stated that there is a huge issue and it sounds like a lot of people are impacted without seeing action. She stated that there is a lot of water coming into the lake with no way for the water to outlet. She asked what happened to ditch 16, which previously acted as an outlet. She stated that she started to become concerned when water came close to their deck in 2016 and it just continues. She stated that they are also concerned with the sewers that are under water as they will not be able to tell if those fail. She stated that something needs to happen now.

Cheryl LeClair-Sommer, 285 Twin Lake Trail, stated that she spent a lot of time today reviewing the District website. She noted that it appears there are multiple problems in different areas. She stated that there have been multiple studies and projects that had the potential to flood Twin Lake. She stated that although remediation was mentioned, there was no action taken. She stated that the overflow for Twin Lake is not accurate and has changed over time. She noted that ditch 16 no longer exists and the culvert has been filled in. She stated that currently Twin Lake is 2.12 feet above the 100-year flood elevation. She noted that the lake levels cannot be sustained. She

stated that pumping would seem to be a cautious approach that could help to reduce flooding in a controlled manner.

7. TECHNICAL MEMO, PRESENTATION AND DISCUSSION: DISTRICT FLOODING CONCERNS (Previously Agenda Item 8)

Tina Carstens thanked everyone for attending and providing comments tonight to the Board and staff. She stated that this is a place the District has not been before as long term water levels have not been planned for in the past and have not occurred to this extent. She stated that the District is working diligently to discover the information and provide that to the City of Little Canada as quickly as possible. She noted that some of the Managers were able to get out to Twin Lake today to see the impacts. She noted that the memorandum was provided in the packet and will review the information that will be provided to Little Canada.

Erin Anderson Wenz stated that there was a lot of information provided in the technical memorandum. She provided photographs from the Twin Lake area and MnDOT overflow berm. She stated that the discussion on the outlet of the lake will continue but a more imminent decision will need to be made tonight.

Manager Aichinger asked if there would be a way this summer to prohibit the water from crossing over the berm into the pipe.

Erin noted that will be looked at in the next steps. She stated that the District is concerned with the overland connection, noting that as West Vadnais stayed high there was a potential connection to Twin Lake. She stated that if West Vadnais reaches 884.8, water could go into the mobile home park overland, but that above a West Vadnais Lake elevation of 884, water has access to a local 24-inch drainage pipe at a lower elevation west of the Five Star Mobile Home Park that carries water to Twin Lake. She stated that this is new territory as this is the first time West Vadnais has reached this elevation for any significant length of time to allow additional flow into the pipe and into Twin Lake which is causing additional problems this year.

Manager Ward stated that West Vadnais seems to be the pinch point for both Twin Lake and Grass Lake and the Crestview Addition.

Erin stated that water is higher in these water bodies than it has ever been in the collective history and therefore water is finding new pathways out. She stated that, in addition, if West Vadnais reached 885, the water has a path to East Vadnais. She stated that Twin Lake was high prior to this year, as have many throughout the region, but acknowledged that the flow from West Vadnais through the 24-inch pipe increased that problem in the spring of 2019.

Manager Swope stated that there are so many government bodies involved and asked how many times the groups are meeting.

Tina stated that staff have been consistently meeting with other agencies, noting that everyone is being very reactive and is working quickly.

Erin stated that West Vadnais is within VLAWMO and staff has spoken with and continues to meet with VLAWMO staff.

Manager Ward noted that this discussion began one year ago and asked what is different now.

Erin noted that there is more urgency from the entities because there is a home at risk. She noted that prior to that time there was not an imminent risk to a home. She reviewed the different activities and studies that were completed thus far. She stated that the District approach has been to work closely with the cities and optimize

flood storage in the Grass Lake/Snail Lake area because there were not homes at risk. She stated that there are flooding concerns everywhere noting that it is a challenging time in water management.

Manager Skinner stated that the District has done a lot in the past 25 years and stated that perhaps it would be helpful to create a timeline of the activities that have been done since the District inherited the Grass Lake area.

Manager Swope stated that the issue is not that the District has not done anything, but more that it has not changed anything.

Erin provided additional details on modeling that was done, using the example of the 10-day snow melt modeling that was done. She noted that other watershed districts and cities are struggling with the same issues right now. She stated that she is sympathetic to Matt Gray, but the sump pumps are keeping up with the water and flooding is not occurring. She noted that staff continues to work with him. She stated that there are some things the District needs to consider about what it will manage and what it will not. She explained that flooding from groundwater is not something the District manages.

Manager Aichinger asked how the water could be stopped from entering the mobile home park.

Erin stated that the District is working with Vadnais Heights to provide information. She explained that the District's role is to provide information and share models to help the cities make decisions.

Erin provided background information on the water level of Twin Lake. She stated that this spring the District has been working to discuss the changing situation at Twin Lake with municipal and agency stakeholders to build consensus around informed and coordinated decisions. She provided background information on the perspective of the different stakeholders including Little Canada, Vadnais Heights, MnDOT, DNR, and St. Paul Regional Water Service. She reported that 2019 is the fourth wettest spring on the historical record for the Twin Cities Metro Area, and that this decade (2010-2019) is tracking to be the wettest decade on the historical record for the state of Minnesota.

Manager Skinner noted that with climate change this trend could continue.

Erin provided information on how this increased water has impacted the lake levels throughout the District. She explained that in 2018 the District did not create an emergency plan for Twin Lake because there was no emergency and then compared those levels to the 2019 levels. She noted that this is the first time that West Vadnais has had this sustained elevation. She stated that Little Canada is meeting the following morning to discuss several options and reviewed some of those options. She provided additional details on how pumping could occur, should Little Canada choose that option. She stated that there are habitable structures at risk of flooding under the 100-year flood elevation downstream that could be impacted from pumping and identified those areas, noting that North Star Estates is the densest concentration of homes at risk. She explained that pumping Twin Lake would shift the risk from the low home on Twin Home to many of the homes in North Star Estates.

Manager Ward stated that it would appear there is some level of pumping that could occur without increasing that flood risk downstream.

Erin stated that MnDOT and the District staff recommend that if Little Canada pumps, that must stop 12 to 24 hours prior to a storm event. She stated that models were run to determine a risk from pumping for Gervais Lake and noted that that risk is very small. She reviewed the options to try and relieve the flooding on Twin Lake without posing a significant risk to other areas of the District. She also included the risk of no action, including but not limited to more flooding on Twin Lake and the uncontrolled topping of the berm along the MnDOT pond which would send more water downstream in an uncontrolled manner.

Tracey Galowitz provided additional information on the legal perspective of liability when changes are made. She stated that this is water that has not been seen before and could not be predicted. She stated that if something happens downstream next year, using Gervais as an example, there could be liability. She noted that the situation currently is not the fault of the District. She stated that the Board will make the decision tonight on whether or not to support that option.

Manager Ward commented on the risk for the pumping and continued monitoring.

Tracey stated that it would be the responsibility of the city to monitor and maintain the pumping, should that be the choice. She stated that the role of the District is to oversee the larger watershed area as water flows through different municipal boundaries.

Erin explained that the flooding occurring right now is not from an action the District took.

Tracey stated that her job is just to educate and it's the Board's job to make the decision.

Manager Ward asked the number of cubic feet per second that would be recommended for pumping.

Tina stated that the city would make the recommendation on the amount to pump but confirmed that if there was going to be pumping, it should be above that level coming in from West Vadnais.

Manager Ward asked why West Vadnais is not pumped out to equal out the output and then the remainder pumped from Twin Lake.

Erin stated that will be a discussion going forward but noted that the decision tonight is for a short-term emergency response for the low home on Twin Lake. She stated that the managers should weigh the risks and benefits of instructing the City of Little Canada to pump water to alleviate the flooding. She stated that the Board will continue to receive updates on the process and progress.

Motion: Cliff Aichinger moved, Dr. Pam Skinner seconded, to support the pumping option and direct staff to continue to provide technical support to Little Canada and to direct staff to research the options to eliminate the water flowing from West Vadnais Lake to Twin Lake. Motion carried unanimously.

President Ebensteiner confirmed that the District will act as a technical advisor and the details of pumping would be the choice of Little Canada.

John Keis, Little Canada Mayor, stated that this would just be pumping water that is coming from West Vadnais and they are looking for help in stopping that bigger problem of water coming from upstream and having impacts downstream.

Tom Fischer, City of Little Canada, stated that they are looking to the District for an emergency plan and long-term plan to assist.

Erin noted that this is a short-term emergency action. She explained that even though it can seem time consuming, the longer-term decisions are huge decisions that take time to review all the potential impacts.

President Ebensteiner recognized that there are a lot of stakeholders involved in issues of this nature.

Manager Skinner asked for input on possible sewer contamination.

Bill Dirks, City of Little Canada, stated that half the manholes are currently underwater. He noted that a new engineer has been hired that will complete a full study to ensure functionality.

Mark Kasma, Bolton & Menk, provided background information that he has learned thus far. He noted that the top end and bottom end of the system are being monitored daily to ensure that it is grey water and not clear water from the lake.

Manager Aichinger noted that if there was an issue leaking, it would be outside water leaking into the pipe and not sewer water leaking out.

Manager Skinner asked for the details on the possible boundary change to incorporate West Vadnais.

Tina Carstens confirmed that she will attempt to coordinate a joint meeting with VLAWMO and a possible boundary change to incorporate West Vadnais, and at least continue discussions on joint management.

Manager Aichinger stated that in the long-term it is reasonable, but it would take about one year to complete. He stated that a decision to change the boundary is not going to change the EAW process and therefore that should not drive the action.

President Ebensteiner noted that there is so much more to consider that comes along with changing boundaries. She noted that additional information would be needed in terms of costs, problems, and additional staff time.

Motion: Lawrence Swope moved, Cliff Aichinger seconded, to direct staff to investigate positives and negatives of taking West Vadnais Lake into the District would entail, including a schedule of the process and steps that would need to be taken. Motion carried unanimously.

8. STEWARDSHIP GRANT PROGRAM (Previously Agenda Item 7)

A. Applications

Permit #19-10 CS: Concordia Arms – 4 Rain Gardens

Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve Permit #19-10 CS. Motion carried unanimously.

Permit #19-11 CS: Reynen – 2 Rain Gardens

Motion: Dianne Ward moved, Lawrence Swope seconded, to approve Permit #19-11 CS. Motion carried unanimously.

Permit #19-12 CS: 2019 Lake Phalen Aquatic Vegetation Harvesting

Motion: Cliff Aichinger moved, Dr. Pam Skinner seconded, to approve Permit #19-12 CS. Motion carried unanimously.

Permit #19-13 CS: City of Woodbury Stormwater Maintenance Project – Habitat Restoration

Motion: Dr. Pam Skinner moved, Cliff Aichinger seconded, to approve Permit #19-13 CS. Motion carried unanimously.

B. Budget Status Update

No discussion.

9. ACTION ITEMS

A. Stormwater Pollution Prevention Plan Annual Report

Tina Carstens noted that this is an annual report, noting that the District is an MS4 because of the management of the Beltline.

Motion: Dr. Pam Skinner moved, Cliff Aichinger seconded, to accept the 2018 MS4 Annual Report and authorize the District Administrator to submit the report to the MPCA. Motion carried unanimously.

B. 2019 Rule Amendment Approval – Resolution 19-01
Motion: Cliff Aichinger moved, Lawrence Swope seconded, to approve the rule revision and adopt Resolution #19-01. Motion carried unanimously.

C. Change Order No. 2 CMAC Filtration BMP at Willow Pond
Motion: Dr. Pam Skinner moved, Dianne Ward seconded, to approve Change Order No. 2 for the CMAC Filtration BMP at Willow Pond, extending the contract end date to June 30, 2019. Motion carried unanimously.

D. Change Order for Capital Improvement Maintenance/Repair 2019
Motion: Dr. Pam Skinner moved, Dianne Ward seconded, to approve the change order extending the contract end date to June 30, 2019. Motion carried unanimously.

10. ADMINISTRATOR'S REPORT

A. Meetings Attended
No comments.

B. Upcoming Meetings and Dates
No comments.

C. Joint Meeting with Vadnais Lake Area Watershed Management Organization
No comments.

D. District 2018 Water Quality Summary
No comments.

E. MAWD Summer Tour Reminder
Noted.

11. PROJECT AND PROGRAM STATUS REPORTS

A. Ongoing Project and Program Updates

i. Flood Risk Response Planning
ii. Owasso Park Stormwater Master Plan
iii. Beltline Resiliency Study
iv. FEMA Flood Mapping
v. West Vadnais Lake Outlet Permitting
vi. 500 Year Atlas 14 Modeling
vii. Wetland Restoration Site Search
viii. Auto Lake Monitoring Systems
ix. Maplewood Mall Monitoring
x. Spent-Lime Pond Research Project
xi. Kohlman Basin Test Weirs
xii. Wakefield Park/Frost Avenue Project
xiii. Targeted Retrofit Projects
xiv. Willow Pond CMAC
xv. Cottage Place Wetland Restoration

xvi. Aldrich Arena Site Design
xvii. CIP Maintenance and Repair 2019 Project
xviii. New Technology Review – EnviroDIY
xix. Natural Resources Program
xx. Education Program

12. INFORMATIONAL ITEMS
No comments.

13. REPORTS OF MANAGERS
No comments.

14. ADJOURN
Motion: Dr. Pam Skinner moved, Lawrence Swope seconded, to adjourn the meeting at 9:15 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 2019
6/30/2019

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	-	705.00	2,660.00	$3,840.00	40.92%
	Manager expenses	4360	3,500.00	-	-	-	3,500.00	0.00%
Committees	Committee/Bd Mtg. Exp.	4365	3,500.00	-	376.45	1,940.54	1,559.46	55.44%
Employees	Staff salary/taxes/benefits	4010	1,385,000.00	-	112,493.46	662,355.79	722,644.21	47.82%
	Employee expenses	4020	10,000.00	-	1,021.57	3,186.26	6,813.74	31.86%
	District training & education	4350	25,000.00	-	1,391.73	10,663.33	14,336.67	42.65%
Administration/	GIS system maint. & equip.	4170	15,000.00	-	175.00	2,028.52	12,971.48	13.52%
Office	Data Base/GIS Maintenance	4171	5,000.00	-	-	2,210.00	2,790.00	44.20%
	Equipment maintenance	4305	3,000.00	-	-	-	3,000.00	0.00%
	Telephone	4310	8,000.00	-	2,479.40	4,275.22	3,724.78	53.44%
	Office supplies	4320	5,000.00	-	485.74	2,033.72	2,966.28	40.67%
	IT/Internet/Web Site/Software Lic.	4325	45,000.00	-	440.22	16,984.07	28,015.93	37.74%
	Postage	4330	10,000.00	-	142.47	284.94	9,715.06	2.85%
	Printing/copying	4335	8,000.00	-	865.19	3,248.92	4,751.08	40.61%
	Dues & publications	4338	11,000.00	-	45.00	7,829.00	3,171.00	71.17%
	Janitorial/Trash Service	4341	17,000.00	-	-	5,652.18	11,347.82	33.25%
	Utilities/Bldg.Contracts	4342	20,000.00	-	801.73	8,843.21	11,156.79	44.22%
	Bldg/Site Maintenance	4343	300,000.00	-	814.66	66,459.02	233,540.98	22.15%
	Miscellaneous	4390	5,000.00	-	-	500.00	4,500.00	10.00%
	Insurance	4480	35,000.00	-	-	30,384.00	4,616.00	86.81%
	Office equipment	4703	40,000.00	-	358.42	29,222.15	10,777.85	73.06%
	Vehicle lease, maintenance	4810-40	43,000.00	-	727.33	2,391.99	40,608.01	5.56%
Consultants/	Auditor/Accounting	4110	55,000.00	-	2,460.57	36,722.71	18,277.29	66.77%
Outside Services	Engineering-administration	4121	93,000.00	-	3,883.00	33,583.64	59,416.36	36.11%
	Engineering-permit I&E	4122	10,000.00	-	43.00	106.00	9,894.00	1.06%
	Engineering-eng. review	4123	55,000.00	-	1,880.00	29,173.16	25,826.84	53.04%
	Engineering-permit review	4124	55,000.00	-	4,426.00	19,874.50	35,125.50	36.14%
	Project Feasibility Studies	4129	790,000.00	-	22,870.00	153,026.94	636,973.06	19.37%
	Attorney-permits	4130	10,000.00	-	-	-	10,000.00	0.00%
	Attorney-general	4131	40,000.00	-	5,335.00	14,840.00	25,160.00	37.10%
	Outside Consulting Services	4160	40,000.00	-	-	-	40,000.00	0.00%
Programs	Educational programming	4370	60,000.00	-	1,495.29	13,143.14	46,856.86	21.91%
	Communications & Marketing	4371	25,000.00		914.66	4,273.46	20,726.54	17.09%
	Events	4372	50,000.00	-	16,830.31	33,556.76	16,443.24	67.11%
	Water QM-Engineering	4520-30	300,000.00	-	12,783.00	38,965.37	261,034.63	12.99%
	Project operations	4650	160,000.00	-	7,432.17	16,021.75	143,978.25	10.01%
	SLMP/TMDL Studies	4661	68,000.00	-	-	3,234.00	64,766.00	4.76%
	Natural Resources/Keller Creek	4670-72	115,000.00	-	5,280.71	56,910.91	58,089.09	49.49%
	Outside Prog.Support/Weed Mgmt.	4683-84	67,000.00	-	978.88	34,196.43	32,803.57	51.04%
	Research Projects	4695	115,000.00	-	7,960.50	38,839.02	76,160.98	33.77%
	Health and Safety Program	4697	3,000.00	-	906.50	930.80	2,069.20	31.03%
	NPDES Phase II	4698	10,000.00	-	-	-	10,000.00	0.00%
GENERAL FUND TOTAL			**$4,124,500.00**	**$0.00**	**$218,802.96**	**$1,390,551.45**	**$2,733,948.55**	33.71%
CIP's	CIP Project Repair & Maintenance	516	1,120,000.00	-	28,446.12	506,877.85	613,122.15	45.26%
	Targeted Retrofit Projects	518	978,760.00	-	19,117.55	172,415.84	806,344.16	17.62%
	District Office Building Solar Energy Retrofit	519	-	-	-	-	-	---
	Flood Damage Reduction Fund	520	2,500,000.00	-	163,300.09	188,414.45	2,311,585.55	7.54%
	Debt Services-96-97 Beltline/MM/Battle Creek	526	399,113.00	-	36,576.25	311,432.40	87,680.60	78.03%
	Stewardship Grant Program Fund	528-529	1,250,000.00	-	84,012.50	188,263.50	1,061,736.50	15.06%
	Impervious Surface Volume Reduction Opportunity	531	1,500,000.00	-	-	-	1,500,000.00	0.00%
	Beltline & Battle Creek Tunnel Repair	549	-	-	-	-	-	---
	Frost/Kennard Enhanced WQ BMP	550	-	-	-	-	-	---
	Markham Pond Dredging & Aeration	551	65,000.00	-	160.00	1,695.00	63,305.00	2.61%
	Wakefield Park Project	553	1,100,000.00	-	2,821.50	48,266.14	1,051,733.86	4.39%
	Willow Pond CMAC	554	300,000.00		678.75	10,417.66	289,582.34	3.47%
	District Office Bond Payment	585	194,885.00	-	-	193,453.76	1,431.24	99.27%
CIP BUDGET TOTAL			**$9,407,758.00**	**-**	**$335,112.76**	**$1,621,236.60**	**$7,786,521.40**	17.23%
TOTAL BUDGET			**$13,532,258.00**	**$0.00**	**$553,915.72**	**$3,011,788.05**	**$10,520,469.95**	**22.26%**

Current Fund Balances:

Fund:	Beginning Fund Balance @ 12/31/18	Fund Transfers	Year to date Revenue	Current Month Expenses	Year to Date Expense	Fund Balance @ 06/30/19
	$4,464,553.28	-	390,254.10	218,802.96	1,390,551.45	3,464,255.93
516 - CIP Project Repair & Maintenance	951,963.00	-	-	28,446.12	506,877.85	445,085.15
518 - Targeted Retrofit Projects	994,725.00	-	-	19,117.55	172,415.84	822,309.16
519 - District Office Building Solar Energy Retrofit	32,805.00	-	-	-	-	32,805.00
520 - Flood Damage Reduction Fund	1,823,918.00	-	39,130.73	163,300.09	188,414.45	1,674,634.28
526 - Debt Services-96-97 Beltline/MM/Beltline-Battle Creek Tunnel Repair	381,949.00	-	-	36,576.25	311,432.40	70,516.60
528/529 - Stewardship Grant Program Fund	389,152.00	-	-	84,012.50	188,263.50	200,888.50
531 - Impervious Surface Volume Reduction Opportunity	1,484,215.00	-	-	-	-	1,484,215.00
549 - Beltline & Battle Creek Tunnel Repair	863,674.00	-	-	-	-	863,674.00
550 - Frost/Kennard Enhanced WQ BMP	70,017.00	-	-	-	-	70,017.00
551 - Markham Pond Dredging & Aeration	110,379.00	-	-	160.00	1,695.00	108,684.00
553 - Wakefield Park Project	1,049,286.00	-	-	2,821.50	48,266.14	1,001,019.86
554 - Willow Pond CMAC	(44,588.00)	-	-	678.75	10,417.66	(55,005.66)
580 - Contingency Fund	598,985.00	-	-	-	-	598,985.00
585 - Certificates of Participation	131,513.00	-	-	-	193,453.76	(61,940.76)
Total District Fund Balance	**$13,302,546.28**	**-**	**$ 429,384.83**	**$ 553,915.72**	**$3,011,788.05**	**$10,720,143.06**

Ramsey Washington Metro Watershed Dist.
Check Register
For the Period From Jun 1, 2019 to Jun 30, 2019

Check #	Date	Payee ID	Invoice #	Payee	Description	Amount
66673	05/31/19	bar009	5/31/19 Payroll	Seth Bartodziej	Employee Wages	$828.70
70273	05/31/19	wil007	5/31/19 Payroll	Patrick Williamson	Employee Wages	958.06
70274	05/31/19	lar002	5/31/19 Payroll	Andrew S. Larson	Employee Wages	839.94
EFT	06/01/19	met008	June 2019	MetLife-Group Benefits	Employee Benefits	1,735.03
EFT	06/11/19	hea002	July 2019	HealthPartners	Employee Benefits	9,394.17
70789	06/13/19	asi001	A060119STPAULPHAL	ASIA Inc.	Events	750.00
70790	06/13/19	aws001	S1335957-060119	AWS Service Center	Utilities/Bldg.Contracts	204.04
70791	06/13/19	cen004	WF19	Center for Hmong Arts & Talent	Events	1,000.00
70792	06/13/19	cen007	052119C	Central Park Elementary School	Educational Program	598.44
70793	06/13/19	del001	10310336468	Dell Marketing, L.P.	Office Equipment	264.68
70794	06/13/19	gra001	WF19	Rick Gravrok	Events	150.00
70795	06/13/19	hom001	4563036	Home Depot Credit Services	Natural Resources/Constr.Imp.	88.34
70796	06/13/19	ind002	INV117253	Indelco Plastics Corporation	Construction-Imp.-Maint. & Rep.	282.00
70797	06/13/19	jad001	Jun 2019	Anita Jader Photography	Events	200.00
70798	06/13/19	lio002	C8697	Lionsgate Academy	Educational Program	217.00
70799	06/13/19	mac004	WF19	Jack MacMillan	Events	270.00
70800	06/13/19	mcc002	WF19	Abby Mccullough	Events	150.00
70801	06/13/19	mid001	6588423	Quicksilver Express Courier	Employee Benefits	26.86
70802	06/13/19	mid003	521568	Roseville Midway Ford	Vehicle Maintenance	76.81
70803	06/13/19	min008	19491	Minnesota Native Landscapes, Inc.	Construction-Imp.-Maint. & Rep.	897.00
70804	06/13/19	pit001	310316966	Pitney Bowes Global Financial Serv LLC	Postage	142.47
70805	06/13/19	pre003	316899527	Premium Waters, Inc.	Utilities/Bldg.Contracts	22.00
70806	06/13/19	ros003	05/21/19	Roseville Area Middle School	Educational Program	598.44
70807	06/13/19	spe002	8258	Speedpro Saint Paul	Events	191.51
70808	06/13/19	stp004	WF19	St. Paul East Parks Lions	Events	621.50
70809	06/13/19	sup002	1962	Superior Tent Rental, Inc.	Events	635.00
70810	06/13/19	sup004	583	Superior Minerals Company	Water QM Staff	29.26
70811	06/13/19	tun001	WF19	Robin Tunbaw	Events	200.00
70812	06/13/19	usb005	386508394	US Bank Equipment Finance	Copier Lease	294.00
70813	06/13/19	vik001	3166416	Viking Industrial Center	Water QM Staff	108.60
70814	06/13/19	xio002	WF19	Bryan Xiong	Events	200.00
70806V	06/25/19	ros003	05/21/19	Roseville Area Middle School	Educational Program	(598.44)
70815	06/25/19	ada002	2790742	Adam's Pest Control, Inc.	Bldg./Site Maintenance	79.00
70816	06/25/19	ahl001	May-June 2019	Paige Ahlborg	Employee Reimbursement	318.25
70817	06/25/19	aic003	1915	David Aichinger	Events	3,480.00
70818	06/25/19	ame004	AST67629	American Student Transportation	Educational Program	271.60
70819	06/25/19	app001	52705	Applied Ecology Services, Inc.	Stewardship Grant Fund	1,741.50
70820	06/25/19	att002	X06252019	AT & T Mobility - ROC	IT/Website/Software/Water QM	85.44
70821	06/25/19	bar001	5/18-6/14/19	Barr Engineering	May/June Engineering	118,679.74
70822	06/25/19	bar009	Jun 2019	Seth Bartodziej	Employee Reimbursement	102.66
70823	06/25/19	blo001	Jun 2019	Simba Blood	Employee Reimbursement	370.71
70824	06/25/19	bre003	3rd Quarter	Bremer Bank	Employee Benefits	7,000.00
70825	06/25/19	cad001	16200748	Allstream	Water QM Staff	64.85
70826	06/25/19	cit011	226195	City of Roseville	IT/Website/Software/Phone	2,728.00
70827	06/25/19	daw001	19-15 CS	Linda Dawson	Stewardship Grant Fund	989.65
70828	06/25/19	dig001	15-38	Dignicare Senior Living	Dev Escrow-General	4,550.00
70829	06/25/19	don001	Jun 2019	Matthew Doneux	Employee Reimbursement	237.95
70830	06/25/19	fit002	Jun 2019	Mary Fitzgerald	Employee Reimbursement	32.54
70831	06/25/19	gal001	June 20, 2019	Galowitz Olson, PLLC	June Legal Expense	5,335.00
70832	06/25/19	hil003	Jun 2019	Kyle Hildebrandt	Employee Reimbursement	30.10
70833	06/25/19	inn002	IN2549487	Innovative Office Solutions LLC	Office Supplies	186.03
70834	06/25/19	int001	W19050506	Office of MN, IT Services	Telephone Expense	55.40
70835	06/25/19	kel004	18-20 CS	Keller Properties	Stewardship Grant Fund	27,582.75
70836	06/25/19	kin001	061700008068	FedEx Office	Events	28.35
70837	06/25/19	kub001	Jun 2019	Kyle W. Kubitza	Employee Reimbursement	30.22
70838	06/25/19	lak007	1002	Lakes Aquatic Weed Removal	Natural Resources	4,807.50
70839	06/25/19	lar002	Jun 2019	Andrew S. Larson	Employee Reimbursement	46.54

Ramsey Washington Metro Watershed Dist.
Check Register
For the Period From Jun 1, 2019 to Jun 30, 2019

Check #	Date	Payee ID	Invoice #	Payee	Description	Amount
70840	06/25/19	mag004	Jun 2019	Carrie Magnuson	Employee Reimbursement	443.38
70841	06/25/19	mbc001	1050	MB Consulting	Events	4,722.99
70842	06/25/19	mcg004	18-21 CS	Kara McGuire	Stewardship Grant Fund	8,775.00
70843	06/25/19	mel001	Apr-May 2019	Michelle L. Melser	Employee Reimbursement	137.21
70844	06/25/19	met004	INV1365512	Metro Sales, Inc.	Copier Lease	571.19
70845	06/25/19	min008	20362/20381	Minnesota Native Landscapes, Inc.	Const.Imp/Proj.Maint./Steward.	54,191.25
70846	06/25/19	ncp001	Jun 2019	NCPERS Group Life Ins.	Employee Benefits	16.00
70847	06/25/19	new002	Jun 2019	Kyra L. Newburg	Employee Reimbursement	26.68
70848	06/25/19	nor013	36988	Northern Dewatering, Inc.	Constr/Flood Damage Reduc.	15,035.75
70849	06/25/19	nor016	06/17/19	Northland Trust Services, Inc.	Beltline/Battle Creek Debt Serv.	36,576.25
70850	06/25/19	nov002	2	Liv Novotny	Communicatins & Marketing	700.00
70851	06/25/19	nsp001	642692591	Xcel Energy	Utilities/Proj.Oper/Willow Pond	669.17
70852	06/25/19	out001	19-056	Outdoor Lab Landscape Design, Inc.	Construction-Imp.-Maint. & Rep.	4,435.72
70853	06/25/19	pac001	1912006547	Pace Analytical Services, Inc.	Water QM Staff	6,693.00
70854	06/25/19	pas002	May-June 2019	Sage Passi	Employee Reimbursement	249.42
70855	06/25/19	pet001	39605/39606	Peterson Companies, Inc.	Construction-Imp.-Food Damage	113,272.30
70856	06/25/19	qwe001	Jun 2019	CenturyLink	Project Operations	228.19
70857	06/25/19	red002	150446954	Redpath & Company, Ltd	May Accounting	2,425.57
70858	06/25/19	ros003	05/21/19	Roseville Area Middle School	Educational Program	194.62
70859	06/25/19	rot002	06/23/19	Violeta Rotstein	Communicatins & Marketing	100.00
70860	06/25/19	sod001	Jun 2019	Nicole Soderholm	Employee Reimbursement	157.98
70861	06/25/19	stu001	2567	Studio Lola	Events	2,280.25
70862	06/25/19	tim002	M24829	Timesaver Off-Site Secretarial, Inc.	Committee/Board Meeting Exp.	285.00
70863	06/25/19	tro002	19-04	Cathy Troendle	Educational Program	213.63
70864	06/25/19	twi004	16-32	Twin Cities Orthopedics	Dev Escrow-General	4,940.00
70865	06/25/19	urb001	18-07 CS	Urban Roots	Stewardship Grant Fund	4,047.50
70866	06/25/19	usb002	Jun 2019	U.S. Bank	May/June Credit Card	5,301.92
70867	06/25/19	van001	65867	Vanguard Cleaning Systems of Minnesota	Bldg./Site Maintenance	550.00
70868	06/25/19	voy001	869293423926	US Bank Voyager Fleet Sys.	Vehicle Fuel	650.52
70869	06/25/19	was002	4510/4528	Washington Conservation District	Stewardship Grant Fund	2,238.00
70870	06/25/19	was003	154584	Washington Co.-Taxation Div.	Accounting Expense	35.00
70871	06/25/19	wil007	Jun 2019	Patrick Williamson	Employee Reimbursement	118.23
70872	06/25/19	ysi001	788007	YSI, Inc.	Water QM Staff	598.25
Total				**Accounts Payable**		**$471,089.16**
Dir.Dep.	06/14/19	---	Payroll Expense-Net	June 14th Payroll	4010-101-000	30,939.08
EFT	06/14/19	int002	Internal Rev.Serv.	June 14th Federal Withholding	2001-101-000	10,337.34
EFT	06/14/19	mnd001	MN Revenue	June 14th State Withholding	2003-101-000	1,939.87
EFT	06/14/19	per001	PERA	June 14th PERA Contribution	2011-101-000	4,761.91
EFT	06/14/19	emp002	Empower Retirement	Employee Def.Comp. Contributions	2016-101-000	2,425.00
EFT	06/14/19	emp002	Empower Retirement	Employee IRA Contributions	2018-101-000	375.00
Dir.Dep.	06/28/19	---	Payroll Expense-Net	June 28th Payroll	4010-101-000	27,175.83
EFT	06/28/19	int002	Internal Rev.Serv.	June 28th Federal Withholding	2001-101-000	9,300.27
EFT	06/28/19	mnd001	MN Revenue	June 28th State Withholding	2003-101-000	1,768.74
EFT	06/28/19	per001	PERA	June 28th PERA	2011-101-000	4,536.61
EFT	06/28/19	emp002	Empower Retirement	Employee Def.Comp. Contributions	2016-101-000	2,425.00
EFT	06/28/19	emp002	Empower Retirement	Employee IRA Contributions	2018-101-000	375.00
				Payroll/Benefits		**$96,359.65**
Total				**Accounts Payable/Payroll/Benefits:**		**$567,448.81**

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From June 1, 2019 - June 30, 2019

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
05/31/19	66673	bar009	Seth Bartodziej	4010-101-000	Employee Wages	$828.70	
05/31/19	70273	wil007	Patrick Williamson	4010-101-000	Employee Wages	958.06	
05/31/19	70274	lar002	Andrew S. Larson	4010-101-000	Employee Wages	839.94	
06/01/19	EFT	met003	MetLife			1,735.03	
				4040-101-000	Employee Benefits-General		1,498.12
				2015-101-000	Employee Health-General		236.91
06/11/19	EFT	hea002	HealthPartners			9,394.17	
				4040-101-000	Employee Benefits-General		8,074.99
				2015-101-000	Employee Health-General		1,319.18
06/13/19	70789	asi001	ASIA Inc.	4372-101-000	Events	750.00	
06/13/19	70790	aws001	AWS Service Center	4342-101-000	Utilities/Building Contracts	204.04	
06/13/19	70791	cen004	Center for Hmong Arts & Talent	4372-101-000	Events	1,000.00	
06/13/19	70792	cen007	Central Park Elementary School	4370-101-000	Educational Program-General	598.44	
06/13/19	70793	del001	Dell Marketing L.P.	4703-101-000	Office Equipment-General	264.68	
06/13/19	70794	gra001	Rick Gravrok	4372-101-000	Events	150.00	
06/13/19	70795	hom001	Home Depot Credit Services			88.34	
				4670-101-000	Natural Resources Project-General		44.92
				4630-516-000	Construction Imp.-Maint. & Repair		43.42
06/13/19	70796	ind002	Indelco Plastics Corporation	4630-516-000	Construction Imp.-Maint. & Repair	282.00	
06/13/19	70797	jad001	Anita Jadar Photography	4372-101-000	Events	200.00	
06/13/19	70798	lio002	Lionsgate Academy	4370-101-000	Educational Program-General	217.00	
06/13/19	70799	mac004	Jack MacMillan	4372-101-000	Events	270.00	
06/13/19	70800	mcc002	Abby Mccullough	4372-101-000	Events	150.00	
06/13/19	70801	mid001	Quicksilver Express Courier	4040-101-000	Employee Benefits-General	26.86	
06/13/19	70802	mid003	Roseville Midway Ford	4820-101-000	Vehicle Maintenance-General	76.81	
06/13/19	70803	min008	Minnesota Native Landscapes, Inc.	4630-516-000	Construction Imp.-Maint. & Repair	897.00	
06/13/19	70804	pit001	Pitney Bowes Global Financial Serv., LLC	4330-101-000	Postage-General	142.47	
06/13/19	70805	pre003	Premium Waters, Inc.	4342-101-000	Utilities/Building Contracts	22.00	
06/13/19	70806	ros003	Roseville Area Middle School	4370-101-000	Educational Program-General	598.44	
06/13/19	70807	spe002	Speedro Saint Paul	4372-101-000	Events	191.51	
06/13/19	70808	stp004	St. Paul East Park Lions	4372-101-000	Events	621.50	
06/13/19	70809	sup002	Superior Tent Rental, Inc.	4372-101-000	Events	635.00	
06/13/19	70810	sup004	Superior Minerals Company	4530-101-000	Water QM Staff-General	29.26	
06/13/19	70811	tun001	Robin Tunbaw	4372-101-000	Events	200.00	
06/13/19	70812	usb005	US Bank Equipment Finance	4335-101-000	Printing-General	294.00	
06/13/19	70813	vik001	Viking Industrial Center	4530-101-000	Water QM Staff-General	108.60	
06/13/19	70814	xio002	Bryan Xiiong	4372-101-000	Events	200.00	
06/25/19	70806V	ros003	Roseville Area Middle School	4370-101-000	Educational Program-General	(598.44)	
06/25/19	70815	ada002	Adam's Pest Control	4343-101-000	Bldg./Site Maintenance	79.00	
06/25/19	70816	ahl001	Paige Ahlborg			318.25	
				4040-101-000	Employee Benefits-General		74.00
				4020-101-000	Employee Expenses		244.25

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From June 1, 2019 - June 30, 2019

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
06/25/19	70817	aic003	David Aichinger	4372-101-000	Events	3,480.00	
06/25/19	70818	ame004	American Student Transportation	4370-101-000	Educational Program-General	271.60	
06/25/19	70819	app001	Applied Ecology Services, Inc.	4682-529-000	Stewardship Grant Fund	1,741.50	
06/25/19	70820	att002	AT & T Mobility - ROC			85.44	
				4325-101-000	IT/Website/Software		43.22
				4530-101-000	Water QM Staff-General		42.22
06/25/19	70821	bar001	Barr Engineering			118,679.74	
				4121-101-000	Engineering Admin-General Fund		3,883.00
				4697-101-000	Health & Safety Program		759.00
				4129-101-000	Project Feasability-General		1,105.00
				4123-101-000	Engineering-Review		1,880.00
				4129-101-000	Project Feasability-General		303.00
				4129-101-000	Project Feasability-General		8,856.50
				4129-101-000	Project Feasability-General		5,293.50
				4129-101-000	Project Feasability-General		6,670.00
				4129-101-000	Project Feasability-General		366.50
				4129-101-000	Project Feasability-General		275.50
				4170-101-000	GIS System Maint. & Equipment		175.00
				4520-101-000	Water QM-Engineering		732.50
				4520-101-000	Water QM-Engineering		4,514.32
				4122-101-000	Engineering-Permit I & E		43.00
				4124-101-000	Engineering-Permit Review		4,426.00
				4128-520-000	Engineering-Flood Damage		34,992.04
				4695-101-000	Research Projects-General		2,185.50
				4695-101-000	Research Projects-General		1,734.50
				4695-101-000	Research Projects-General		8.50
				4650-101-000	Project Operations-General		7,110.50
				4128-553-000	Engineering-Wakefield		2,821.50
				4128-518-000	Engineering-School/Commer Retrofit		966.00
				4128-518-000	Engineering-School/Commer Retrofit		517.50
				4128-518-000	Engineering-School/Commer Retrofit		287.50
				4682-559-000	Stewardship Grant Program		5,589.50
				4128-518-000	Engineering-School/Commer Retrofit		2,702.30
				4128-551-000	Engineering-Markham		160.00
				4682-529-000	Stewardship Grant Fund		7,951.60
				4695-101-000	Research Projects-General		4,032.00
				4128-516-000	Engineering-Maint. & Repair		3,909.48
				4128-516-000	Engineering-Maint. & Repair		4,428.50
06/25/19	70822	bar009	Seth Bartodziej	4020-101-000	Employee Expenses-General	102.66	

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From June 1, 2019 - June 30, 2019

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
06/25/19	70823	blo001	Simba Blood			370.71	
				4040-101-000	Employee Benefits-General		32.65
				4020-101-000	Employee Expenses-General		59.28
				4372-101-000	Events		24.36
				4670-101-000	Natural Resources Project-General		254.42
06/25/19	70824	bre003	Bremer Bank	4040-101-000	Employee Benefits-General	7,000.00	
06/25/19	70825	cad001	Allstream	4530-101-000	Water QM Staff-General	64.85	
06/25/19	70826	cit011	City of Roseville			2,728.00	
				4310-101-000	Telephone-General		2,424.00
				4325-101-000	IT/Website/Software		304.00
06/25/19	70827	daw001	Linda Dawson	4682-529-000	Stewardship Grant Fund	989.65	
06/25/19	70828	dig001	Dignicare Senior Living	2024-101-000	Dev Escrow-General Fund	4,550.00	
06/25/19	70829	don001	Matthew Doneux			237.95	
				4040-101-000	Employee Benefits-General		40.00
				4020-101-000	Employee Expenses-General		44.08
				4670-101-000	Natural Resources Project-General		153.87
06/25/19	70830	fit002	Mary Fitzgerald	4020-101-000	Employee Expenses-General	32.54	
06/25/19	70831	gal001	Galowitz Olson, PLLC	4131-101-000	Atty General-General Fund	5,335.00	
06/25/19	70832	hil003	Kyle Hildebrandt			30.10	
				4670-101-000	Natural Resources Project-General		10.00
				4020-101-000	Employee Expenses-General		20.10
06/25/19	70833	inn002	Innovative Office Solutions, LLC	4320-101-000	Office Supplies-General	186.03	
06/25/19	70834	int001	Office of MN, IT Services	4310-101-000	Telephone-General	55.40	
06/25/19	70835	kel004	Keller Properties	4682-529-000	Stewardship Grant Fund	27,582.75	
06/25/19	70836	kin001	FedEx Office	4372-101-000	Events	28.35	
06/25/19	70837	kib001	Kyle W. Kubitza			30.22	
				4372-101-000	Events		1.22
				4020-101-000	Employee Expenses-General		29.00
06/25/19	70838	lak007	Lakes Aquatic Weed Removal	4670-101-000	Natural Resources Project-General	4,807.50	
06/25/19	70839	lar002	Andrew S. Larson			46.54	
				4670-101-000	Natural Resources Project-General		10.00
				4020-101-000	Employee Expenses-General		36.54
06/25/19	70840	mag004	Carrie Magnuson			443.38	
				4020-101-000	Employee Expenses-General		96.16
				4040-101-000	Employee Benefits-General		240.00
				4365-101-000	Committee/Board Meeting Expense		65.58
				4372-101-000	Events		41.64
06/25/19	70841	mbc001	MB Consulting	4372-101-000	Events	4,722.99	
06/25/19	70842	mcg004	Kara McGuire	4682-529-000	Stewardship Grant Fund	8,775.00	
06/25/19	70843	mel001	Michelle L. Melser			137.21	
				4040-101-000	Employee Benefits-General		40.00
				4020-101-000	Employee Expenses-General		97.21
06/25/19	70844	met004	Metro Sales, Inc.	4335-101-000	Printing-General	571.19	
06/25/19	70845	min008	Minnesota Native Landscapes, Inc.			54,191.25	
				4630-516-000	Construction Imp.-Maint. & Repair		14,450.00
				4682-529-000	Stewardship Grant Fund		25,097.00
				4682-518-000	BMP Cost Share Program		14,644.25

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From June 1, 2019 - June 30, 2019

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
06/25/19	70846	ncp001	NCPERS Group Life Ins.	2015-101-000	Employee Health-General	16.00	
06/25/19	70847	new002	Kyra I. Newburg	4020-101-000	Employee Expenses-General	26.68	
06/25/19	70848	nor013	Northern Dewatering, Inc.	4630-520-000	Construction-Flood Damage	15,035.75	
06/25/19	70849	nor016	Northland Trust Services, Inc.	4708-526-000	Debt Services-Beltline Tunnel	36,576.25	
06/25/19	70850	nov002	Liv Novotny	4371-101-000	Communications & Marketing	700.00	
06/25/19	70851	nsp001	Xcel Energy			669.17	
				4342-101-000	Utilities/Building Contracts		11.32
				4342-101-000	Utilities/Building Contracts		564.37
				4650-101-000	Project Operations-General		93.48
06/25/19	70852	out001	Outdoor Lab Landscape Design, Inc.	4630-516-000	Construction Imp.-Maint. & Repair	4,435.72	
06/25/19	70853	pac001	Pace Analytical Services, Inc.	4530-101-000	Water QM Staff-General	6,693.00	
06/25/19	70854	pas002	Sage Passi			249.42	
				4020-101-000	Employee Expenses-General		96.86
				4372-101-000	Events		56.06
				4040-101-000	Employee Benefits-General		96.50
06/25/19	70855	pet001	Peterson Companies, Inc.			113,272.30	
				4630-520-000	Construction-Flood Damage		99,047.30
				4630-520-000	Construction-Flood Damage		14,225.00
06/25/19	70856	qwe001	CenturyLink	4650-101-000	Project Operations-General	228.19	
06/25/19	70857	red002	Redpath & Company, Ltd.	4110-101-000	May Accounting Services	2,425.57	
06/25/19	70858	ros003	Roseville Area Middle School	4370-101-000	Educational Program-General	194.62	
06/25/19	70859	rot002	Violeta Rotstein	4371-101-000	Communications & Marketing	100.00	
06/25/19	70860	sod001	Nichole Soderholm			157.98	
				4040-101-000	Employee Benefits-General		140.00
				4020-101-000	Employee Expenses-General		17.98
06/25/19	70861	stu001	Studio Lola	4372-101-000	Events	2,280.25	
06/25/19	70862	tim002	Timesaver Off-Site Secretarial, Inc.	4365-101-000	Committee/Board Meeting Expense	285.00	
06/25/19	70863	tro002	Cathy Troendle	4370-101-000	Educational Program-General	213.63	
06/25/19	70864	twi004	Twin Cities Orthopedics	2024-101-000	Dev Escrow-General Fund	4,940.00	
06/25/19	70865	urb001	Urban Roots	4682-529-000	Stewardship Grant Fund	4,047.50	
06/25/19	70866	usb002	U.S. Bancorp			5,301.92	
				4320-101-000	Office Supplies-General		88.35
				4320-101-000	Office Supplies-General		39.59
				4040-101-000	Employee Benefits-General		119.75
				4320-101-000	Office Supplies-General		42.19
				4320-101-000	Office Supplies-General		27.60
				4343-101-000	Bldg./Site Maintenance		26.66
				4325-101-000	IT/Website/Software		93.00
				4365-101-000	Committee/Board Meeting Expense		25.87
				4684-101-000	Weed Management Program		153.53
				4371-101-000	Communications & Marketing		25.00
				4372-101-000	Events		95.92
				4372-101-000	Events		850.00
				4320-101-000	Office Supplies-General		11.99
				4320-101-000	Office Supplies-General		89.99
				4697-101-000	Health & Safety Program		115.55

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From June 1, 2019 - June 30, 2019

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
				4371-101-000	Communications & Marketing		35.00
				4372-101-000	Events		348.00
				4040-101-000	Employee Benefits-General		125.59
				4372-101-000	Events		47.60
				4630-554-000	Events		678.75
				4703-101-000	Office Equipment-General		93.74
				4372-101-000	Events		84.64
				4371-101-000	Communications & Marketing		50.00
				4350-101-000	Training & Education		350.00
				4350-101-000	Training & Education		525.00
				4350-101-000	Training & Education		350.00
				4371-101-000	Communications & Marketing		4.66
				4338-101-000	Dues & Publications		45.00
				4372-101-000	Events		386.28
				4350-101-000	Training & Education		166.73
				4697-101-000	Health & Safety Program		31.95
				4372-101-000	Events		14.99
				4343-101-000	Bldg./Site Maintenance		159.00
06/25/19	70867	van001	Vanguard Cleaning Systems of Minnesota	4343-101-000	Bldg./Site Maintenance	550.00	
06/25/19	70868	voy001	US Bank Voyager Fleet Sys.	4830-101-000	Vehicle Fuel-General	650.52	
06/25/19	70869	was002	Washington Conservation District	4682-529-000	Stewardship Grant Fund	2,238.00	
06/25/19	70870	was003	Washington County-Taxation Division	4110-101-000	Auditor/Accounting	35.00	
06/25/19	70871	wil007	Patrick Williamson	4020-101-000	Employee Expenses-General	118.23	
06/25/19	70872	ysi001	YSI, Inc.	4530-101-000	Water QM Staff-General	598.25	
			Accounts Payable Total:			**$471,089.16**	
Dir.Dep.	06/14/19	---	Payroll Expense-Net	4010-101-000	June 14th Payroll	30,939.08	
EFT	06/14/19	int002	Internal Rev.Serv.	2001-101-000	June 14th Federal Withholding	10,337.34	
EFT	06/14/19	mnd001	MN Revenue	2003-101-000	June 14th State Withholding	1,939.87	
EFT	06/14/19	per001	PERA	2011-101-000	June 14th PERA Contribution	4,761.91	
EFT	06/14/19	emp002	Empower Retirement	2016-101-000	Employee Def.Comp. Contributions	2,425.00	
EFT	06/14/19	emp002	Empower Retirement	2018-101-000	Employee IRA Contributions	375.00	
Dir.Dep.	06/28/19	---	Payroll Expense-Net	4010-101-000	June 28th Payroll	27,175.83	
EFT	06/28/19	int002	Internal Rev.Serv.	2001-101-000	June 28th Federal Withholding	9,300.27	
EFT	06/28/19	mnd001	MN Revenue	2003-101-000	June 28th State Withholding	1,768.74	
EFT	06/28/19	per001	PERA	2011-101-000	June 28th PERA	4,536.61	
EFT	06/28/19	emp002	Empower Retirement	2016-101-000	Employee Def.Comp. Contributions	2,425.00	
EFT	06/28/19	emp002	Empower Retirement	2018-101-000	Employee IRA Contributions	375.00	
			Payroll/Benefits			**$96,359.65**	
			TOTAL:			**$567,448.81**	

BARR

Summary of Professional Engineering Services During the Period
May 18, 2019 through June 14, 2019

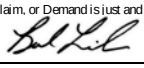
Engineering Administration	Total Engineering Budget (2019)	Total Fees to Date (2019)	Budget Balance (2019)	Fees During Period	District Accounting Code	Plan Implementation Task Number
General Engineering Administration	$76,000.00	$39,007.14	$36,992.86	$3,883.00	**4121-101**	DW-13
RWMWD Health and Safety/ERTK Program	$2,000.00	$759.00	$1,241.00	$759.00	**4697-101**	DW-13
Educational Program/Educational Forum Assistance	$20,000.00	$13,498.00	$6,502.00	$1,105.00	**4129-101**	DW-11
Engineering Review						
Engineering Review	$55,000.00	$37,759.16	$17,240.84	$1,880.00	**4123-101**	DW-13
Project Feasibility Studies						
Owasso County Park Stormwater Master Plan and Detailed Design: Phase 1 and Phase 2	$50,000.00	$5,231.70	$44,768.30	$303.00	**4129-101**	DW-6
Beltline Resiliency and Phalen Chain Water Level Management Study	$217,000.00	$60,928.12	$156,071.88	$8,856.50	**4129-101**	BELT-3
Interim emergency response plan funds for top priority District flooding areas (such as Owasso Basin, Willow Creek, PCU Pond, etc)	$50,000.00	$648.00	$49,352.00		**4129-101**	DW-19
FEMA Flood Mapping Update	$90,000.00	$43,634.00	$46,366.00	$5,293.50	**4129-101**	DW-9
Snail, Grass, and West Vadnais outlet permitting with the MnDNR	$100,000.00	$14,046.50	$85,953.50	$6,670.00	**4129-101**	DW-9
Modeling of 500-year event Atlas 14 District-wide (Climate Change Scenario) and Generation of Flood Maps for Future Outreach Efforts	$70,000.00	$1,258.00	$68,742.00		**4129-101**	DW-9
Climate Adaption Workshops with Member Cities	$100,000.00	$170.00	$99,830.00		**4129-101**	DW-9
Hillcrest Golf Course (multi-use)	$25,000.00	$0.00	$25,000.00		**4129-101**	DW-6
Wetland Restoration site search. BWSR criteria needed to help guide this idea.	$25,000.00	$14,754.00	$10,246.00	$366.50	**4129-101**	DW-1, DW-8
Gold BRT planning	$20,000.00	$0.00	$20,000.00		**4129-101**	DW-6
Priority Pond Assessment (WQ Monitor/Dredge/Treat/Leave As-Is)	$20,000.00	$275.50	$19,724.50	$275.50	**4129-101**	DW-5
Contingency*	$20,000.00	$3,233.00	$16,767.00		**4129-101**	
GIS Maintenance						
GIS Maintenance	$5,000.00	$341.50	$4,658.50	$175.00	**4170-101**	DW-13
Monitoring Water Quality/Project Monitoring						
Lake Water Quality Monitoring (Misc QA/QC)	$10,000.00	$340.00	$9,660.00		**4520-101**	DW-2
Auto lake monitoring system for Grass Lake	$20,000.00	$0.00	$20,000.00		**4520-101**	DW-18
Auto lake monitoring system for Owasso Lake	$20,000.00	$4,158.50	$15,841.50		**4520-101**	DW-18
Auto lake monitoring system for Phalen Lake	$20,000.00	$4,799.50	$15,200.50		**4520-101**	DW-18
Auto lake monitoring system for Snail Lake	$20,000.00	$0.00	$20,000.00		**4520-101**	DW-18
Auto lake monitoring system for Wabasso Lake	$20,000.00	$3,943.50	$16,056.50	$732.50	**4520-101**	DW-18
Special Project BMP Monitoring (Maplewood Mall, Frost Kennard Spent Lime Filter, Willow Pond CMAC)	$25,000.00	$12,708.84	$12,291.16	$4,514.32	**4520-101**	DW-12
Permit Processing, Inspection and Enforcement						
Permit Application Inspection and Enforcement	$10,000.00	$106.00	$9,894.00	$43.00	**4122-101**	DW-7
Permit Application Review	$55,000.00	$24,775.50	$30,224.50	$4,426.00	**4124-101**	DW-7
Lake Studies/WRPPs/TMDL Reports						
2019 Grant Applications	$30,000.00	$144.00	$29,856.00		**4661-101**	--
Tanners Flood Response Tool Model Update	$3,000.00	$1,545.00	$1,455.00		**4661-101**	TaL-1
Internal Load Management Discussions	$10,000.00	$1,826.00	$8,174.00		**4661-101**	KL-2, GC-2, WL-3, BL-3, BCL-2, LE-4, BeL-3, LO-5
Twin Lake Public Meeting	$20,000.00	$14,522.12	$5,477.88		**4129-101**	DW-19
Twin Lake Emergency Response Management 2019		$34,992.04	-$34,992.04	$34,992.04	**4128-520**	
Contingency for Lake Studies	$5,000.00	$0.00	$5,000.00		**4661-101**	
Research Projects						
New Technology Mini Case Studies (average 6 per year)	$12,000.00	$8,027.50	$3,972.50	$2,185.50	**4695-101**	DW-12
Kohlman Permeable Weir Test System - Implement Monitoring Plan	$15,000.00	$10,247.10	$4,752.90	$1,734.50	**4695-101**	DW-12
Iron aggregate pond application research project	$20,000.00	$195.50	$19,804.50	$8.50	**4695-101**	DW-12
Project Operations						
2018 Tanners Alum Facility Monitoring	$15,000.00	$11,959.50	$3,040.50	$7,110.50	**4650-101**	TaL-3
Capital Improvements						
Wakefield Park/Frost Avenue Stormwater Project	$175,000.00	$59,239.14	$115,760.86	$2,821.50	**4128-553**	WL-1
Commercial Sites Retrofit Projects 2018 (Targeted Retrofits)	$55,000.00	$6,202.20	$48,797.80	$966.00	**4128-518**	DW-6
School Sites Retrofit Projects 2018 (Targeted Retrofits)	$55,000.00	$16,894.50	$38,105.50	$517.50	**4128-518**	DW-6
Church Sites Retrofit Projects 2018 (Targeted Retrofit)	$55,000.00	$12,078.50	$42,921.50	$287.50	**4128-518**	DW-6
Roseville High School Campus Stormwater Retrofit (Bennett Lake Subwatershed)	$125,000.00	$23,026.52	$101,973.48		**4128-518**	BeL-4
BMP Incentive Fund: Gen'l BMP Design Assistance and Review (cases where Dist is approached by landowner, or landowner is not commercial, school, church).	$50,000.00	$32,780.50	$17,219.50	$5,589.50	**4682-529**	DW-6
Lowering West Vadnais Lake Outlet	$50,000.00	$0.00	$50,000.00		**4128-520**	DW-9
Cottage Place Wetland Restoration	$100,000.00	$29,968.99	$70,031.01	$2,702.30	**4128-518**	DW-1, DW-8
Markham Pond Aeration Project and Grant Reporting	$1,000.00	$1,855.00	-$855.00	$160.00	**4128-551**	KC-1
Aldrich Arena Plans and Specifications	$125,000.00	$104,287.74	$20,712.26	$7,951.60	**4682-529**	DW-6
Willow Pond CMAC Implementation	$100,000.00	$128,641.61	-$28,641.61		**4128-554**	BeL-4
CIP Project Repair & Maintenance						
Kohlman Lake Macrophyte Mgmt	$5,000.00	$4,032.00	$968.00	$4,032.00	**4695-101**	KL-3
Routine CIP Inspection and Unplanned Maintenance Identification	$75,000.00	$49,729.90	$25,270.10	$3,909.48	**4128-516**	DW-5
2019 CIP Maintenance and Repairs	$150,000.00	$83,249.19	$66,750.81	$4,428.50	**4128-516**	DW-5
2020 CIP Maintenance and Repairs	$150,000.00	$0.00	$150,000.00		**4128-516**	DW-5

*Final edits to Beaver, Owasso and Battle Creek Lakes Subwatershed Feasibility Studies per Board comments at the 1/2/19 meeting.

Subtotal $118,679.74

TOTAL PAYABLE FOR PERIOD 05/18/2019 - 06/14/2019 **$118,679.74**

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

2018 Faith Based and Commercial Sites BMP Retrofits
House of Prayer Lutheran Church and New Horizon Daycare
Progress Payment Number 2

1	Completed to Date:	$73,369.00		
2	Less Previously Billed:		$0.00	
3	Amount Completed This Period:			$15,415.00
4	Amount Previously Retained:		$0.00	
5	Amount Retained This Period (See Note 1):		$770.75	
6	Total Amount Retained (See Note 2):		$3,668.45	
7	Retainage Released Through This Period:			$0.00
8	Less Total Retainage Remaining:			
9	Less Amounts Previously Paid:	$55,056.30		
10	Amount Due This Estimate:			$14,644.25

Note 1: At rate of 10% until Completed to Date equals 50% of current Contract Price and a rate of 0% thereafter.

Note 2: Maximum amount is 5% of current Contract Price

SUBMITTED BY:
Name: Jeff Renier Date: 6/21/2019
Title: ~~President~~ P.M
Contractor: ~~Outdoor Lab~~ MN Native Landscapes
Signature:

RECOMMENDED BY:
Name: Matt Kumka Date: 6/21/2019
Title: Project Manager
Engineer: Barr Engineering Company
Signature:

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

Signature:

House of Prayer Lutheran Church
Oakdale, MN
Contract Amount

Base Bid Items				Bid Total		Total Completed Through This Period			Total Completed Through This Period		
						Invoice #1			Invoice #2		
Item	Description	Unit	Estimated Quantity	Unit Price	Extension	Unit Price	Actual Quantity	Extension	Unit Price	Actual Quantity	Extension
A	Mobilization/Demobilization/Traffic Control/Erosion Control	L.S.	1	$2,000.00	$2,000.00	$2,000.00	1	$2,000.00	$2,000.00	0	$0.00
B	Remove Concrete Curb and Gutter	L.F.	20	$60.00	$1,200.00	$60.00	20	$1,200.00	$60.00	0	$0.00
C	Sod Removal (P)	S.Y.	378	$3.00	$1,134.00	$3.00	378	$1,134.00	$3.00	0	$0.00
D	Inlet Protection	Each	1	$500.00	$500.00	$500.00	1	$500.00	$500.00	0	$0.00
E	Excavate, Haul, and Dispose	C.Y.	87	$40.00	$3,480.00	$40.00	87	$3,480.00	$40.00	0	$0.00
F	Grading	L.S.	1	$2,300.00	$2,300.00	$2,300.00	1	$2,300.00	$2,300.00	0	$0.00
G	Soil Loosening	S.Y.	160	$10.00	$1,600.00	$10.00	160	$1,600.00	$10.00	0	$0.00
H	Clean Sand	C.Y.	15	$60.00	$900.00	$60.00	15	$900.00	$60.00	0	$0.00
I	Planting Soil (12" depth- 75% Sand, 25% Leaf compost- MnDOT Grade II)	C.Y.	86	$70.00	$6,020.00	$70.00	86	$6,020.00	$70.00	0	$0.00
J	Twice-Shredded Hardwood Mulch (3" depth)	C.Y.	32	$65.00	$2,080.00	$65.00	32	$2,080.00	$65.00	0	$0.00
K	Concrete Curb & Gutter	L.F.	20	$150.00	$3,000.00	$150.00	20	$3,000.00	$150.00	0	$0.00
L	Concrete Curb Cut & Small Splash Block Assembly (Small)	Each	2	$2,750.00	$5,500.00	$2,750.00	2	$5,500.00	$2,750.00	0	$0.00
M	4" Perforated (CPEP) Draintile w/o sock (Underdrain)	L.F.	85	$11.00	$935.00	$11.00	85	$935.00	$11.00	0	$0.00
N	4" Solid (CPEP) Draintile w/o sock (Underdrain)	L.F.	70	$11.00	$770.00	$11.00	70	$770.00	$11.00	0	$0.00
O	Draintile Clean Out	Each	1	$850.00	$850.00	$850.00	1	$850.00	$850.00	0	$0.00
P	Connect Draintile to Catch Basin	Each	1	$1,100.00	$1,100.00	$1,100.00	1	$1,100.00	$1,100.00	0	$0.00
Q	Edging	L.F.	180	$5.00	$900.00	$5.00	180	$900.00	$5.00	0	$0.00
R	Sod	S.Y.	15	$10.00	$150.00	$10.00	15	$150.00	$10.00	0	$0.00
S	#1 Cont. Perennial or Shrub (Furnish & Install)	Each	254	$25.00	$6,350.00	$25.00	0	$0.00	$25.00	254	$6,350.00
T	One-Year Establishment Maintenance Period	L.S.	1	$3,000.00	$3,000.00	$3,000.00	0	$0.00	$3,000.00	0	$0.00
U	#2 Cont. Shrub (Furnish & Install)	Each	66	$40.00	$2,640.00	$40.00	0	$0.00	$40.00	66	$2,640.00
V	1.5" B&B Deciduous Tree (Furnish & Install)	Each	2	$650.00	$1,300.00	$650.00	0	$0.00	$650.00	2	$1,300.00
W	6" Sediment Control Log	L.F.	190	$5.00	$950.00	$5.00	190	$950.00	$5.00	0	$0.00
	Interpretive Sign Installation (Added by District Staff)	Each	3	$125.00	$375.00	$125.00	0	$0.00	$125.00	3	$375.00
			SUBTOTAL	TOTAL	$49,034.00		TOTAL	$35,369.00		TOTAL	$10,665.00

New Horizon Daycare
Woodbury, MN
Contract Amount

Base Bid Items				Bid Total		Total Completed Through This Period			Total Completed Through This Period		
						Invoice #1			Invoice #2		
Item	Description	Unit	Estimated Quantity	Unit Price	Extension	Unit Price	Actual Quantity	Extension	Unit Price	Actual Quantity	Extension
A	Mobilization/Demobilization/Traffic Control/Erosion Control	L.S.	1	$2,000.00	$2,000.00	$2,000.00	1	$2,000.00	$2,000.00	0	$0.00
B	Remove Concrete Curb and Gutter	L.F.	10	$60.00	$600.00	$60.00	10	$600.00	$60.00	0	$0.00
C	Remove Sod	S.Y.	125	$3.00	$375.00	$3.00	125	$375.00	$3.00	0	$0.00
D	Inlet Protection	Each	1	$500.00	$500.00	$500.00	1	$500.00	$500.00	0	$0.00
E	Excavate, Haul, and Dispose	C.Y.	64	$40.00	$2,560.00	$40.00	64	$2,560.00	$40.00	0	$0.00
F	Grading	L.S.	1	$1,750.00	$1,750.00	$1,750.00	1	$1,750.00	$1,750.00	0	$0.00
G	Soil Loosening	S.Y.	31	$10.00	$310.00	$10.00	31	$310.00	$10.00	0	$0.00
H	Clean Sand	C.Y.	5	$60.00	$300.00	$60.00	5	$300.00	$60.00	0	$0.00
I	Planting Soil (12" depth- 75% Sand, 25% Leaf compost-MnDOT Grade II)	C.Y.	30	$70.00	$2,100.00	$70.00	30	$2,100.00	$70.00	0	$0.00
J	Twice-Shredded Hardwood Mulch (3" depth)	C.Y.	10	$65.00	$650.00	$65.00	10	$650.00	$65.00	0	$0.00
K	Concrete Curb & Gutter	L.F.	15	$150.00	$2,250.00	$150.00	15	$2,250.00	$150.00	0	$0.00
L	Concrete Curb Cut & Small Splash Block Assembly	Each	1	$2,750.00	$2,750.00	$2,750.00	1	$2,750.00	$2,750.00	0	$0.00
M	Manhole Cover	Each	1	$900.00	$900.00	$900.00	1	$900.00	$900.00	0	$0.00
N	4" Perforated (CPEP) Draintile w/o sock (Underdrain)	L.F.	20	$11.00	$220.00	$11.00	20	$220.00	$11.00	0	$0.00
O	4" Solid (CPEP) Draintile w/o sock (Underdrain)	L.F.	20	$11.00	$220.00	$11.00	20	$220.00	$11.00	0	$0.00
P	Draintile Clean Out	Each	1	$850.00	$850.00	$850.00	1	$850.00	$850.00	0	$0.00
Q	Connect Draintile to Catch Basin	Each	1	$1,100.00	$1,100.00	$1,100.00	1	$1,100.00	$1,100.00	0	$0.00
R	4" Black Powder Coated Landscape Edging	L.F.	90	$5.00	$450.00	$5.00	90	$450.00	$5.00	0	$0.00
S	Sod	S.Y.	15	$10.00	$150.00	$10.00	15	$150.00	$10.00	0	$0.00
V	1.5" B&B Deciduous Tree (Furnish & Install)	Each	2	$650.00	$1,300.00	$650.00	0	$0.00	$650.00	1	$650.00
T	#1 Cont. Perennial or Shrub (Furnish & Install)	Each	164	$25.00	$4,100.00	$25.00	0	$0.00	$25.00	164	$4,100.00
V	Inlet Structure Repair (Field Change Order)	L.S.	1	$2,550.00	$2,550.00	$2,550.00	1	$2,550.00	$2,550.00	0	$0.00
			SUBTOTAL	TOTAL	$27,985.00		TOTAL	$22,585.00		TOTAL	$4,750.00

Galowitz Olson, PLLC
10390 39th Street North
Lake Elmo, Minnesota 55042
Office: (651) 777-6960
Fax: (651) 777-8937

June 20, 2019
File No: 9M

Ramsey-Washington Metro Watershed District
C/O Tina Carstens
2665 Noel Drive
Little Canada MN 55117

	Balance
General Account	$5,335.00

****

Permit Program

****

Permit Application Coversheet

Date July 03, 2019

Project Name White Bear Lake Apartments Project Number 19-30

Applicant Name Trevor Martinez, Schafer Richardson

Type of Development Residential

Property Description

This project is located northwest of County Road E and Linden Avenue in the City of White Bear Lake. The applicant is proposing to demolish three existing houses and construct a 189-unit apartment building with associated surface and underground parking, a pool, and pet park. The total site area is 4.67 acres. An underground infiltration system and tree trench will be constructed to treat stormwater. Pretreatment will include sumped manholes with baffles.

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.

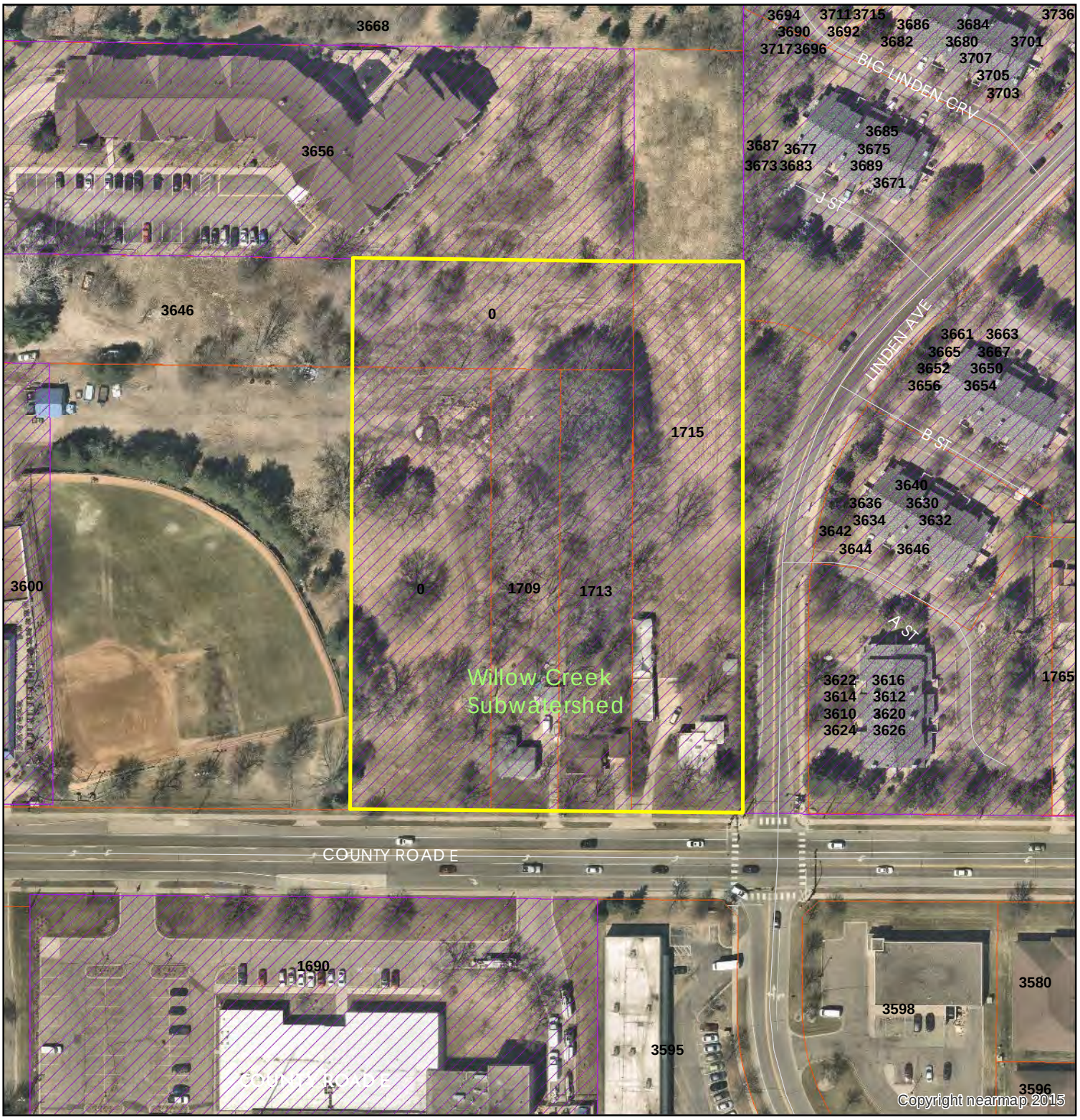
Staff Recommendation

Staff recommends approval of this permit with the special provisions.

Attachments:

- ☑ Project Location Map
- ☑ Project Grading Plan

#19-30 White Bear Lake Apartments



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

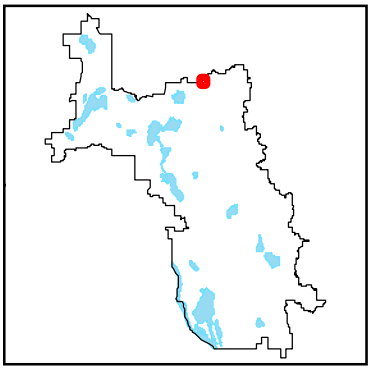
- RWMWD Boundary
- Flow Arrows
- Major Flow Arrows
- Subwatersheds
- Creeks
- Permits
- Ramsey Co Parcels

Highlighted Areas Represent Active Permit

0 100 200
Feet

0 0.02 0.04
Miles

N



19-30

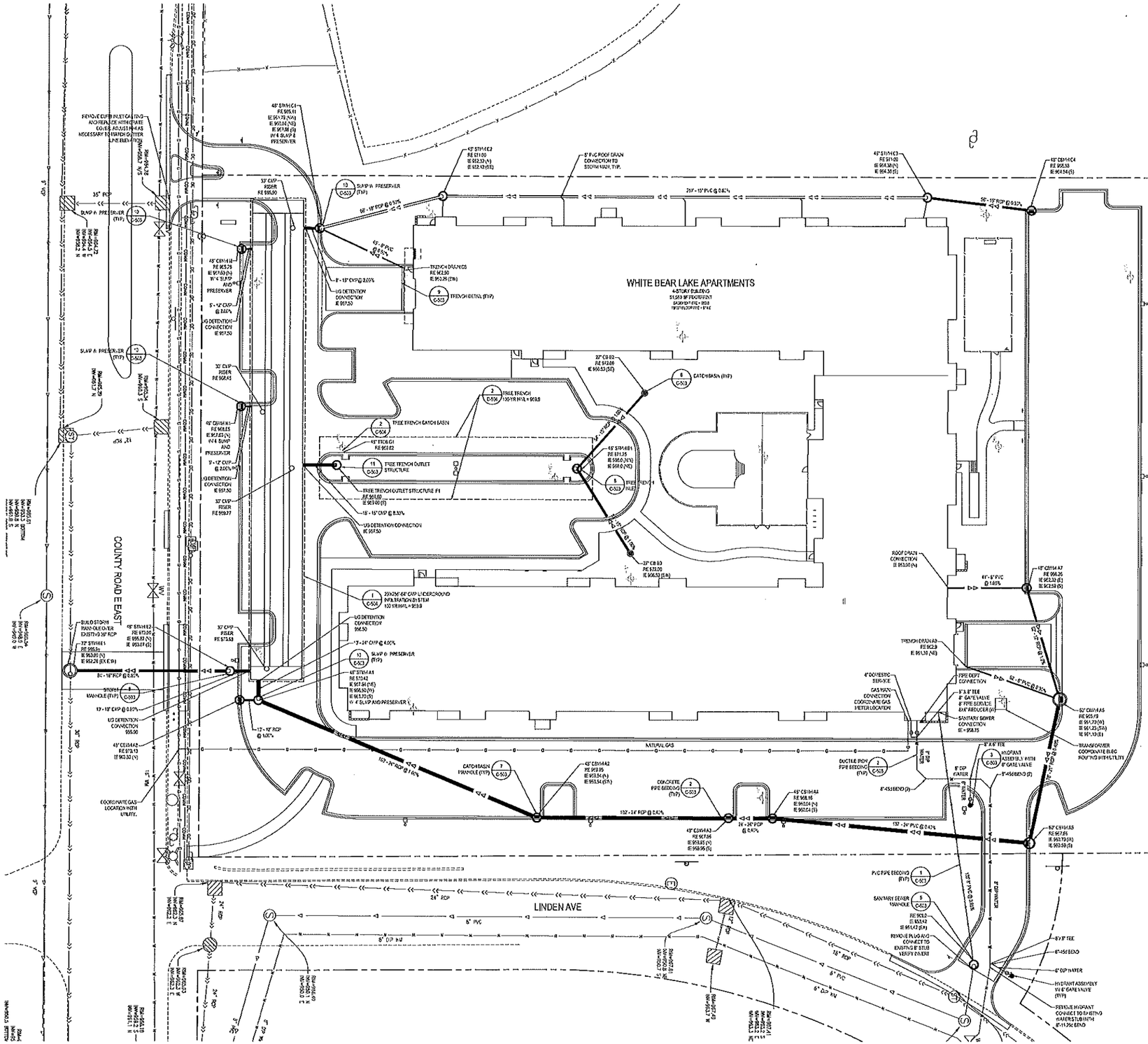
Special Provisions

1. The applicant shall revise the erosion control plan to show perimeter control around stockpile location.

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

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

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



UTILITY NOTES

1. VERIFY ALL CONNECTIONS TO EXISTING UTILITY SERVICES PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN LOCATED UTILITIES AND THE EXISTING CONDITIONS PLAN SHOULD BE NOTED AND FORWARDED TO THE ENGINEER.
2. CONTRACTOR TO PROVIDE ADEQUATE MEANS AND METHODS TO ASSURE ADJACENT PROPERTY IS NOT DAMAGED DURING UTILITY INSTALLATION.
3. PIPE LENGTHS SHOWN ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. UTILITY SERVICE LOCATIONS WITHIN BUILDING ARE SHOWN CORRECT AS OF THE DATE OF THIS PLAN. THE CONTRACTOR SHALL VERIFY LOCATIONS BY COMPARING THIS PLAN WITH THE MECHANICAL PLANS PRIOR TO ANY UTILITY CONSTRUCTION.
5. PIPE MATERIALS

WATERMAIN	4", 6" AND 8" DIP
SANITARY SEWER	SDR 26 PVC
STORM SEWER	RCP AND SDR 26 PVC, AS NOTED
DRAINTILE	PERFORATED, SCHEDULE 40 PVC

6. ALL UTILITY CONSTRUCTION TO CONFORM WITH STATE, CITY ENGINEER'S ASSOCIATION OF MINNESOTA (CEAM), MINNESOTA PLUMBING CODE AND CITY OF WHITE BEAR LAKE STANDARD SPECIFICATIONS.
7. ADJUST ALL STRUCTURES, PUBLIC AND PRIVATE, TO PROPOSED GRADES WHERE DISTURBED. COMPLY WITH ALL REQUIREMENTS OF UTILITY OWNERS. STRUCTURES BEING RESET TO PAVED AREAS TO MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
8. PROVIDE A MINIMUM 7.5' OF COVER OVER ALL NEW WATERMAIN.
9. UTILITY AND MECHANICAL CONTRACTORS MUST COORDINATE THE INSTALLATION OF ALL WATER PIPES INTO THE BUILDING TO ACCOMMODATE CITY INSPECTION AND TESTING.
10. ALL COMPONENTS OF THE WATER SYSTEM, UP TO THE WATER METER OR FIRE SERVICE EQUIPMENT MUST UTILIZE PROTECTIVE INTERNAL COATINGS MEETING CURRENT ANSI/AWWA STANDARDS FOR CEMENT MORTAR LINING OR SPECIAL COATINGS. THE USE OF UNLINED OR UNCOATED PIPE IS NOT ALLOWED.
11. COORDINATE UTILITY SERVICE AND ROOF DRAIN CONNECTIONS WITH MECHANICAL.
12. CONTACT NICOLE SODERHOLM, RAMSEY-WASHINGTON METRO WATERSHED DISTRICT, AT 651-792-7976 AT LEAST 48 HOURS PRIOR TO THE CONSTRUCTION OF ANY VOLUME REDUCTION BMPS.

① UTILITY PLAN
1" = 20'

Know what's below.
Call before you dig.

20 60
SCALE IN FEET

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PHONE: 651-379-9090 FAX: 651-379-9091

Élan DESIGN lab
901 N 3rd STREET, SUITE 120
MINNEAPOLIS, MN 55401
p 612.260.7980
f 612.260.7990
www.elanlab.com

CERTIFICATION
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 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
NOT FOR CONSTRUCTION
PE, LEED AP #42323
06.12.2019
DATE

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DRAWN BY: CJJ

PROPOSED APARTMENTS:
WHITE BEAR LAKE APARTMENTS
1711 COUNTY ROAD E, WHITE BEAR LAKE, MINNESOTA

ISSUES/REVISIONS:

City Submittal	03.18.2019
CUP Package	05.07.2019
RWMWD Submittal	06.12.2019

UTILITY PLAN

☒ PRELIMINARY NOT FOR CONSTRUCTION
☐ PERMITTED SET
☐ CONSTRUCTION SET
☐ AS-BUILT SET
☐ NOT TO SCALE

DATE
03-18-19

C-301

PROJECT NO.
18031

Permit Application Coversheet

Date July 03, 2019

Project Name 3108 W Owasso Boulevard Project Number 19-31

Applicant Name Mark Jones,

Type of Development Erosion Control

Property Description

This project is located on a residential lot at 3108 West Owasso Boulevard in the City of Roseville. The applicant is proposing to remove the existing timber sea wall that is failing and restore the shoreline with riprap. The total site area is 0.05 acre but involves alteration of a floodplain (District Rule D). The applicant has demonstrated there will be no net fill within the floodplain of Lake Owasso.

Watershed District Policies or Standards Involved:

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

Water Quantity Considerations

There are no water quantity considerations.

Water Quality Considerations

Short Term

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

Long Term

There are no long term water quality considerations.

Staff Recommendation

Staff recommends approval of this permit with the special provision.

Attachments:

- ☑ Project Location Map
- ☑ Project Grading Plan

#19-31 3108 W Owasso Blvd

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

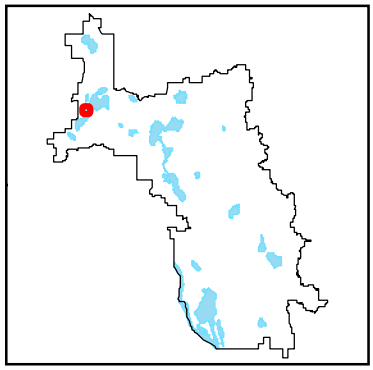
- RWMWD Boundary
- Flow Arrows
- Major Flow Arrows
- Subwatersheds
- Creeks
- Permits
- Ramsey Co Parcels

Highlighted Areas Represent Active Permit

0 75 150
Feet

0 0.015 0.03
Miles

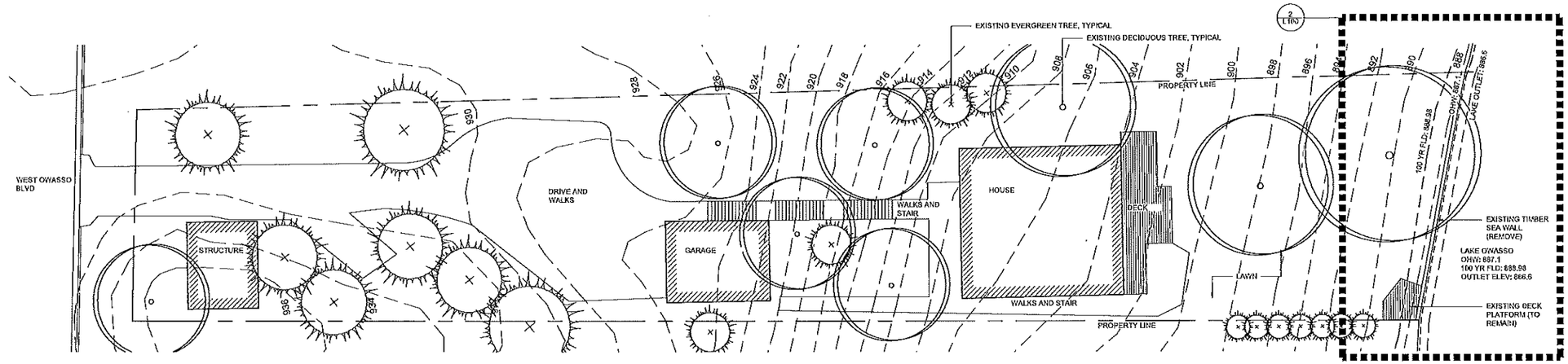
N



19-31

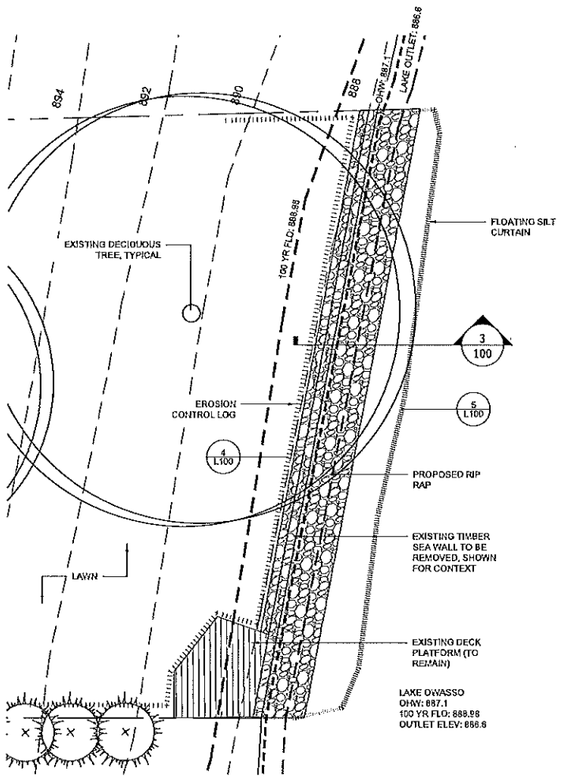
Special Provisions

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



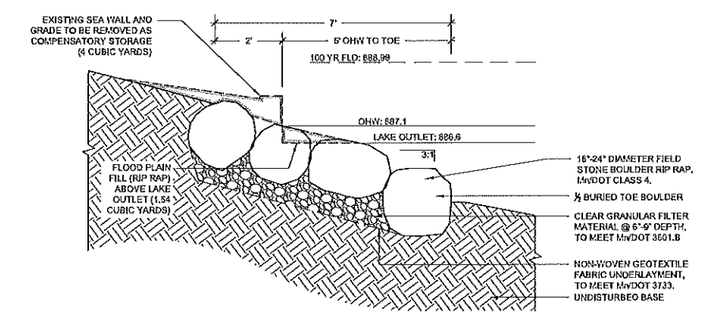
1 EXISTING SITE AND REMOVAL PLAN

Scale: 1/16"=1'-0"



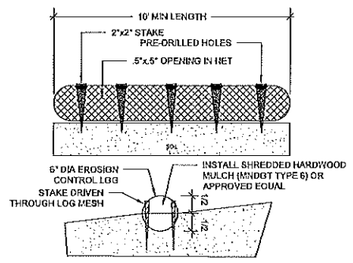
2 SWPP AND RIP RAP PLAN

Scale: 1/16"=1'-0"



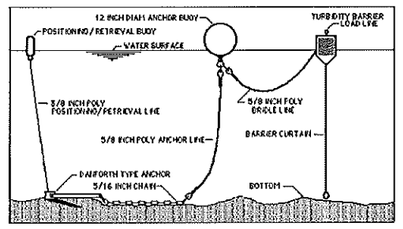
3 TYPICAL RIP RAP SECTION DETAIL, COMPENSATORY STORAGE

Scale: 1/2"=1'-0"



4 EROSION CONTROL LOG DETAILS

Scale: 1/2"=1'-0"



5 TURBIDITY BARRIER INSTALLATION DETAIL

NTS

GENERAL NOTES

- NATURAL TOPOGRAPHY AND SOIL CONDITIONS TO BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S TO BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED UPON FINAL STABILIZATION
- ALL DISTURBED AREAS TO BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY.
- ACTIVITIES MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (E.G., ZEBRA MUSSELS, EURASIAN MILFOIL, ETC.) TO THE MAXIMUM EXTENT POSSIBLE
- FLOATING SILT CURTAIN AND EROSION CONTROL LOG TO BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED THROUGH PROJECT COMPLETION
- EXISTING TREE LOCATIONS ARE CONTEXTUAL AND NEED TO BE FIELD VERIFIED

RWMWD NOTES (RULE F)

- EROSION CONTROL COORDINATOR: TROY SANDERS: 763-442-6980
- NOTIFY NICOLE SODERHOLM, RAMSEY-WASHINGTON METRO WATERSHED DISTRICT, AT 651-792-7976 PRIOR TO BEGINNING ANY AND ALL CONSTRUCTION ACTIVITY FOR AN INITIAL SWPPP INSPECTION.
- THE SPECIFIED EROSION/SEDIMENT CONTROL PRACTICES ILLUSTRATED IN PLAN ARE THE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

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- Stormwater Management
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tel: 763-544-8002 fax: 763-445-2207
www.naturalenvironmentscorp.com

ISSUANCE

PERMIT

PROJECT NAME

Jones Residence
3108 W Owasso Blvd
Roseville, MN 55113

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.

SIGNATURE:

PRINTED NAME: JONATHAN BLASEG

DATE: 01.08.2019

LICENSE NUMBER: 56704

REVISION DATE

05/29/2019
06/17/2019
Date
Date
Date

SHEET NAME

SITE PLAN

SHEET NUMBER

L100

Permit Application Coversheet

Date July 03, 2019

Project Name St. Paul Urban Tennis Courts Project Number 19-32

Applicant Name Song Thao, St. Paul Urban Tennis

Type of Development Institutional

Property Description

This project is located at Eastview Recreation Center in the City of St. Paul. The St. Paul Urban Tennis Program is located in the facility, and the organization is proposing to construct five new tennis courts. The District has agreed to award a grant to cover the design, installation, and two years of maintenance for a filtration basin which will treat 2.3" of runoff off the proposed impervious area. If soil conditions allow for infiltration, the drain tile will be capped. The District considers this a pilot grant to fund a stormwater BMP that helps meet goals for equity and water quality in the neighborhood.

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.

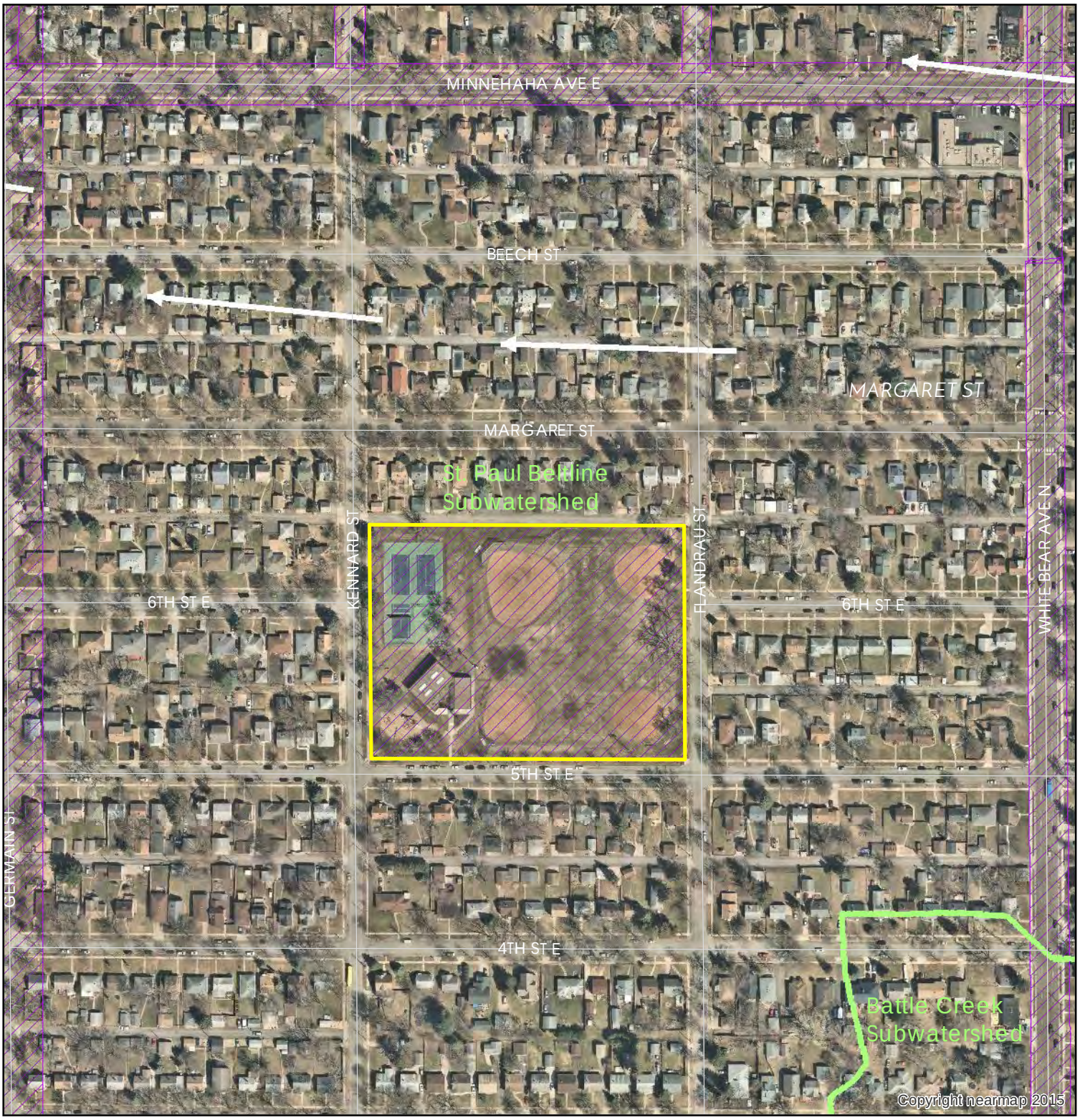
Staff Recommendation

Staff recommends approval of this permit with the special provisions.

Attachments:

- ☑ Project Location Map
- ☑ Project Grading Plan

#19-32 St. Paul Urban Tennis Courts



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

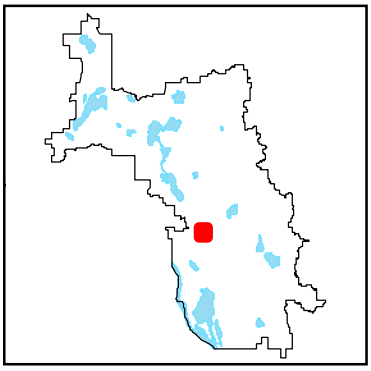
- RWMWD Boundary
- Flow Arrows
- Major Flow Arrows
- Subwatersheds
- Creeks
- Permits

Highlighted Areas Represent Active Permit

0 200 400
Feet

0 0.04 0.08
Miles

N



19-32

Special Provisions

1. The applicant shall submit a detailed summary of hydrologic and hydraulic model input parameters and simulation results.

2. The applicant shall add a list and/or map to the Stormwater Pollution Prevention Plan (SWPPP) of receiving waters within 1 mile of the project area.

3. The applicant shall add notes to the plans:
A. Notify Nicole Soderholm, Ramsey-Washington Metro Watershed District, at 651-792-7976 prior to beginning any and all construction in order to schedule an initial SWPPP inspection.
B. The specified erosion and sediment control practices are the minimum. Additional practices may be required during the course of construction.

4. The applicant shall submit erosion control plan details for construction entrance, inlet protection, and perimeter control.

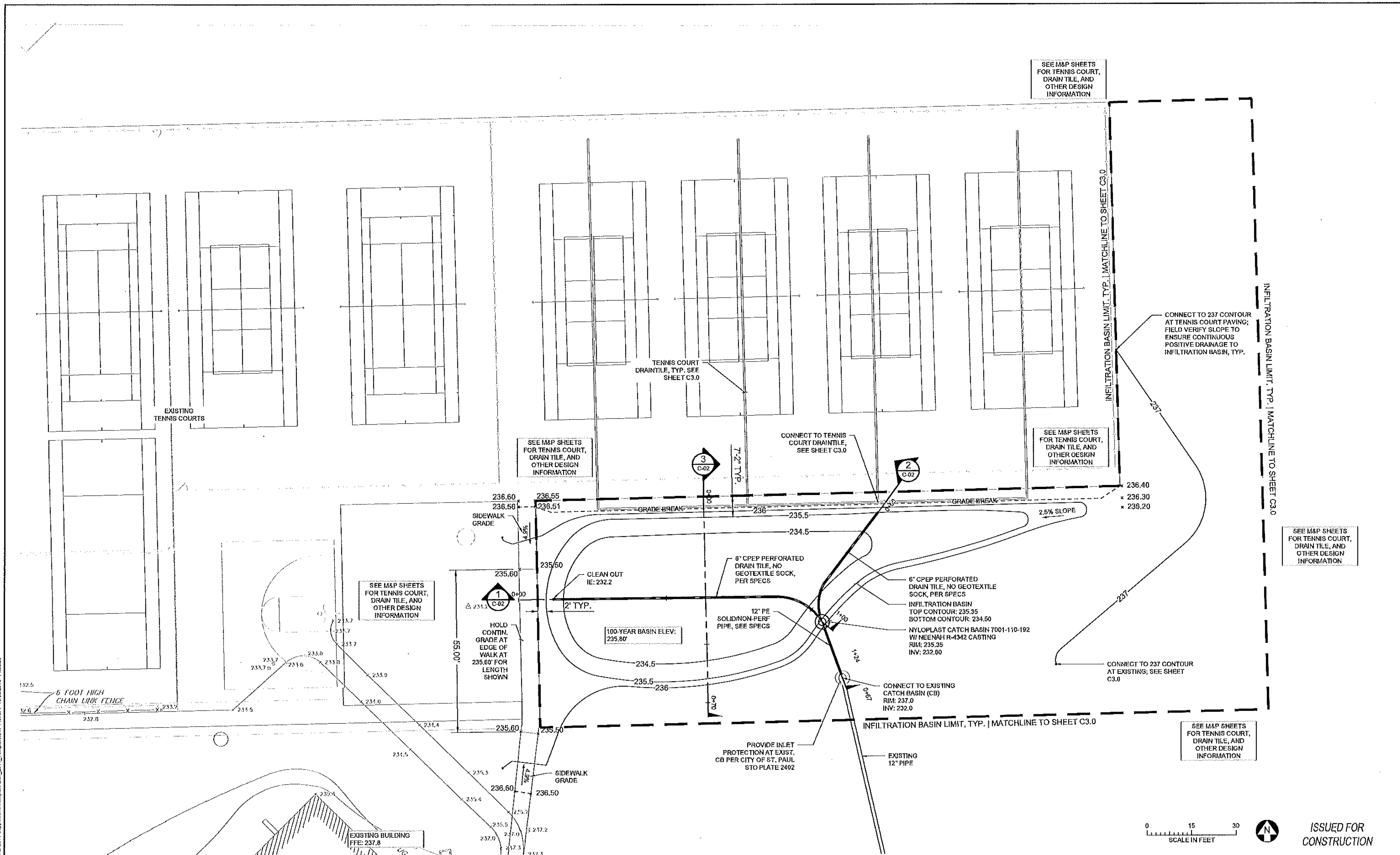
5. The applicant shall submit a final, signed copy of the construction plans.

6. The applicant shall submit an executed stormwater maintenance agreement.

7. The applicant shall submit a draft, site-specific BMP Operations & Maintenance Plan.

8. The applicant shall submit contact information for the trained erosion control coordinator responsible for implementing the SWPPP.

9. The applicant shall submit a copy of the Minnesota Pollution Control Agency's NPDES Permit coverage for the project.



ISSUED FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
B	TAO2	MAK	ELA	6/24/2019	ISSUED FOR CONSTRUCTION
A	TAO2	MAK	ELA	5/17/2019	ISSUED FOR PERMIT REVIEW

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 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME MICHELLE KIMBLE
SIGNATURE
DATE 6/24/2019 LICENSE # 42012

RELEASED TO/FOR	A	B	C	0	1	2	3
CLIENT	5/17/2019						
BID							
CONSTRUCTION		6/24/2019					

DATE RELEASED

BARR
Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277

Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com

Scale	AS SHOWN
Date	6/24/2019
Drawn	TAO2/AMW
Checked	MAK
Designed	MAK
Approved	ELA

ST. PAUL URBAN TENNIS
ST. PAUL, MN

EASTVIEW TENNIS COURTS
EASTVIEW PARK, ST. PAUL, MN

INFILTRATION BASIN SITE PLAN

BARR PROJECT No. 23/62-1309
CLIENT PROJECT No.
DWG. No. C-01 REV. No. B

RAMSEY-WASHINGTON
METRO WATERSHED DISTRICT

MEMORANDUM

Date: July 3, 2019

To: Board of Managers and Staff

From: Nicole Soderholm, Permit Coordinator

Subject: June Enforcement Action Report

During June 2019:

Number of Violations:	**7**
Install/Maintain Perimeter Control	4
Sweep Streets	1
Implement Proper Dewatering	1
Protect/Maintain Permanent BMPs	1

Activities:

Permitting assistance to private developers and public entities, permit review with Barr Engineering, miscellaneous inquiries, site inspections and reporting, WCA administration/procedures, permit enforcement, permit rule revisions process, WaterFest, Employee Right to Know training, annual IDDE training, Red Rock Rail tour and stakeholder meeting, underground BMP maintenance inspections

Project Updates:

Permit #17-31 Met Council Beltline Sanitary Sewer Rehab, St. Paul

Dewatering for the Met Council's Beltline sanitary sewer project is complete. District and Barr staff will complete a post-dewatering inspection of the Beltline storm interceptor to ensure the dewatering has not caused any damage or settling to the pipe. As of June 17th the water level in the pipe continues to be too high for safe access. Staff will continue to monitor water levels and schedule the post-inspection when it is safe to do so. Staff completed an erosion control inspection at Site 1 and a drive-through look at Site 2 on June 6th. Additional inlet protection and silt fence maintenance were requested.

Permit #18-21 Margaret Street Pedestrian & Bike Improvements, St. Paul

Work continues on the city sidewalk project along Margaret Street which includes a multiuse trail down McKnight Rd in St. Paul. Staff completed inspections of the site on June 13th and June 24th. During both visits, maintenance was requested with respect to the inlet protection bags and street sweeping. Stockpiles were observed unprotected in the streets. Staff requested responses from the contractor on June 24th and June 26th and will continue to push for corrective actions. A meeting with the contractor may be requested followed by an escalation in enforcement if terms of the permit are not being met.

Permit #17-21 Maplewood Retail Development

The Maplewood Retail development east of White Bear Avenue by the Maplewood Mall is substantially complete. Staff completed an inspection of the underground infiltration system on June 21st and determined the system was functioning. The plans on file made it difficult to determine the location of the system's outlet, so as-built plans were requested. A final permit close-out checklist was sent to the applicant on June 25th. Escrow will be returned pending submittal of the as-built plans and permit checklist items.

Permit #18-03 Suite Living North St. Paul

Work continues on the new senior living facility in North St. Paul. Staff completed inspections of the site on June 10th and June 24th. Maintenance items were requested with respect to inlet protection and perimeter control. An oil sheen was observed on the street following a rain event. The contractor was asked to locate the source of the sheen and properly contain any material that could be leaking from equipment or vehicles.

Permit #16-35 Maplewood Alzheimer's Care Facility

District staff completed an inspection of the underground filtration system on June 21st. The system is functioning as intended. A final permit close-out checklist was prepared and distributed on June 25th. The adjacent vacant lot used for staging is not yet restored with vegetation. A portion of the lot may need to be reseeded. The erosion blanket needs to be secured as it has become displaced by wind. Pending a minimum 70% vegetation establishment throughout the site and completion of the checklist items, the permit may be closed and escrow refunded.

Permit #18-04 Suite Living Little Canada

Work continues on the new senior living facility off Rice Street in Little Canada. Curb and gutter have been installed at the site. Staff completed inspections on June 10th and June 24th. The site is not fully restored, but inlet protection was removed from the parking lot. Staff requested that it be reinstalled. The stormwater pond is not complete and still needs to be regraded, cleaned out, and stabilized. It has been functioning as a temporary sediment basin during construction.

Permits Closed in June 2019:

15-37 MnDOT I-94 from Earl St to TH120, St. Paul
15-38 Roseville Assisted Living
16-06 Hill-Murray Track & Field Improvements, Maplewood
16-09 North St. Paul 2016 Street Improvement Project
16-32 Vadnais Heights Medical Office Building

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Stewardship Grant Program

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Stewardship Grant Application Summary

Project Name: Marquardt **Application Number** 19-16 CS

Board Meeting Date: 7/3/2019

Applicant Name: James Marquardt

Residential ☑ **Commercial/Government** ☑

Project Overview:

This project is located at the south end of Duluth St just east of Lake Phalen. The homeowner is interested in installing a permeable driveway to replace their existing asphalt driveway that is in disrepair. The permeable driveway will capture roof runoff and filter it before it drains into Lake Phalen. The homeowner has existing native plantings and due to utility and space constraints has no room for a rain garden. This project is eligible to receive 75% funding up to $15,000. The cost of the project is $22,000. 75% of the project cost is $16,500. The applicant is requesting additional funding to help fund this project.

BMP type(s):

Porous Pavers(1)

Grant Request:

$16,500.00

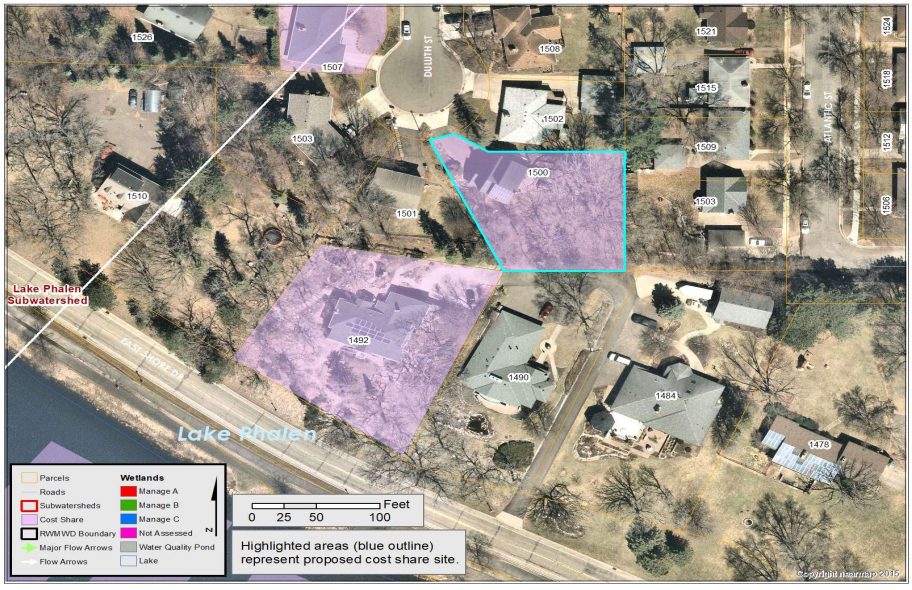
Recommendation:

Staff recommends approval of this application along with additional fund request.

Subwatershed:

Lake Phalen

Location Maps:



#19-16CS

DULUTH ST

868'

FIRE HYDRANT (EX)

UTILITY BOX

PROJECT: BMP 1
BMP TYPE: PERMEABLE INTERLOCKING CONCRETE PAVER DRIVEWAY SYSTEM; OR EQUAL
BMP SIZE: +/- 1200 SF; 12" PONDING DEPTH

Pollutant Reductions: BMP 1

	Before	After	Reduction	Red. %
Volume (cu-ft/yr)	13726.00	331	13,395	98%
TSS (lbs/yr)	46.70	0.30	46.40	99%
TP (lbs/yr)	0.2570	0.0040	0.2530	98%

Watershed Data	BMP 1	
Target Rainfall	1.10	in
Soil Type:	Sandy Loam	HSG: A
Soil IR	0.50	in/hr

Surface	Sq-ft	Acre
Roof-D	1160.00	0.027
Driveway-D	1242.00	0.029
Hardscape-ID	2600.00	0.060
Turf Lawn-ID	6000.00	0.138
Total	11,002	0.253
% Imp	45%	

862'

PROPERTY LINE (APPROX)

RETAINING WALL (EX)

DRIVEWAY

DRIVEWAY

PROPERTY LINE (APPROX)

STAIRS

STAIRS

1500 DULUTH ST

864'

866'

868'

870'

872'

874'

876'

878'

880'

882'

884'

RAMSEY COUNTY

RAMSEY COUNTY SWCD
1425 PAUL KIRKWOLD DR
ARDEN HILLS, MN 55112
651-266-7274
www.ramseycounty.us

PROJECT: MARQUARDT RESIDENCE
LOCATION:
1500 DULUTH ST
ST. PAUL, MN 55106

WATERSHED DISTRICT:

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

DESIGNER: MPS
DATE: 04/23/2019
REVISION:
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY:
TAA:

NOTES:
CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO WORK

UTILITIES WITHIN OR NEAR CONSTRUCTION AREA SHALL BE POTHOLED

CONTRACTOR MUST AQCUIRE ALL NECESSARY PERMITS

ORIGINAL SHEET SIZE: 11" x 17"

SCALE: 1"=10'0"

SITE PLAN

N

L100

Stewardship Grant Application Summary

Project Name: Warner **Application Number** 19-17 CS

Board Meeting Date: 7/3/2019

Applicant Name: Cecilia Warner

Residential ☑ **Commercial/Government** ☑

Project Overview:

This project is located off Centennial Drive just east of Lake Owasso in Roseville. The applicant is in the process of removing buckthorn and other overgrown invasive species from their property. They are requesting stewardship grant funds to replant the area with native shrubs and wildflowers. This will also help solve a minor erosion issue on their property.

This project is eligible for 50% funding up to $15,000.

BMP type(s):

Native Habitat Restoration(1)

Grant Request:

$5,200.00

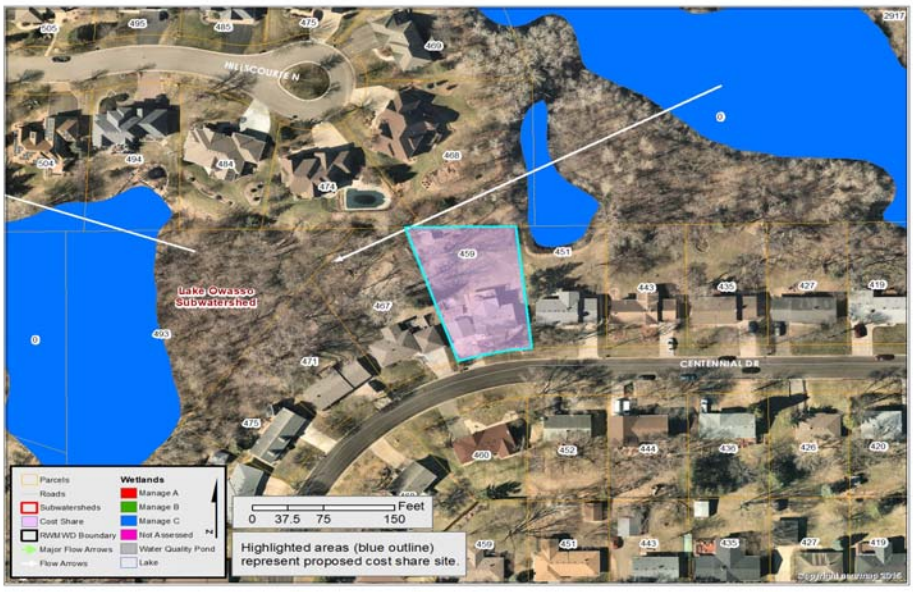
Recommendation:

Staff recommends approval of this application.

Subwatershed:

Lake Owasso

Location Maps:



Stewardship Grant Program Budget Status Update

July 3, 2019

Homeowner	Coverage	Number of Projects	Funds Allocated
Habitat Restoration and rain garden w/o hard surface drainage	50% Cost Share $15,000 Max	2	$1564.65
Rain garden w/hard surface drainage, pervious pavement, green roof	75% Cost Share $15,000 Max	2	$9,975
Master Water Steward Project	100% Cost Share $15,000 Max	1	$7,500
Shoreland Restoration	100% Cost Share $15,000 Max	1	$12,000

Commercial, School, Government, Church, Associations, etc.	Coverage	Number of Projects	Funds Allocated
Habitat Restoration	50% Cost Share $15,000 Max	4	$20,400
Shoreland Restoration (below 100-year flood elevation w/actively eroding banks)	100% Cost Share $100,000 Max	1	$200,000
Priority Area Projects	100% Cost Share $100,000 Max	3	$341,000
Non-Priority Area Projects	75% Cost Share $50,000 Max	0	$0
Public Art	50% Cost Share	1	$6,000
Aquatic Veg Harvest	50% Cost Share $15,000 Max	1	$8,500
Maintenance	50% Cost Share $5,000 Max for 5 Years	14	$13,700
Consultant Fees			$187,400
Total Allocated			**$830,739.65**

2019 Stewardship Grant Program Budget	
Budget	$1,250,000
Total Funds Allocated	$718,350
Total Available Funds	**$419,260.35**

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Administrator's Report

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MEMO

TO: Board of Managers and Staff

FROM: Tina Carstens, Administrator

SUBJECT: July Administrator's Report

DATE: June 27, 2019

A. **Meetings Attended**

Saturday, June 1	ALL DAY	WaterFest
Monday, June 3	12:00 PM	Staff Training – Employee Right to Know
Tuesday, June 4	7:30 AM	Water Resources Conference Planning
Wednesday, June 5	10:30 AM	Meet with Little Canada
	5:00 PM	Twin Lake Site Visit
	6:30 PM	Board Meeting
Tuesday, June 18	10:00 AM	Meet with Little Canada
Wednesday, June 19	9:00 AM	Meet with Barr re: 2020 workplan
Tuesday, June 25	3:00 PM	Meet with Dianne and Tracey
Wednesday, June 26	ALL DAY	MAWD Summer Tour
Thursday, June 27	ALL DAY	MAWD Summer Tour
Friday, June 28	ALL DAY	MAWD Summer Tour

B. **Upcoming Meetings and Dates**

Metro MAWD Meeting	Tuesday, July 16, 2019
August Board Meeting	Wednesday, August 7, 2019
September Board Meeting	Wednesday, September 4, 2019
Board/CAC Tour	TBD
October Board Meeting	Wednesday, October 2, 2019
November Board Meeting	Wednesday, November 6, 2019
Watershed Excellence Awards	TBD
MAWD Annual Meeting	December 4 – 7, 2019
December Board Meeting	TBD (conflict with MAWD Annual Meeting)

C. **My Vacation**

This is just to notify you that I will be on vacation starting July 5 through July 19. Much of the time I will likely be without cell or data service but should be able to check in by email in the evenings through a Wi-Fi connection. I will have coordinated with a number of District and Barr staff to handle specific concerns in my absence. Feel free to call or email if you have any concerns and I will get back to you when I am able. If there is an immediate need, you can call the general front desk number and be directed to the appropriate staff person.

D. **2018 District Water Quality Summary Presentation**

Unfortunately, Eric was not available due to a scheduled vacation to present at the July board meeting. He is planning to attend the August meeting to present on the water quality summary as well as an update on the Alum Plant performance and monitoring.

E. **MAWD Summer Tour**

At the time of this writing, a number of board members and staff were attending the MAWD Summer Tour up in the Red River Valley. This is a placeholder for those that attended to share their experiences on the tour.

F. **Board and CAC Tour**

Typically, we plan a board and CAC tour for late summer or early fall. I would like to check in on your interest in doing that again this year. I would also like to get some ideas from you on locations or projects you would like to visit.

G. **CAC Update – Carrie Magnuson**

The Citizen Advisory Commission met on June 11th, 2019. The group included staff liaison Carrie Magnuson, and board liaison, Cliff Aichinger. The following initiatives were discussed and further developed

a. Continuing outreach regarding invasive species – A CAC sub-committee developed a "Surrender your Goldfish" display for WaterFest including a banner, brochure handouts, and a fish tank with live goldfish. Handouts included information on the problem with goldfish, a pictorial flyer of other common household pets/plants that have become nuisance species in the wild, and local volunteer opportunities for invasive species management. No goldfish were surrendered at WaterFest, but having the live tank attracted many guests and the CAC members reported that a lot of good conversations about the issue were had. With the entire display infrastructure in place, the group discussed continuing their outreach to school science classrooms (where many invasive

species are given to families without proper education on how to surrender/dispose of the animal), pet stores, and more. There seemed to be interest in tabling at other events and/or distributing handouts to continue the momentum of this project.

b. Fostering public art and student artists of color – CAC member, Randee Edmundson updated the group on the work she is doing with two youth (a senior and a freshman) who are part of The Boys and Girls Club Youth Leadership Keystone Program. These students will be developing a bronze sculpture this year that will be poured at a foundry over the winter and placed at Ames Lake in early 2020. To date, one clay model is complete and they are working with the other two students to complete their model. The foundry is planning for fall/winter for the pour. This project is partially funded by RWMWDs Stewardship Grant Program.
c. Planning for joint planting event with CAC and the LEAP teams – The CAC and LEAP teams are planning a planting event at the Snail Lake Regional Park wetland in the fall.
d. Communicating with neighborhoods – the CAC is interested in using their local Nextdoor app and talking with neighbors and elected officials on behalf of the district. They would like Communications Intern, Seth Bartodziej, to help by providing content on relevant issues.
e. Adopting a Raingarden – the CAC is interested in considering a dedicated or rotating "adoption" to help maintain local raingardens.
f. The CAC also reviewed major projects being done by RWMWD staff and partners.
g. Future meetings: September 24th, October 22nd, December 10th

H. **Master Water Steward (MWS) Program**

Manager Ward has requested that I provide her and the board with some information regarding the decision to fund Master Water Steward BMP projects at 100% reimbursement when other small, homeowner BMP projects are funded at 75%.

The District board approved staff to partner with Freshwater Society and participate in the Master Water Steward program in 2015 for the 2016 year. We discussed at that time what the impact on the budget would be to participate including the cost of funding the MWS capstone project. The board at the time felt it was fair to contribute 100% of the cost of their project in return for their commitment to attend the classes, earn their designation, and continue with their volunteer hours. MWS' are required to provide 50 hours of volunteer time in the district their first year and 25 hours in subsequent years to keep their

MWS title. This discussion was held before we recruited for our first MWS candidates. I was not able to find an official motion by the board in 2015 but the first and all subsequent MWS cost share applications have indicated to the board that they are for MWS candidates and that the cost share percentage would be 100%. Five applications came before the board because they were over the $5,000 threshold for board approval. Two applications were less than that amount and were staff approved.

Below is an accounting of all the MWS projects over the last three years as well as some commentary from Paige on the impact those projects have had on others. I have copies of the board packet items that show the MWS designation and that they will be funded at 100%, if you are interested in seeing them, let me know.

2016

- Small residential rain garden in Woodbury — Staff — $600
  - This resident hosts a maintenance training at her property each spring.
- Curb cut rain garden in Roseville — 16-23 CS — $5,400
- Two curb cut rain gardens in Roseville — 16-24 CS — $11,200
  - The two projects above have inspired two other people on their street to also install rain gardens.

2017

- Curb cut rain garden in St. Paul — 17-09 CS — $5,800
  - Coordinated with L'Etoile du Nord students and planted by them.
- Curb cut rain garden in St. Paul — 17-10 CS — $9,500
  - Coordinated with L'Etoile du Nord students and planted by them.
- Rain barrel sale in Shoreview — 17-19 CS — $6,200
  - This resident handled all the details of the sale including outreach, education, and distribution and installation assistance. He currently does ongoing monitoring of their usage and answers questions for people that need further assistance.

2018

- Bee lawn in St. Paul — Staff — $2,000
  - This pair of MWS held a bee lawn party to educate their neighbors on the practice. They are involved in a neighborhood cleanup and are helping with a potential rain garden project at a neighborhood rec center.

I. **2020 Budget Discussion**

To begin the board budget process for 2020, I am preparing a preliminary budget memo for your review and input. The memo will outline budget issues and considerations for next year. The memo highlights any major additions or deletions to the budget as compared to this year. Items identified in our watershed management plan for 2020 will be highlighted for discussion. On Monday, July 1, our internal staff training meeting will be focused on the budget and work plan for 2020. I will receive input from all staff and we will discuss our work plan for 2020 and the various budget considerations. I want to be sure to have all the input from staff as I prepare the memo for the board. I will try and send the memo to the board directly on Tuesday, July 2. And then I will bring it to the meeting and plan to walk through it for discussion. The memo will also be uploaded to the website as an addendum to the July 2019 board packet.

In August, staff will provide the board with a draft budget table with projected budget and levy estimates. This information will be reviewed at the August meeting and if authorized by the board, the budget and work program will be sent to the cities and counties for review and comment. In September, the board will hold a public hearing to take comments on the budget and approve the preliminary budget and levy for certification to the counties. The final budget and levy will be approved by the board in December.

J. **Boundary Change with Vadnais Lake Area Watershed Management Organization (VLAWMO)**

As was requested by the board at the June meeting, I have given some thought to the pros and cons of pursuing a boundary change with VLAWMO to change the jurisdiction of West Vadnais Lake. I had hoped to include a memo in the board packet but a combination of being gone at the MAWD summer tour as well as waiting to hear from VLAWMO staff after their board meeting on the 27th of June, has delayed me having all the information I need to include in the memo regarding this decision. As I receive information from VLAWMO, I will finish the memo for you and send it to you ahead of the meeting. I will also be prepared to walk through the memo and its points at the meeting. The memo will also be posted to our website as an addendum to the packet.

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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

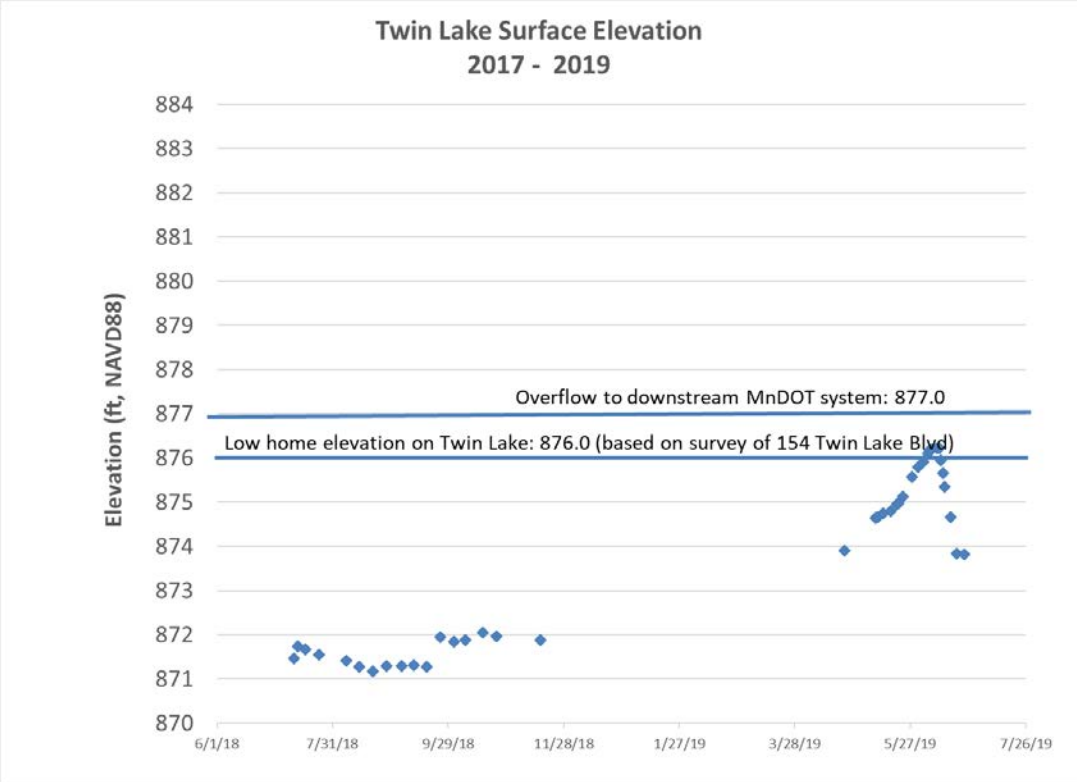
Memorandum

To:	Board of Managers and Staff
From:	Tina Carstens and Brad Lindaman
Subject:	Project and Program Status Report – July 2019
Date:	June 27, 2019

Twin Lake emergency response management 2019: (Barr project managers: Brad Lindaman and Erin Anderson Wenz; RWMWD project manager: Tina Carstens)

The purpose of this project is to provide engineering assistance and technical guidance to help cities in and around Twin Lake and West Vadnais Lake determine emergency flood response options for implementation.

The City of Little Canada began pumping water out of Twin Lake into the Minnesota Department of Transportation (MnDOT) right of way, in the manner described during last month's board meeting and consistent with the MnDOT permit for the work. Pumping success was aided by the significant decline in overflows from West Vadnais Lake to the 24-inch pipe under 5 Star Estates—a pipe that ultimately drains to Twin Lake. The chart below shows the water levels in Twin Lake over the past two years, including the recent pumping period in June, 2019.



The city's MnDOT permit states that the lake level can be drawn down to its 100-year flood elevation. A recent series of modeling and calculations show Twin Lake's 100-year flood level to be elevation 873.5. The City of Little Canada is managing the pumping level.

At the June board meeting, the managers directed Barr to evaluate options for bypassing overflows from West Vadnais Lake around Twin Lake. The bypass will help to reduce future flooding risk of the low home on Twin Lake. We considered multiple bypass routes and will discuss these options with MnDOT and other stakeholders at a July 1 meeting. The preferred option is to collect the overflow water at the inlet of the 24-inch pipe, just west of the 5 Star Estates mobile home area; pump it through a pipe south to the MnDOT right-of-way ditch near the noise wall; and continue east to discharge to a small MnDOT pond, which drains south through I-694 to the same discharge location as the primary outlet (the 15-inch pipe) of West Vadnais Lake. As with the current pumping at Twin Lake, this bypass pumping would likely be subject to limits similar to those in the current MnDOT permit and to an operations plan that shuts down the system before significant rainfalls and/or rises in Owasso Basin's water level, and/or when downstream water bodies are significantly elevated. In addition, the discharge piping would require crossing one roadway (Twin Lake Boulevard). Barr will discuss this and other options with various stakeholders (the cities, MnDOT, the Vadnais Lakes Area Watershed Management Organization (VLAWMO), and the Minnesota Department of Natural Resources (DNR)) at the July 1 meeting to better understand any concerns or barriers that stakeholders may have. The outcome of this meeting and the investigated options will be shared with the managers at the July board meeting.

Project feasibility studies

System-wide evaluation of flood control options/Beltline resiliency study (Barr project manager: Brandon Barnes; 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 critical system 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 use 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 to homes adjacent to RWMWD-managed water bodies.

The Beltline resiliency study represents a non-traditional approach to optimizing a regional urban stormwater system. As such, a stepwise, phased approach is being implemented to confirm that efforts, should they not show improvement, can be halted without excess expenditures. The study was phased so that flood-prone areas (in terms of habitable structures) in the upstream portion of the watershed are addressed first, working downstream. At each phase, if the study shows that improvements to and operations of the system can reduce flood impacts to structures, recommendations for actual field modifications will be offered for future capital improvement programming. The original study, approved by the managers, was broken into five phases.

- phase 1: evaluate potential increases in discharge from Owasso Basin to manage flood risk and evaluate downstream system modifications to mitigate downstream adverse impacts; presented at the August 2018 board meeting

- phase 2: evaluate potential for additional floodplain storage, grading, and additional culvert capacity in the Willow Lake and Kohlman Creek subwatershed; presented at the April 2019 board meeting
- phase 3: evaluate potential operation of the Keller Creek weir and Lake Phalen outlet to address flood-prone structures on Kohlman Lake, Lake Gervais, Keller Lake, and Lake Phalen
- phase 4: evaluate possible operation of the Beaver Lake outlet structure to address potentially flood-prone structures on the Beaver Lake branch of the Beltline
- phase 5: evaluate modifications within the Beltline subwatershed to address potentially flood-prone structures downstream of Lake Phalen

At the request of the managers, the scope of the study was expanded in 2019 to include the evaluation of a direct outlet from Lake Owasso to Owasso Basin and the Gervais Creek area as well as a number of simulations of similar outlet scenarios through Lake Wabasso and Grass Lake as a part of that expansion. The results associated with this evaluation will be included in the final report.

At the last board meeting, the managers directed staff to develop and evaluate additional long-term strategies to further reduce flood risk to the low home on Twin Lake. The board recognized that scenarios that moved additional water into the Gervais Creek system may incrementally increase the flooding risk to homes downstream. However, balancing those risks with the potential impacts to the low home on Twin Lake would be considered by the board before implementing. Staff have interpreted this board direction, in part, to mean it is appropriate to evaluate a winter draw down of the West Vadnais Lake /Grass Lake system to further reduce the potential for West Vadnais overflows toward Twin Lake. This evaluation and potential increases to water levels downstream would be quantified for board consideration. Staff would like board concurrence that this interpretation and evaluation is consistent with the what the board was communicating to staff.

These concurrent evaluations are being conducted because the flows to the Beltline already exceed its capacity during storm events, and initial modeling simulations indicate that other modifications and seasonal operation of the outlet structures may offer additional flood-risk reduction for existing homes in flood-prone areas.

The results of these simulations, as well as results from previous phases of the study, will be part of the final report later this year. Preliminary results from all phases will be presented to the managers at the August board meeting so that Barr can receive feedback on project prioritization before the report is finalized.

Federal Emergency Management Agency (FEMA) flood mapping updates (Barr project manager: Brandon Barnes; RWMWD project manager: Tina Carstens)

The purpose of this project is to apply Minnesota DNR grant funding to use the RWMWD's updated stormwater model to develop information required to update the FEMA floodplain maps.

In February, the RWMWD stormwater models were submitted to the Interagency Hydrology Review Committee (IAHRC) for review. The IAHRC reviews hydrologic models prior to them being used to update FEMA floodplain maps. As part of the review, the IAHRC will provide comments on the methodology used to calculate runoff from the subwatershed and review hydrologic input parameters and simulation results. We are still waiting on comments from the DNR and IAHRC.

Concurrent to IAHRC review, Barr is developing updates to the hydraulic models throughout the rest of the RWMWD, as well as finalizing an evaluation of flood levels in Twin Lake and Snail Lake. These lakes are considered land-locked, so runoff volume has a significant impact on the 100-year floodplain elevation—necessitating an alternative approach to defining the 100-year flood elevation. The RWMWD model was used to simulate 70 years of rainfall, and a statistical evaluation was completed to estimate the flood levels. Barr prepared a memorandum summarizing the methodology and results. After we receive input from the RWMWD, the memorandum and calculations for Twin Lake and Snail Lake will be submitted to the DNR, along with the updated hydraulic model for the rest of the RWMWD.

In addition, Barr continued development of preliminary floodplain delineations and is in the process of comparing the updated floodplain extents to the previous FEMA maps. The comparison will be used to identify changes from the previous floodplain maps issued by FEMA and to identify additional structures that may be mapped in the revised floodplain areas.

We anticipate that the updated hydraulic model and the evaluation for Twin Lake and Snail Lake will be submitted to the DNR next month.

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

The purpose of this project is to prepare and facilitate DNR permitting for the proposed lowering of the West Vadnais lake outlet. .

This period, in partnership with VLAWMO, Barr continued to develop an environmental assessment worksheet (EAW) that evaluates the impact of lowering the 15-inch outlet from West Vadnais Lake by 0.8 feet to provide additional live storage during storm events. As described last month, the scope of the EAW was prepared with input from VLAWMO to address potential concerns. Although West Vadnais Lake's outlet is in the RWMWD, the lake itself is within VLAWMO, making VLAWMO the responsible governmental unit (RGU) that decides whether the project can proceed and whether an environmental impact statement is needed. The estimated timeline for creation of the EAW is still as follows.

milestone	estimated completion date
task 1: bathymetry survey lake transects (to be completed by Ramsey County)	late June to early July 2019
task 1: bathymetry survey of north littoral zone (to be completed by Barr)	late June 2019
task 2: wetland delineation	mid-June 2019
task 3: draft EAW for RWMWD review	mid-July 2019

This period, the RWMWD and Ramsey County completed tasks 1 and 2. After task 3, with the RWMWD's approval, Barr will provide the draft EAW to the RGU to determine completeness. We will also complete one round of document revisions based on the RGU's review.

After the RGU deems the EAW complete, the 30-day EAW public notification for comment process will commence. The RGU will be responsible for publishing the notice of document availability in the *Environmental Quality Board (EQB) Monitor*, publishing a notice in a local newspaper announcing document availability, and making the document publicly accessible (typically via a website).

The RGU must make the EIS need decision within 30 days of the end of the public comment period and must distribute the notice of decision within five days of the decision. The decision notice must be submitted to the *EQB Monitor*.

Lowering West Vadnais Lake's outlet will ultimately provide additional floodwater storage in Grass Lake and West Vadnais Lake and will thereby lower their flood levels. However, the benefits of lowering the outlet will only be realized once conditions in the lake draw down to the new outlet elevation. This will likely take months of drier-than-normal weather conditions after the lower outlet is installed.

As a reminder, the intent of lowering the West Vadnais Lake outlet to 881.0 and the Grass Lake outlet to 881.3 (already completed) was to provide enough flood storage to contain the 100-year, 96-hour storm event within Grass Lake and West Vadnais Lake without any flow leaving the Grass Lake emergency spillway if both lakes start at their outlet elevations before the storm event begins.

Modeling of 500-year Atlas 14 district-wide (climate change scenario): flood map generation for future outreach efforts (Barr project manager: Brandon Barnes; 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 500-year rainfall depth. The confidence limit (or uncertainty) associated with the 500-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 will be used for discussion with stakeholders when evaluating future flood-risk reduction projects.

This past month, the RWMWD's model was used to simulate rainfall events with different recurrence intervals in order to update the FEMA floodplain maps. We are in the process of developing inundation areas throughout the RWMWD. This effort will help us better understand how lesser storms, other than the 100-year and 500-year events, affect (or do not affect) low-lying structures, in order to prioritize projects in areas that flood during more frequent events.

Monitoring water quality/project monitoring

Automated lake-monitoring systems (Barr project manager: Chris Bonick; RWMWD project manager: Eric Korte)

The purpose of this project is to install an automated system to monitor lake levels throughout the RWMWD and allow real-time transfer of data to the RWMWD's website for public consumption.

The subcontractors, Peterson Co. and Killmer Electric, are continuing to install the shelters, cement pads, utilities, etc., associated with the monitoring systems. Barr continues to set up, program, and bench test the equipment for the Phalen, Wabasso, and Owasso stations in preparation for installation after the subcontractor work is complete.

Ramsey County Parks recently met with the RWMWD at Grass and Snail lakes to discuss station locations. We anticipate that these stations and their locations will be approved for installation on county property; however, approvals are not expected until later this summer. These monitoring stations will be used in conjunction with the emergency response plans to help guide cities in plan implementation to protect homes during floods.

Maplewood Mall monitoring (Barr project manager: Matt Kumka; RWMWD project manager: Paige Ahlborg)

The purpose of this project is to assess functionality of the Maplewood Mall stormwater retrofit project as it enters its fifth year of total completion. Features that will be inspected include all stormwater infrastructure, plantings, and tree growth. The findings, including site improvement and maintenance recommendations, will be summarized and presented to the board.

Barr has completed development plans and specifications to replace the trees, as recommended to the board in February. Bidding documents were made available to potential contractors in early June. A formal bidding process is not necessary for this effort, as the expected cost is well below the threshold dollar value. Tree replacement activities are planned for September 2019.

Spent-lime pond application research project (Barr project manager: Greg Wilson; RWMWD project manager: Eric Korte)

This project is a partnership between Barr (funded through the Minnesota Stormwater Research Council), the RWMWD, the cities of Maplewood and White Bear Lake, St. Paul Regional Water Services (SPRWS), and VLAWMO. The project will consist of a pond application of spent lime to control internal phosphorus loading in Wakefield Pond, the small stormwater pond immediately south of Wakefield Lake and north of Larpenteur Avenue.

Recently, Barr completed sediment core collection from the pond and began laboratory dose testing with the spent-lime slurry samples previously collected from SPRWS and the City of White Bear Lake. Treatment is expected later this year.

Kohlman Basin weir test system (Barr project manager: Keith Pilgrim; RWMWD project manager: Bill Bartodziej)

The purpose of this project is to test new filtration media on a routine basis and share the data more broadly across the water resource management community.

As described in the annual plan for the test site, testing was completed in May 2019 using steel slag, spent lime, and hematite. Flows were very high and, hence, the contact time between the treatment media and water was very short. There was no meaningful phosphorus removal. A repeat of testing was completed in June, and a final round of testing will be completed in September.

Capital improvements

Wakefield Park/Frost Avenue stormwater project (Barr project managers: Michelle Kimble; 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.

As you may recall, the board approved the permit for this project at its March 6 meeting. The City of Maplewood facilitated the bid opening on March 21, and the contract was awarded to Veit on April 22 at the city council meeting. The RWMWD portion of the construction cost is approximately $550,000.

Veit has started construction, and weekly construction meetings are taking place. Barr and the RWMWD have attended several of the meetings. The Wakefield Park portion of the project will not be constructed until July and August. Construction is planned to be complete by November 1, 2019.

School, commercial, and faith-based sites BMP 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.

Construction is yet to be scheduled at Redeemer Lutheran Church in White Bear Lake and Cornerstone Montessori in St. Paul. These projects include three rain gardens, a shoreline buffer installation, and an erosion-control repair at the school's play yard. Outdoor Lab has through the construction season to determine its preferred three-week construction window for each site, with substantial completion required before November 1.

Target Corporation has provided base site information for the Suburban Avenue and North St. Paul sites to begin conceptual site analysis. Surveying will take place this summer, with conceptual stormwater management design moving through fall. Final designs and cost estimates will be developed in late fall/early winter, with the projects being bid in early spring and constructed in summer 2020.

Willow Pond Continuous monitoring and adaptive control (CMAC) spent lime filter (Barr project manager: Erin Anderson Wenz; RWMWD project manager: Paige Ahlborg)

The purpose of this project is to design, provide bid assistance for, and oversee construction of a spent lime filter that takes intermittent flow from Willow Pond in Roseville through the use of CMAC technology. The completed project will remove dissolved and particulate phosphorus to benefit Bennett Lake.

Construction is substantially complete. Pressure transducers were exchanged, and a backflow preventer was removed from the site. Barr plans to complete instrumentation installation, test the system, and put the filter online in June. We expect that some system optimization will be necessary during this first season of use. The project will be closed out after a plant establishment inspection in late September or early October.

Barr also recommends adding a cedar split-rail fence to the site to protect the filtration from foot and bike traffic. A design was proposed to the City of Roseville and approved. Fence installation will likely be completed outside of this project's scope by Minnesota Native Landscapes as part of the maintenance contract.

Cottage Place wetland restoration (Barr project manager: Fred Rozumalski; RWMWD project manager: Paige Ahlborg

The purpose of this project is to evaluate options for restoring the wetland south of the St. Odelia Church property and west of the Cottage Place cul-de-sac in Shoreview. A restored wetland could be used to offset wetland loss in other parts of the RWMWD.

Barr has overseen subcontractor surveying of the site as well as a phase II soils investigation to determine if soil contamination exists. The phase II investigation involves sampling to establish what materials have been placed on site. The next step is to develop conceptual wetland restoration plans when the survey and phase II results are available in early July.

Aldrich Arena site design (Barr project manager: Matt Metzger; RWMWD project manager: Paige Ahlborg)

The purpose of this project is to incorporate green-infrastructure stormwater management into the Aldrich Arena campus renovations. The parking lot will be full-depth reclaimed by Ramsey County, which itself would not trigger the need for a RWMWD permit. The partnership between the RWMWD and Ramsey County will achieve treatment of runoff from the parking lots where none currently exists. A formalized joint powers agreement outlining the partnership cost-sharing, roles, and responsibilities was crafted between the RWMWD and Ramsey County.

Barr prepared and delivered plans and specifications for implementation of 14 large filtration basins within and around the parking lot, as well as turf reduction via installation of shortgrass prairie. Plans were delivered to the potential contractors through Ramsey County's design-build contractor's (Loeffler) bidding process. Due to the tight timeline, the plans continued to be developed throughout the bidding period and addendum process. A conformed issued-for-construction document set was released on June 24. The anticipated subcontractor for the stormwater improvements is Veit, pending completion of bid review and subcontracting by Loeffler.

Bids were received on May 24, with Veit being the current responsive low bidder for the stormwater BMP retrofit work; Veit's bid was a lump sum of $907,900 and was adjusted to $993,710 after Loeffler completed edge-matching subcontractor bids relative to pavement work items. Veit was the general contractor on the Maplewood Mall project and is the current contractor for the Wakefield Park rain garden project. Loeffler will commence contracting in the coming days, as the arena work will begin shortly. Construction of the stormwater BMPs is set to begin just after the Ramsey County Fair ends in late July, with substantial completion set for this fall and plantings occurring in spring 2020.

The Maplewood Planning Commission met on May 21 to discuss the project. The commission voted to support the project, including reducing parking stalls to 9 feet wide to allow for more impervious surface reduction. On June 10, the Maplewood city council approved the variance request for narrower 9-foot-wide parking stalls. A preconstruction meeting is scheduled for July 15.

CIP project repair and maintenance

CIP maintenance/repairs 2019 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 municipal separate storm-sewer system (MS4) requirements.

All site work has been completed, except for installation of the stop-log system to be installed on the south side of the pedestrian tunnel under Gramsie Road. In recent days, water levels in this area have receded and/or pumped mechanically to accommodate the installation. Equipment was delivered to the RWMWD office last week and will be installed by the contractor over two to three days, starting on June 25. A contract extension request was granted at the June meeting, and the stop-log installation is the only remaining task to complete. Once again, the contractor did not submit a request for payment this month.

New technology review

Bio Clean: Watergate Automatic Retractable Screen (ARS)

innovative technology	The Watergate ARS is a curb inlet filtration screen that blocks trash and debris during dry weather and light to moderate precipitation events. During larger storm events and periods of heavy rain, the ARS will automatically unlock and open to allow runoff into the storm drain and prevent flooding. The screen has a patented front-pivot design and provides more effective closing and locking mechanisms.
use	The ARS blocks trash and debris from entering curb inlets to protect downstream water bodies. Trash and debris blocked by the system can be collected by routine street-sweeping operations.

benefits of technology	▪ patented front-pivot design provides a natural, positive closing force that has been shown to work better than the springs, magnets, and counterweights found in traditional designs ▪ prevents clogging and flooding issues often found with fixed-screen systems ▪ routine street sweeping is the only major maintenance required ▪ screen can be manually locked open from the street if needed; a simple push upward on the screen returns the unit to normal operation ▪ screen is fabricated with only eight parts, allowing for simple construction and lower costs
drawbacks	The ARS provides optimal cost-benefit when the screen is positioned in curb inlets that are cleaned with routine street sweeping. If a city or county has not established a routine street-sweeping plan, an alternative cleaning method would need to be developed; otherwise, trash and debris collected in the screen will be washed downstream during larger precipitation events.
suppliers/contacts	▪ Bio Clean Corporate Office (a Forterra company) 5796 Armada Drive, Suite 250 Carlsbad, California 92008 855-566-3938 ▪ David Wright (Minnesota contact) 612-877-1857 (office) david.wright@forterrabp.com
conclusion	The ARS provides the greatest benefit in locations where routine street sweeping is already established.

Technology description

The Bio Clean Watergate ARS is an automatic, retractable curb inlet screen that filters trash and debris from entering a storm sewer system during dry weather and light to moderate precipitation events. During these periods, the Watergate ARS remains closed and locked. Any trash and debris blocked by the screen can then be removed by routine street sweeping. During larger storm events, where periods of heavy rain and high-velocity runoff are produced, the screen will unlock automatically and allow runoff into the storm drain to prevent flooding (stormwater flows of approximately 2 inches or more). The screen will open only as far as necessary to allow runoff into the catch basin in order to still block larger trash and debris from discharging downstream. When heavy flows recede, the screen will automatically return to the closed and locked position to continue trash and debris collection. Figure 1 shows operation of the Watergate ARS in dry weather and low/moderate precipitation conditions and under high flow periods.

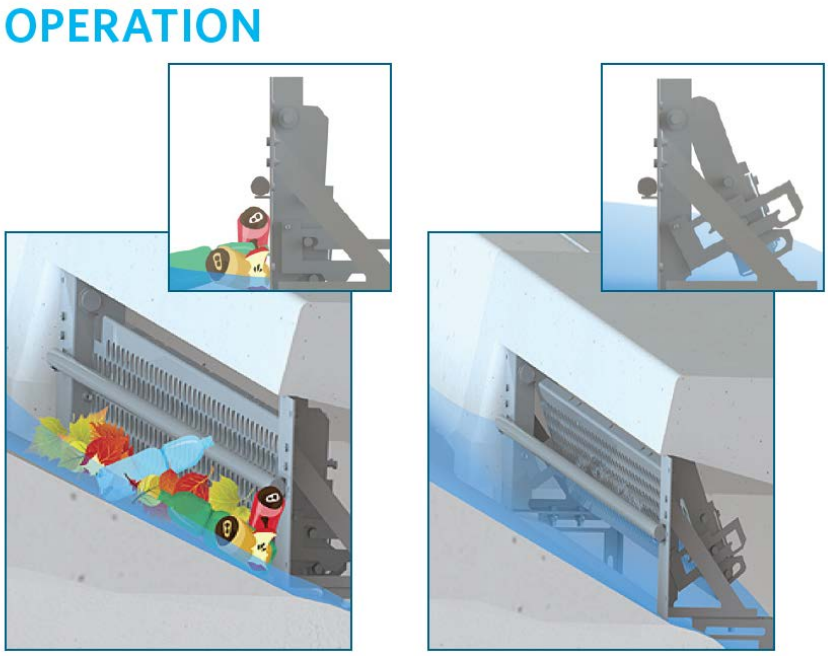


Figure 1: Watergate ARS operation under the closed/locked position during dry weather and low-flow events and in the open/unlocked position during increased flow

(https://biocleanenvironmental.com/wp-content/uploads/2019/01/Watergate-ARS_122018R1A.pdf)

The Watergate ARS consists of eight total parts, which are all constructed with type 304 stainless steel. Only five of these parts are individually fabricated, allowing for simplicity in the design and construction. The screen uses industry-standard 0.75-inch holes in a perforated pattern, permitting a 50-percent open flow area, as shown in figure 2. The system also considers safety by including a built-in 0.75-inch-diameter stainless-steel child protection bar.

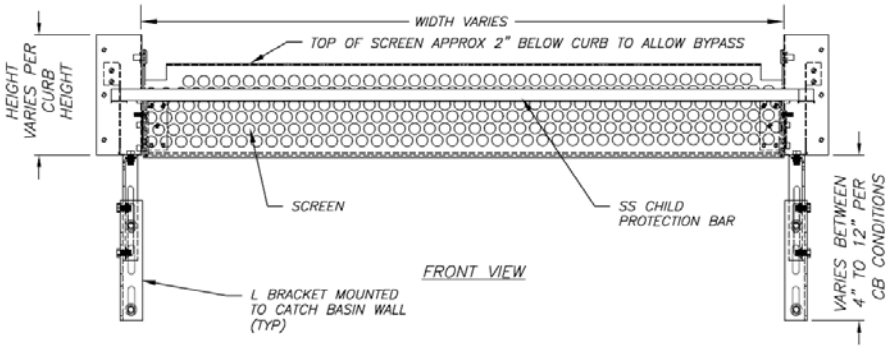


Figure 2: standard front view detail of the Watergate ARS
(https://biocleanenvironmental.com/wp-content/uploads/2018/06/BC-Watergate-standard.pdf)

Additionally, the Watergate ARS features a front-pivot design. This biases the screen toward the closed position and provides enhanced closing and locking. This design is noted as being superior to springs, magnets, and counterweights, which are found in traditional curb inlet screens. The positive closing force also reduces the possibility of trash and debris becoming trapped and preventing the screen from fully closing and locking following larger precipitation events. Furthermore, the top of the screen is positioned so that there is an approximately 2-inch space between the top of the screen and the edge of the catch-basin inlet. Therefore, if the screen is clogged with debris and runoff cannot discharge through

the screen, the top overflow design will direct flow through this space and onto the actuator, helping the unit to open and preventing flooding under clogged conditions.

Cost

The cost of the Watergate ARS varies depending on the number of screens purchased and installation in a single setting. The cost for one Watergate ARS differs based on the inlet, anywhere from $800 to $3,000.

Maintenance

The Watergate ARS requires minimal preventative maintenance as long as regular street-sweeping programs are already in place. Periodic street sweeping will prevent debris from building up in front of the unit and will confirm that the collected debris is not discharged downstream during larger storm events. The screens are durable enough to handle routine street sweeping and should remain closed and locked as the sweeping brushes remove the collected trash and debris. Pressure-washing the unit may be necessary if regular street-sweeping programs are not established, as the units can become clogged.

The supplier recommends that visual inspections of the units be completed on a yearly maintenance schedule to verify that vandalism or damage to the screens does not compromise the units' ability to properly function. Testing the opening/locking function of the screen is also recommended on a yearly basis. If the unit is not opening and closing to the standard in which it was installed, Bio Clean should be contacted for further assistance.

Although the Watergate ARS automatically opens to allow larger stormwater runoff flows to enter the catch basin, the screen can be manually locked open if desired. The lock can be engaged and disengaged by hand through use of receptors on the control arms.

Conclusion

The Watergate ARS is a trash/debris control technology that can be placed inside the opening of a curb inlet catch basin. The screen remains closed and locked during dry weather and low/moderate flow conditions to capture trash and debris in the stainless steel screen. The screen can automatically open during larger storm events, where flows deeper than 2 inches are developed, to prevent flooding. The screen will automatically close following the storm event due to the patented front-pivot design that biases the screen toward the closed position. Due to the automatic nature of the screen, minimal maintenance is required. Debris and trash blocked by the Watergate ARS can be collected through routine street-sweeping practices. Yearly inspections are recommended to enable proper function of the opening/closing mechanism. The greatest benefit of the Watergate ARS unit exists in cities and counties where a routine street-sweeping program is established. If a street sweeping program has not been established, alternative screen-cleaning programs should be created to remove the debris and trash collected in the units. Otherwise, during large storm events, the collected debris will discharge to downstream water bodies.

Natural Resources Update – Bill Bartodziej and Simba Blood

Wetland A – Ecological Restoration

Our primary ecological restoration project this year is the northern buffer area on Wetland A. In spite of the wet and cool spring and early summer, we were able to work around the weather and stay on schedule. This effort started last winter with the removal of mass quantities of buckthorn from this area.

We are focusing on the green highlighted area this year.

Site preparation work began this spring with the control of weedy ground cover species that were daylighted from the buckthorn removal. After control was completed, mulch was brought in from the Ramsey County Correctional facility. This woody layer is used to create a weed seed barrier, and to hold moisture in for the newly planted seedlings. After the site prep work was completed, we had a variety of student and civic groups help to introduce incredibly diverse prairie and wetland plant communities. Over the next month, the wetland transitional zone closest to the shore will be seeded with a custom mix. We will also plant seedlings in this seeded area over the next couple of months. NR staff will be busy monitoring the planting and actively controlling invasive weed that pop up. In late summer, our District CAC group will take an evening field trip to Wetland A and assist with a planting close to the shore.

Below are a few representative pictures from this restoration. We also have a fun and informative video on our Facebook page that highlights the student planting at Wetland A. Click on the link below to view the video: https://www.facebook.com/RWMWD/videos/1145930272258673/

Piles of buckthorn were hauled off site in early spring.

An RCC crew spent several days removing buckthorn branches and spreading mulch.

The mulch bed is ready for the student planting.

Hundreds of students were actively involved in the restoration – a great day in the field.

The chorus of the American toad was amazingly raucous during the planting.

Public Involvement and Education Program, June 2019

WaterFest Celebrates Twenty Year Anniversary on June 1

WaterFest 2019, a free annual zero-waste, family-friendly celebration at Lake Phalen, now in its 20th year, was put on by RWMWD, our many partners and with support from 17 sponsors and 7 in-kind sponsors. It was a joyful, fun-filled day with glorious weather and enthusiastic crowds. Maddy Bohn, our new event consultant stepped up to the plate to coordinate the event upon Debbie Meister's retirement from the role after many years of organizing WaterFest. There were many new fun and informative exhibits and activities to draw in participants and beautifully crafted signposts designating areas to help people locate these activities in the park.

Here are a few statistics from Maddy's account of the event: 679 attendees participated in one or more of our activities that required a waiver to be signed. 106 attendees completed our passport odyssey game; 99 sampled water at our Water Bar station; 91 Exhibitors participated and 66 Jr ROTC volunteers from Johnson, Harding and Washington High Schools helped in a variety of roles. Because this is a free event, we can never get a truly accurate head count of the number of people who actually attend this event each year, but we know that there were many more people in attendance than appear in these numbers. Two local school, Farnsworth Aerospace Middle School and the Harding High Drumming Band gave performances at the opening of the event. The amphitheater provided the stage for a line-up of many other dance and music performers coordinated by the Center for Hmong Arts and Talent.

Stormwater Mural Installed at WaterFest

A special feature of the event was the painting of a stormwater mural on the bridge over Phalen Creek as it enters Lake Phalen. The mural was designed and painted by artist Liv Novotny with help from artist Violeta Rothstein along with community input and participation by Urban Roots youth and Jr ROTC volunteers. This art installation depicts the connection between pollution in the run-off from sidewalks

and other impervious surfaces that ends up in our local water bodies. Images in the mural include a person biking on a sidewalk past a storm drain that spills into a river, great blue herons soaring over a voyageur canoe, and an angler sitting beside prairie plants on the shoreline. This project was done in collaboration with Friends of the Mississippi River, St. Paul Parks and Recreation and the St. Paul Public Works Department.

Left: Liv Novotny (left) and Violeta Rothstein, mural artists. Right: artists and painting volunteers from Jr. ROTC.

Volunteers Take to the Streets, the Shorelines, the Landscape Revival, Gardens and More!

June was a busy month for outreach, tours and plantings. We finished off the last rounds of shoreline plantings at Snail Lake Regional Park with 2 classes from Island Lake on June 4 and 2 classes of Roseville Middle School ESL students on June 6. To top that off, we organized an evening planting on June 4 with volunteers from the Big River Big Woods chapter of Wild Ones at the site. That group was a powerhouse on the steep slope at the beginning part of the wetland trail, teaming up with three Master Water Stewards and Watershed staff for a productive event planting native plugs on a sunny, but cool night. Thank you to Eva Ekola for helping recruit 12 Wild One volunteers and to Master Water Stewards, Idelle Peterson, Paul Gardener and Anna Barker for helping with the restoration at Snail Lake Regional Park.

Shoreview & Oakdale Landscape Revivals Draw Large Crowds

On Saturday, June 8, Watershed staff, Washington Master Gardeners and Ramsey County Cooperative Weed Management staff were invited to host tables at the Landscape Revival held at Oakdale City Hall. At the Watershed booth, we handed out printed information, provided advice for many people who stopped to learn what native plants were appropriate for their yards, shared info about our stewardship grants program and educated people about pollinators. Attendance at both the Shoreview and Oakdale Landscape Revivals doubled from last year. Each of the two events attracted over a thousand visitors.

Summer Stretch Youth Volunteers from East Side Churches Promote Adopt-A-Drain Program

Our Redeemer Lutheran Church pastor, Jennifer Schneider and Gustavus Adolphus Lutheran Church pastor, John Hierlinger and 14 youth volunteers from east St. Paul churches teamed up with RWMWD education staff and Master Water Steward in training, Bette Danielson to promote the Adopt A Drain program on the east side of Lake Phalen and a neighborhood adjacent to Our Redeemer Lutheran Church. Both churches have been partners with our watershed on previous projects. The youth team focuses on community service throughout the year. They distributed about 300 doorhangers in the neighborhood where Bette lives. She also led them on a tour to the large outfall where the storm drains from these neighborhoods drain into the lake near Hoyt and East Shore Drive. Bette also developed and staffed a Paint a Rain Barrel activity at WaterFest. Her employer donated the barrels for this purpose.

Osher Lifelong Learning Institute Visits Watershed Project Sites in Woodbury and St. Paul

Left: John Woodworth, Friends of the Fen tour leader helps identify plants on the Olli tour stop at Tamarack Nature Preserve.

The Osher Lifelong Learning Institute at the University of Minnesota's McNamara Alumni Center offers 1150 seniors 300 non-credit courses, social events, traveling and volunteer opportunities. This summer Sage and Anna Barker, Washington County Master Gardener/Master Water Steward and Ramsey County Gardeners, were course leaders for a five-day Olli course, *Gardening with a Purpose.* We partnered with the Ramsey County Master Gardener program to take seniors on four half days to tour a variety of gardens in Ramsey and Washington counties. The Ramsey County visits included a stop at the Barn's rain garden, Hmong garden and other demonstration projects and several residences. The Washington County stops included a visit to Trinity Presbyterian Church to teach about their series of rain gardens and cistern on June 20, then to Tamarack Nature Preserve, to draw the connection to this rare wetland complex where the church's run-off travels next. On June 25 we met the participants at Mitzi Knutsen's residence where Anna Barker and Stephanie Wang worked with Mitzi to install their Master Water Steward capstone rain garden project to slow erosion into Battle Creek in Woodbury. The fourth stop of the course took participants to Woodbury Elementary to see the large-scale rain gardens installed in the fall of 2017.

Take Aim Event on June 21 Draws Visitors to Keller Regional Park

On June 21, we partnered with the Minnesota DNR, Ramsey County Parks, Urban Roots, the Ramsey County Master Gardener Program, Tips Outdoors, Wilderness Survival, Maplewood Nature Center, St. Paul Public Library and many other hosts to put on an outdoor event in Keller Regional Park. We set up next to our 4-year restoration project along the creek, with the area of action spread out from the park on the west side of Highway 61 at Keller Lake to Golfview Picnic Area along the creek. Participants had the opportunity to try out many outdoor activities including fishing, canoeing, bicycling, birding, creating buckthorn walking sticks, animal tracking, archery, Tuj Lub and learn about plants and pollinators at our Nature Station. This was the first year at this location. In past years, the outdoor event has been located at the Minnesota DNR's Warner Road site.

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Informational Items

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MPRnews

On record-high lakes, cabin owners' dreams underwater

Kirsti Marohn · Motley, Minn. · Jun 13, 2019 Environment

Homes and cabins on Lake Shamineau near Motley are threatened by rising lake waters. Buildings, boat lifts and docks have sustained damage, and some properties have been abandoned. *Kirsti Marohn | MPR News*

LISTEN **Story audio**

4min 3sec (https://www.mprnews.org/listen?name=/minnesota/news/features/2019/06/13/high_lakes_20190613_128.mp3)

When Pat Held walks out to what used to be the beach at the lakefront home he's owned for 28 years, he's now standing ankle-deep in water.

Every year, the waters of Lake Shamineau keep rising, and his beach keeps disappearing.

"I'm paying taxes on land that's under water right now," he said.

Held relies on a cement dike and eight sump pumps to keep the lake water out of his house. He said he's spent about $30,000 on the effort to prevent flooding in the summer and ice jacking from pushing up the shoreline in the winter.

"What happens every year now is the lake plateaus at a higher level," Held said. "It keeps going up and up and up every year."

Lake Shamineau, Morrison county *William Lager | MPR News*

Most Minnesota rivers that flooded this spring after snow melt and heavy rains have returned to more normal levels. But some lakes around the state remain historically high, causing property damage, eroding shorelines and frustrating lake property owners.

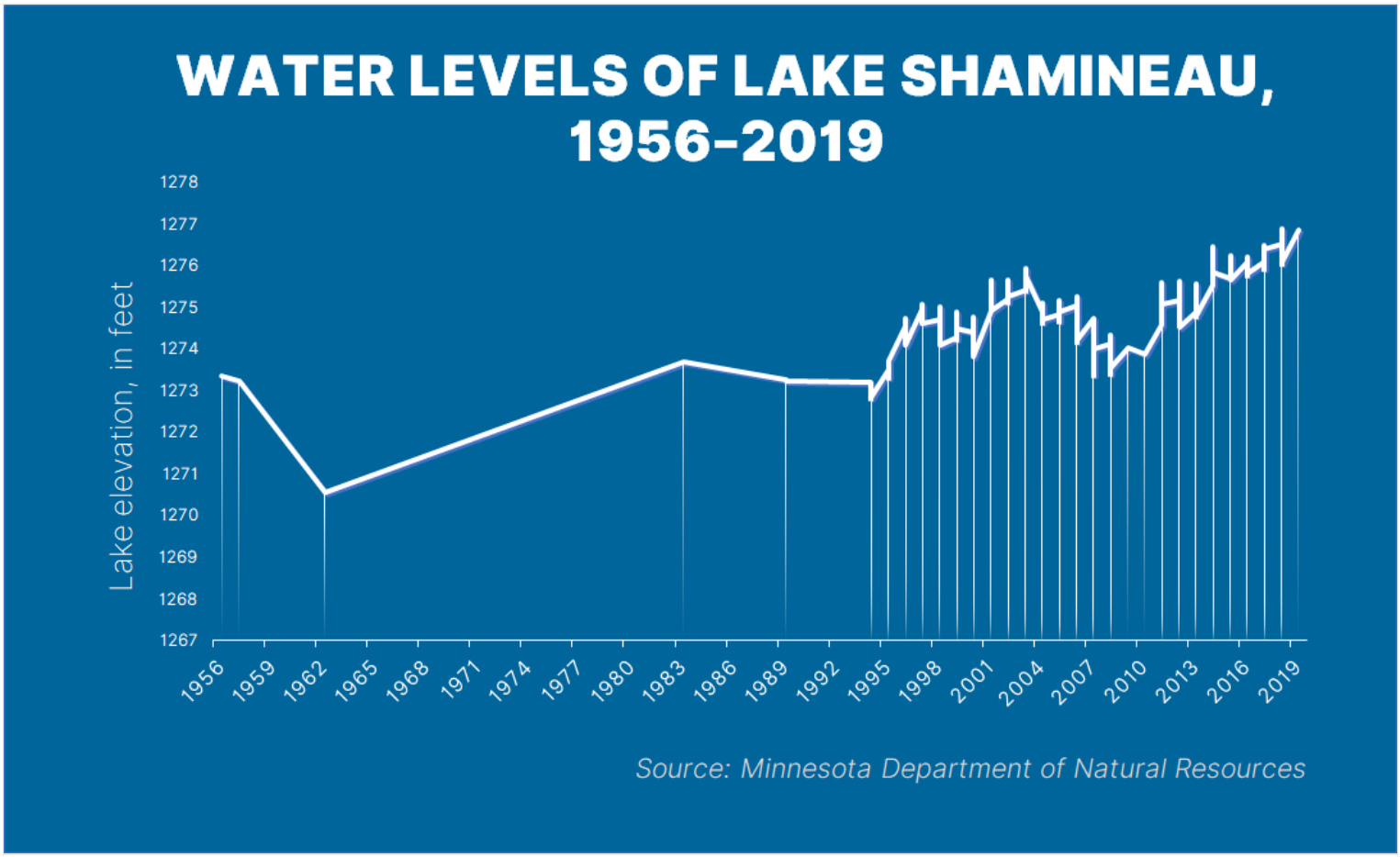
The last several years of above-average precipitation have posed a particular challenge to landlocked lakes like Shamineau, which has no natural outlet. Lakes fed by rivers tend to rise in the spring, but they generally go back down when the river level falls.

When there's a lot of rain, landlocked lakes keep filling up — like a bathtub, said DNR hydrologist Tim Crocker, who is based in Little Falls.

"If it doesn't have that release valve, you're going to see those get higher than normal," Crocker said.

It takes a stretch of hot, dry days for the lake water to evaporate. But Minnesota has been experiencing a trend of wetter summers and winters for the past decade.

"We haven't had a real serious drought in the state since 2013, and even a moderate drought since 2015," said state climatologist Pete Boulay. "Overall, we've had very wet years."



The water levels of landlocked Lake Shamineau have been steadily rising in recent years. Since 2010 the level has increased by three feet. *William Lager | MPR News*

Record levels

Lake Shamineau is a peaceful oasis in central Minnesota, ringed by century-old pine trees, family cabins and a Bible camp.

The lake's level has been climbing steadily — up about 3 feet over the past nine years. Waves splash right up to the edge of homes. Tangled boat lifts and docks are strewn along the shore. Some cabins have become uninhabitable.

"We're at the highest it's ever been right now," said Cindy Kevern, a member of the Lake Shamineau Lake Improvement District, which has taxing authority to protect water quality and address the high water problem.

"In everybody's head, they keep thinking it's going to go down," Kevern said. "It's been really difficult to get everyone to accept that it's really not going down, that we're in a wet climate cycle, and our water just keeps going up and up."

· Related: Lake Superior water levels could hit record highs this month (https://www.mprnews.org/story/2019/05/04/lake-superior-water-levels-could-hit-record-highs-this-month)
· Also: Changing climate has waterlogged MN towns reeling (https://www.mprnews.org/story/2018/07/19/changing-climate-has-waterlogged-minnesota-towns-reeling)

Lacking a stream or river to carry the water away, landlocked lake basins continues to fill swallowing beaches and the usual shoreline. Above average precipitation in recent years has increased the water buildup. *William Lager | MPR News*

Lake Shamineau residents want a solution. The lake improvement district is proposing to lower the lake level by a couple of feet by pumping some of its water into a nearby gravel pit.

That would require a permit from the Minnesota Department of Natural Resources and about $1.5 million, either from state grants or by assessing lake property owners.

Not everyone on the lake wants to help pay for it. But the project's supporters say they're already paying, in costly property repairs and the loss of enjoyment of the lake.

"We know it's in the millions," Kevern said.

Relief for Lake Shamineau isn't expected to come this summer. Residents will vote on the lake improvement district's budget and long-range plans at its annual meeting in August. If the DNR signs off on the plan, construction would start sometime next year.

Pat Held stands on a rock that used to be on land, but is now underwater at his Lake Shamineau home. Held has been dealing with rising water eroding his lakeshore and threatening his home. *Kirsti Marohn | MPR News*

Statewide problem

Shamineau isn't the only Minnesota lake where residents are coping with record-high water levels.

In a typical wet year, the DNR gets two or three applications for permits to pump lakes. This year — one of the wettest on record — it's received a dozen, mostly for lakes and ponds in the Twin Cities metro area.

Among them are Indianhead Lake in Edina, Crystal Lake in Robbinsdale and Shady Oak Lake in Minnetonka, where excess water is being pumped into nearby Nine Mile Creek.

"We've been permitted to pump the lake down approximately 2 feet, so we're pumping as much as we can," said Minnetonka city engineer Will Manchester.

Pumping can be costly — and tricky, as communities also need to avoid causing problems for another lake or river, or spreading invasive species.

It's also not a quick fix. Manchester said it will likely be months before they see any progress on Shady Oak Lake.

Homes and cabins on Lake Shamineau near Motley are threatened by rising lake waters. Buildings, boat lifts and docks have sustained damage, and some properties have been abandoned. *Kirsti Marohn | MPR News*

Keeping it natural

One factor that can exacerbate a lake's tendency to flood: overdevelopment. When rain falls on roofs and paved driveways, it runs more quickly into the lake because there's nowhere for it to soak into the ground.

Minnesota has had regulations that protect lakeshore in place since 1969. But on many lakes like Shamineau, homes and cabins built long before then are closer to the water's edge than today's rules would allow.

Lake experts say one step property owners (https://www.dnr.state.mn.us/lakescaping/index.html) can take to help reduce flooding is to keep their shoreline natural, instead of mowing right up to the water. Adding rain gardens with deep-rooted native plants also helps to hold water longer and reduce erosion.

· MnDNR: Lakescaping and shoreland restoration (https://www.dnr.state.mn.us/lakescaping/index.html)

Crocker said it's important to keep in mind that anytime humans alter the land, they're also affecting water's natural drainage patterns.

"All that changes how the water runs on the landscape, and how it can handle heavy storm events," he said.

The New York Times

Fish Cannons, Koi Herpes and Other Tools to Combat Invasive Carp

Researchers are experimenting with a Rube Goldberg-esque mix of tactics to control hearty, nonnative swimmers that re-engineer nutrient-rich Midwest waters.

By JoAnna Klein

June 4, 2019

Why is someone loading a fish into a tube?

That's Whooshh. It's a high-tech fish removal system, something like a cross between a potato gun and a pneumatic tube at a drive-in bank.

And that fish is a common carp, one of the oldest and most invasive fish on the planet.

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Cyprinus carpio, the common carp, is a close relative of the goldfish, native to Eurasia. It has been farmed throughout Europe for about 2,000 years. In the 1880s, the federal government brought over more than 300 carp to the United States from Germany, at the request of recent European settlers. They bred the fish in ponds in Washington, loaded their offspring onto rail cars, sent them across the country, sometimes dumping them directly into lakes and rivers.

Read to the end of this article to see where the carp end up after their journey through the Whooshh. By Minnesota Aquatic Invasive Species Research Center

Minnesota Aquatic Invasive Species Research Center

Around 1910, it was clear this was a mistake. Common carp are tolerant of poor water quality. They travel miles to spawning grounds. And they can live up to 50 years, especially without the limits of pathogens, predators or weather from their native ranges.

Where they invaded, lakes turned brown and muddy. Plants and ducks disappeared. They displaced other fishes and dominated.

They've thrived in the nutrient-rich waters of the Midwest, where they can re-engineer entire ecosystems. When they forage for bugs and seeds on lake bottoms, they stir up sediment, uproot plants, change water chemistry, promote algal blooms and leave little food for waterfowl.

So for the past decade, researchers at the Minnesota Aquatic Invasive Species Research Center have been searching for the most effective ways to remove common carp from lakes, ponds and marshes where they do the most damage. Last summer, the team implemented a

comprehensive common carp control campaign, including year-round strategies that take advantage of the fish's life cycle. There is no one-size-fits-all solution, they've found, and some approaches work better at certain times and places.

It didn't take long to realize that bringing common carp to American waters was a mistake. Minnesota Aquatic Invasive Species Research Center

"In some it's very easy to control, and in some, it's very, very challenging," said Przemek Bajer, a common carp researcher leading the Whooshh team. "Once you see the life cycle, it becomes much, much easier."

Learning from failures and successes, the team hopes wildlife managers elsewhere may develop removal strategies fine tuned for their own invasive species, ecosystems and geography. Here are some tactics they've been testing.

During the spring spawning season, tens of thousands of adult carp migrate miles through lakes and streams to marshes where they were born. If conditions are right, a single carp can produce 2,000 babies a season. But sometimes natural predators gobble up their eggs and larvae.

A small lake in Shoreview, Minn., where researchers have tested common carp control.
Minnesota Aquatic Invasive Species Research Center

The team has done many experiments to better understand this natural removal method. In one, they dangled carp eggs attached to green yarn in different lakes. In waters dominated by voracious bluegill, the eggs were gone the next day. But with no bluegills, they survived.

Dumping bluegills in carp nesting grounds is impractical. So the researchers are looking at ways to help more bluegills survive winter conditions that deplete oxygen in their waters. That way, they might be alive and ready to dine when carps show up to spawn during the spring thaw.

The team is also testing which barriers might keep surviving juveniles from dispersing from their nurseries, and block adults from spawning sites in the first place. Electric guidance systems are promising.

Electronic barriers that are being tested to control the movement of carp.

These deployable underwater fences produce small electric fields that guide the fish to traps. When tested last April, they helped remove more than a third of the 15,000 carps in one lake.

From late summer to the start of autumn, actively feeding common carp can also be made to fall for a classic bait and switch. Researchers train carp to swim to large nets baited with food on lake bottoms. As long as some fish find it, the rest follow. All are then scooped up.

In November and December, shallow lakes start freezing. The carp gather in large groups beneath thin ice. Then, they're at the mercy of what researchers call "the Judas technique."

Because common carp play follow the leader, researchers can catch and tag a few fish in the fall, then follow their signal to locate the rest in winter. The scientists can swoop up most fish at once with special nets. This requires careful strategy, because after a few escapes, the fish learn to avoid the nets.

Netting carp is wet, slippery work, but cheaper and less toxic than other techniques.
Minnesota Aquatic Invasive Species Research Center

This summer the team is testing a bait and switch/Judas combination, tagging and training many carp to find food placed by sensors for gathering behavioral intelligence. This can help them target the carp that lead others in later experiments or removals.

They're also experimenting with toxins and pathogens.

For decades, a poison called rotenone has been used to control carp, but it basically wipes out all fish. As an alternative, the team is looking to another toxin, Antimycin A, to poison corn pellets, which only carp will eat in their waters. They'll train the carp to eat clean corn, then swap in poisoned niblets.

This has worked in test ponds and laboratories. But as long as fish gather around food, a net is cheaper, nontoxic and just as effective.

Researchers at the Minnesota Aquatic Invasive Species Research Center.
Minnesota Aquatic Invasive Species Research Center

There's also naturally-occurring Koi Herpes Virus (KHV) that appears to only affect common carp and their ornamental variants, koi. Infected fish shed KHV into the environment, where it spreads by close contact. It damages gills and can lead to suffocation, killing up to 90 percent of a population.

Nicholas Phelps, a veterinary pathologist studying KHV, is studying how and when the virus spreads, and hopes to better understand whether the disease could be used safely to control the common carp.

"I understand this sounds like a scary idea, releasing viruses to kill fish," Dr. Phelps said. But with cautious and incremental testing, he thinks that, "at some point, perhaps it's not a scary idea anymore."

A fish affected by KHV. Minnesota Aquatic Invasive Species Research Center

In the meantime there's Whooshh, the fish cannon. It was originally developed to help spawning salmon traverse interruptions in their migratory path, but these researchers hope it will cut back on laboriously netting large groups of trapped carp.

They've been trying to cajole the fish into independently swimming one-by-one into the Whooshh, but common carp are smart, stubborn, cautious and sometimes coy. Unlike salmon, they "don't want to swim into the carp vacuum," Dr. Bajer said. Right now, it's just a transport system.

After netting the fish, they are loaded into the Whooshh, one-by-one, to be slurped down and chucked up into a container. They're then euthanized and made into compost or feed for bears and wolves at wildlife centers.

Dr. Bajer wonders if the fish will ever feel comfortable entering a fish vacuum voluntarily: "It might be possible, we just haven't cracked it yet."

A version of this article appears in print on June 10, 2019, on Page D2 of the New York edition with the headline: Carpio Diem: They Won't Shoot These Fish in a Barrel, but All Other Options Are on the Table

Your journey, and some common carps', are now at an end.
By Minnesota Aquatic Invasive Species Research Center